



2023-24

Program Outcomes Assessment Report

Prepared by the Academic Affairs Department

March 2024

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Introduction

Each academic program at North Central Missouri College (NCMC) has established program outcomes. NCMC faculty file an annual assessment report to include results and assessment-based program changes. This report refers to assessment activities conducted during the 2023-24 academic year, but it is not an exhaustive list of program assessment activities and responses.

Transfer Programs

The Missouri Department of Higher Education and Workforce Development (MDHEWD) developed a set of eight general education goals, with suggested competencies articulated for each goal. Four goals address skills and the other four represent major areas of knowledge expected. MDHEWD worked with faculty from Missouri institutions to design a state general education core of forty-two (42) credit hours around these goals and competencies. This “Core 42” transfers as a program to all Missouri public colleges and universities, and the included courses transfer individually. Missouri community colleges are required to include the Core 42 within the Associate in Arts degree, and are discouraged from having other specific course requirements in that degree.

NCMC faculty adopted the state goals as the college’s general education outcomes many years ago, with only a few minor modifications since then. In fall 2021, after careful review a faculty driven committee recommended a revised set of four general education outcomes: Communicating, Engaging, Managing Information, and Problem Solving. The NCMC Faculty Senate approved these outcomes in October 2021. Since Higher Order Thinking was reviewed in AY21, and was similar to Problem Solving, the following rotation schedule was developed for assessing the new general education outcomes.

AY22	Communicating
AY23	Engaging
AY24	Managing Information
AY25	Associate in Arts Program Review

AY26	Problem Solving
AY27	Communicating
AY28	Engaging
AY29	Managing Information

As a result, the focus for AY24 was on Managing Information.

Associate in Arts and General Education (Managing Information)

The Associate in Arts degree has no required courses outside the state-mandated core 42. Free electives are chosen by the student with help from an adviser, based on the student's intended major field of study after transfer. Therefore, NCMC considers the general education outcomes described above to be the learning outcomes for the Core 42, and for the A.A. degree.

History

HI102: Managing Information was assessed through the Early Modern Europe writing assignment.

Students complete a ten-question assignment that takes them through the process of approaching and analyzing a primary source document, in this case, excerpts from Charles-Louis de Secondat, Baron de la Bréde et de Montesquieu's *The Spirit of Laws*. They read the assigned excerpts and then respond to questions about the difference between primary and secondary sources, where this source was found, when and why the author likely wrote the document, and then they evaluate the kind of information and writing included before they then locate an outside source in the JSTOR and/or EBSCO Academic Search Premier databases that helps validate this source as a reliable primary source.

Results:

	Met or Exceeded		Did Not Meet	
HI102 Online	4/4	100%	0/4	0%

Out of ten students enrolled in the course, only four completed the assessment as assigned. Those students who completed the assessment showed a high degree of success in accessing the document, analyzing it, and evaluating the information and locating an outside source to validate the source as a reliable primary source. This seems to indicate that students are capable of managing information when they are committed enough to complete the assignment (which is not meant to be difficult). The data does not reflect that there were ten students who should have completed the assessment, but only four who submitted it on time. An additional student completed a partial assessment late that reflected some ability to access, organize, and evaluate information, but was late and incomplete, so not evaluated following the course policy on late assignments and assessments. Finding ways to encourage more students to complete the assessment seems like the next step and reflects the struggle of intervening with online students seen in the HI103 and HI104 assessment of managing information as well.

HI103 and HI104: Managing Information was assessed through the Scholarly Article Review assignment.

In this essay, students first select, read through, and then summarize two scholarly/academic history journal articles on a similar topic from the NCMC library-supplied databases JSTOR or EBSCO Academic Search Premier on a topic of their choice that fits within the scope and time period that this course

covers. They then respond to the articles by analyzing and evaluating specific quotes from the articles and then comparing their arguments and the ways that the authors support their arguments with evidence.

At the June Workshop, participants participated in a tuning exercise that included examining two sample assignments from students from the previous academic year and a discussion of the features of each sample student essay. This helped increase the reliability of grading among instructors and provided a helpful opportunity to talk through the assignment, ways to scaffold to try to improve student understanding (including adding a “check in” time for students to show the instructor which articles they chose ahead of time).

In December, adjunct and dual credit instructors were asked to complete the Brief Course Assessment Form while the lead instructor completed the full Course Assessment.

Results:

	Met or Exceeded		Did Not Meet	
HI103 On-Ground	23/26	88.46%	3/26	11.54%
HI103 Hybrid	2/6	33.33%	4/6	66.64%
HI103 Online	9/14	64.29%	5/14	35.71%
HI104 Online	6/13	46.15%	7/13	53.85%
Total	40/59	67.8%	19/59	32.2%

The difference between on-ground and online and hybrid courses in student achievement on this assessment stood out and mirrors a disparity between success rates in on-ground vs. online courses seen across semesters in the history courses, so follow-up conversations focused on that topic and how to try to approach the managing information, the assignment, and process differently, especially for the online and hybrid courses.

- Adding a discussion over how to read a scholarly article, including helping student find thesis statement and major arguments. In general, trying to find ways to scaffold more for students in online and hybrid courses like the approach taken in the on-ground classes that seems to be working.
- Consider changing the assignment to focus on one scholarly article, while requiring students to cite another scholarly article so that they have to locate, organize, and evaluate information from two scholarly articles, but they focus their attention primarily on one of the two articles.
- Reminding students about Tutoring Center and Resource Center resources and support and encouraging online and hybrid students to begin the process with enough time for instructor or tutor feedback before it is due.

For the spring 2024 semester, the Tutoring Center and Maryellen Harman are piloting an embedded tutor program where professional tutor Abigail Oneal is an active part of one on-ground (for now) class to learn more about the class and expectations and to offer additional support for these students. We hope to scale this up to online after piloting with the on-ground version and Abigail has been providing extra support for key online students at risk of failure so far during the spring 2024 semester (in January).

Follow-up from 2023 Annual Review

In the 2023 review, Engaging seemed to be an area of strength in the history and Spanish courses. I indicated that I would follow up with dual credit and adjunct instructors and the June Workshop and we did discuss engaging and its general success across history courses. At this point in time, no action seems to be necessary involving Engaging in these areas.

Humanities

Humanities instructors conducted several assessments related to Managing Information described here.

EN282 --- One example of students managing information in a Humanities course the Author Presentation assignment in EN282: Introduction to Short Stories. In the Author Presentation assignment, students must access reliable resources and use those resources to create and present a class presentation. Each student is responsible for one author and presentations are given once a day throughout the semester. Each Author Presentation is meant to set the stage for understanding that day's required reading. To successfully complete the assignment, students must access reliable resources, determine the most important details relevant to the course, organize the information into a PowerPoint presentation, and then present that information to the class.

The online EN282 assesses Managing Information using a different assignment. The Author Presentation assignment does not work quite as well in the online sections. But students are still using the same Managing Information skills in the online course. One assignment in the online course is an assignment called Consider Mental Health. Students are asked to investigate the possible psychological ailments of characters in the short stories we have read. Students must access reliable resources to determine the psychology of the character. Then they must cite that information and apply what they learned about mental health to the situations of various characters.

Class	Number completing Activity	Goal met	Goal not met
EN282-01 22Spring Main	12	8	4
EN282-01 22Fall Main	8	8	0
EN282-01 23 Fall Main	17	14	3
EN282-E1 23 Summer Online	15	14	1

EN282-E1	14	14	0
22 Summer Online			

Overall, students that complete this assignment tend to be successful in showing they can manage information. There is still room for improvement, especially amongst students that do not complete the work in the first place.

EN102 -- The Notes assignment of the Researched Argumentative essay process is used in EN102. Students have approximately 2 weeks to collect database sources that support their theses. This requires that they first utilize the databases through NCMC Library Resources, search appropriate keywords, and differentiate between those that support their project. Then, they must select quotes and paraphrase important ideas. Lastly these annotated notes must be organized onto a streamlined document for efficient accessibility that will become an informal outline of their essays.

Goal: For students to systematically organize useful sources for the purpose of writing a researched argumentative essay over the topic of their choice.

Class	Number completing Activity	Goal met	Goal not met
EN102-02 FA 23	18	16	2
EN102-Q3 SP 23	21	20	1
EN102-01 SP 22	15	12	3

Generally, the majority of students were able to meet this goal. Students who did not meet the goal were lacking the baseline requirements, eg. Not enough sources to support their theses, or they failed to discern between information that would be best quoted or paraphrased. We can better facilitate this process by providing and teaching from released student samples of adequate and inadequate notes.

EN101 -- The activity assessed here is the Citation Assignment in EN101. While this is an activity students in EN101 are assigned each semester, this assessment is based upon those students enrolled in the on-ground sections taught in the fall semester in 2023. At that time, the instructor(s) did not teach any online sections of EN101, so the data presented comes only from students enrolled in an on-ground course.

This unit took place over one week. During that week, information was presented to students about how to evaluate various types of sources including online sources, academic journals, and other types of resources to establish their credibility. Additionally, we presented information with regard to how to organize resources used during the research process to meet the guidelines of the Modern Language Association documentation style. During another lecture, the Director of Library Services made a presentation to students to help them learn how to access the reference databases NCMC offers students. Once students better understood how to access, evaluate, and appropriately cite resources, they were asked to select a previous essay they had written for the course, and find six resources in the reference databases from NCMC that might help to enhance that essay.

The goal of this assignment was to help students not only familiarize themselves with the academic resources available at NCMC, but also to ensure they understand how to credit the work of others in an academic context.

Class	Number Completing Activity	Goal Met	Goal Not Met
EN101-04	9	9	0
EN101-04W	9	9	0
EN101-H1	5	5	0
EN101-H1W	8	8	0
EN101-05	14	14	0

In each of the courses listed above, all of the students met the goal. Despite the fact that the success rate was so high, in the future, we believe there is room for growth with this assignment. It could be enhanced by having students annotate the bibliography to help them articulate the direct connection each source they selected had to the topic they selected.

SP175 -- The activity assessed is the Persuasive Speech from SP175. After students select a topic, then they research if they are for or against the topic. Students learn about various persuasive techniques to implement in the Persuasive Speech. One day in class, the instructor brought in heavy whipping cream

and had students shake the liquid, as it is a mason jar with a tight lid. As the students shake the liquid, we discuss where butter comes from and how to make it. Then we have a guided debate asking if butter is better or margarine is better. Students are asked to access butter vs. margarine articles and information and organize risks and benefits of both butter and margarine. After the liquid has solidified, then the students can eat the butter. Students learn about how to access both sides of a topic and then evaluate, write, and present the Persuasive Speech outline.

Class	Number completing Activity	Goal met	Goal not met
Fall 2023			
SP175-01	18	14	4
SP175-02	18	16	2

In both sections, the majority of the students met the goal.

In the MWF session (SP175-01) the 14 students who met the goal, were excited to shake the liquid. A few of the students were former agriculture students and had participated in this activity before. They are asked not to share the outcome as several of the students did not know that they were making butter. The students were interested in the health aspects of butter vs margarine. One student was amazed that 'Country Crock' was not actual butter. The student went on to say she thought had been deceived most of her life. The students were able to find and evaluate different information regarding all of the benefits of butter vs. margarine.

AR104 -- The activity assessed in Art Appreciation online courses is based on an early discussion in class that revolves around the many purposes of art in society (current and historical). One of the topics that are discussed is the fact that art can "protest injustices and raise social consciousness." This has been a powerful function of art for centuries because it's made people aware of horrific and/or wonderful things that have happened. In other words, art has been a way to make people aware of things happening around them. The two artworks that are included in the Powerpoint are Francisco de Goya's "The Third of May, 1808" and Normal Rockwell's "The Problem We All Live With."

The assignment for students is to research THREE works of art that fit into the category of protesting injustices or raising social consciousness. They are allowed to use any three artworks from any era or history, including our own. The information is then presented as a PowerPoint presentation or Google slides.

Each artwork should be presented on its own page, and include the title, artist, date, medium, and where the artwork was made. On a separate page for each artwork, students are asked to explain how the piece completed the function of protesting injustice or raising social concerns. This should include:

- 1) why the artist felt it was necessary to share this information with the public,
- 2) what events led to this,
- 3) how did the artist depict their message in the artwork,
- 4) what was the result of the artwork (did any changes happen because of the artwork?),
- 5) did the creation of the artwork help or hurt the artist's career

Class	Number completing Activity	Goal met	Goal not met
AR104E1 23 Spring First Session	25	22	3
AR104E2 23 Spring Second Session	19	19	0
A104E1 23 Fall First Session	25	21	4
AR104E2 23 Fall Second Session	14	13	1

This project provides a good learning experience for students to search for information about specific artists and their works, and then determine the relevance of their works to society. With the success of this project in the online classes, it will be used to assess on-ground courses as well.

Political Science

A book review assignment was used for the 2023 – 2024 school year where students select a book from a list created by the instructor. They are not told exactly what the assignment is at the beginning, just that they need to read the book and take notes about the themes and ideas related to current events in some way. The main purpose for approaching the assignment this way is to ensure they actually read the book without knowing the purpose. There are three associated assignments beginning in week 6 that require increased and deeper understanding of the book they selected.

The overall purpose is to introduce students to books, both fiction and nonfiction, that in some way reflect or explain current events, specifically events that have occurred during and after the pandemic. We want them to learn and see that much of what is happening has happened before and has

contributed to both domestic and global history. The hope is the books will put the perceived instability into some context.

We piloted the assignment in the Fall 2023 semester and overall students did a good job if they read the entire book. We were glad to see that the ones who finished the book they selected were able to tie its topic into our current times in some way. We think it also helps that we are able to cater questions and their assignments to the feedback they provide in the first assignment, where we simply ask them why they chose the book, and what they expect to get out of it. We then provide them a question based on their individual response that will guide them through the remainder of the book.

We have only seen the completion of this assignment for one semester, but out of approximately 125 students who completed the assignment, around 75% were able to write a final 600 – 750 essay that comprehensively and adequately examined the book they chose.

Psychology

The following assignment is used to assess managing information.

Psychological Disorder Assignment

Directions:
Select a disorder from the list below. Research the disorder and prepare a one or two-sided handout that could be shared with others to educate them about the disorder. This assignment is worth 10 points. Submit the handout as a word document or .pdf file. Some files cannot be opened on my computer which prevents me from being able to grade them. If you submit in word or .pdf this ensures I can grade it.

Handout Components
Include the following on your handout:

Title

- Your name
- Class
- Psychological disorder

Description

- Brief description of disorder
- History and background of the disorder
- Prevalence of the disorder in the United States and/or worldwide
- Five to seven relevant facts about the disorder

Cause, Risk, and Prognostic Factors

- Brief explanation of the environmental or genetic and physiological factors that cause or increase the risk of the development of the disorder

Symptoms

- Complete list of symptoms
 - Hint: Although, not the only place to find symptoms, the DSM-5-TR is an excellent place to find a complete list of symptoms. Partial lists of symptoms will not receive full credit.*

Prevention/Treatment

- Prevention strategies
- Suggested treatment options
 - Hint: Be specific. Example: recommending therapy is a good start, but not specific. What type of therapy is suggested for this specific disorder?*

Resources

- Two or more reputable resources (books, websites, podcasts, videos, etc.) that provide information about the disorder. These should not be the same as you're citations.
 - Hint: Think of these as easy to access resources that a person in need might use to learn more about the disorder.*

Citations

- References (where the information included in the handout came from) cited within the body of the handout since you are probably quoting or paraphrasing information; use APA format
 - Hint: If you don't know how to use APA format here are some resources in Brightspace or the NCMC Library is an excellent resource!*
- Reference list was included at the bottom of the handout; use APA format.
 - Hint: Think of these as the required citations that prevent you from plagiarizing and allow others to know where the factual information on your handout came from. APA calls this a Reference List. Other citation formats may have called this a Bibliography or Works Cited.*

Psychological Disorder List

Generalized Anxiety Disorder	Posttraumatic Stress Disorder
Major Depressive Disorder	Narcolepsy
Schizophrenia	Oppositional Defiant Disorder
Anorexia Nervosa and/or Bulimia Nervosa	Borderline Personality Disorder
Attention-Deficit/Hyperactivity Disorder	Antisocial Personality Disorder
Bipolar Disorder	Obsessive-Compulsive Disorder
Narcissistic Personality Disorder	Alcohol Use Disorder
	Intellectual Disability



Rubric

Criteria	6-5 points	4-3 points	2-0 points	Points Earned	Comments
Content - Description	<u>Information</u> is thorough and accurate. All requested components were included	Some requested components were missing and/or information was inaccurate.	Most of the requested information was missing and/or most of the information was inaccurate.		
Content – Symptoms	<u>Information</u> is thorough and accurate. All requested components were included	Some requested components were missing and/or information was inaccurate.	Most of the requested information was missing and/or most of the information was inaccurate.		
Content – Causes and Prevention/Treatment	<u>Information</u> is thorough and accurate. All requested components were included	Some requested components were missing and/or information was inaccurate.	Most of the requested information was missing and/or most of the information was inaccurate.		
Resources & References	<u>Handout</u> included at least two resources and a reference list. There were appropriate citations within the handout.	Handout has less than two <u>resources</u> , but did have a reference list and citations.	Handout was missing resources, citations, and the reference list.		
Professionalism (Organization, Format, & Proofreading)	<u>Handout</u> was professionally presented. There were no grammar, punctuation, or spelling errors.	Handout contained several grammar, punctuation, and spelling errors and/or was disorganized.	Handout contained three or more grammar, punctuation, and spelling errors and/or was disorganized		
Total Points					

The Psychological Disorder Handout Assignment was used to assess Managing Information. Students are expected to use reputable sources to create an information handout over a psychological disorder. Students in the Fall 2023 scores were analyzed. The mean score for the on-ground section was 27.7 and the score for the online section was 24.4. These results suggest that onground students outpaced the online students on this assignment. All students are provided electronic access to the DSM-5-TR through the NCMC Library, which is a reputable source for looking up information about psychological disorders and are provided a video recording of the assignment description. Students are also allowed to use outside sources and cite them using APA format. APA format resources are provided on Brightspace. The difference in scores could be due to the fact that there are several times throughout the semester that the topics of fake news and vetting resources naturally emerge during class discussions and this is not an option in online courses.

Sciences

The science department assessed the General Education outcome of Managing Information: Students will be able to access, organize, evaluate, and present information in various formats.

Managing Information Assessment Results

Assessment: Use an exam designed for students to evaluate information from a table, model, graph, etc.

If they correctly answer at least 70% of the questions correctly, then they will have “Met” the Outcome. This assesses outcomes for general education and the Associate in Science.

Associate in Science Outcomes

- *Analyze data to draw defensible conclusions*
- *Evaluate scientific and mathematical evidence and argument*

General Education Outcome:

- *Managing Information: Students will be able to access, organize, evaluate, and present information in various formats.*

Science Program and Course Assessment Form

Jeff Grell, full-time faculty

Table of Assessment Results

Course	Number of Students participating	Number of Students Meeting Expectations	Number of Students Not Meeting Expectations
General Chemistry 1 Online	5	5	0
General Chemistry 1 On-Ground	4	4	0
Introduction to Chemistry Online	10	9	1
Introduction to Physical Science Online	11	9	2
College Physics 1 Hybrid	6	5	1
Introduction to Physical Science On ground	4	4	0
Organic Chemistry 2 Online	2	2	0

1. Describe the activity/assignment you used to assess “Managing Information.”

I gave a science reasoning test. Questions were compiled from full-time faculty. The physical science questions were taken from a released ACT exam. This test measures the ability to reason (i.e., manage information).

2. What improvements or ideas do you have for approaching this topic the next time?

Perhaps free response questions?

3. What suggestions do you have for improving or changing the assessment tool?

Use a different form since students may have seen before.

4. (If applicable) What changes did you make to this course over the past year based on previous assessment results? Did the changes help?

N/A

Science Program and Course Assessment Form

Annette Pool, full-time faculty

Table of Assessment Results

Course	Number of Students participating	Number of Students Meeting Expectations	Number of Students Not Meeting Expectations
BI:240-01 On-campus	6	6	0
Percentage Distribution	90% or higher	80-89%	70-79%
	2	2	2

1. Describe the activity/assignment you used to assess “Managing Information.”

Exam designed to evaluate information from tables, models, graphs.

2. What improvements or ideas do you have for approaching this topic the next time?

I like this format, gives good, concise data

3. What suggestions do you have for improving or changing the assessment tool?

Include as an “extra credit” assignment for online students so that they give a good effort.

4. (If applicable) What changes did you make to this course over the past year based on previous assessment results? Did the changes help?

Future: will make as an “extra credit” assignment due 1-2 weeks before the final exam so students put forth an honest effort.

Science Program and Course Assessment Form

Billi Tiner, full-time faculty

Table of Assessment Results

Course	Number of Students participating	Number of Students Meeting Expectations	Number of Students Not Meeting Expectations
BI240S1	14	7	7
BI240SC	17	14	3

1. Describe the activity/assignment you used to assess “Managing Information.”

A multiple choice quiz was used.

2. What improvements or ideas do you have for approaching this topic the next time?

None (first semester teaching)

3. What suggestions do you have for improving or changing the assessment tool?

None (first semester teaching)

4. (If applicable) What changes did you make to this course over the past year based on previous assessment results? Did the changes help?

N/A (first semester teaching)

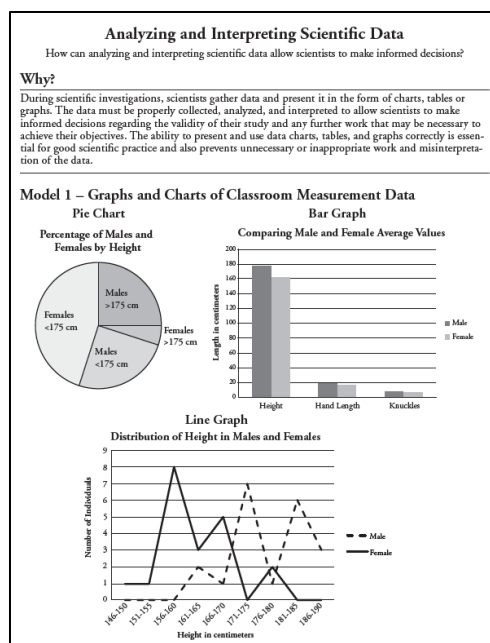
Science Program and Course Assessment Form

Susan Stull, full-time faculty

Table of Assessment Results

Course	Number of Students participating	Number of Students Meeting Expectations	Number of Students Not Meeting Expectations
BI100-E1	14	9	5
BI100-Q1	18	14	4
BI100-01	14	9	5
BI110-01	14	5	9
BI103-01	3	2	1

1. Describe the activity/assignment you used to assess “Managing Information.”
A test was used with graphs, tables, and figures with questions designed to determine the student’s ability to evaluate and analyze data.
2. What improvements or ideas do you have for approaching this topic the next time?
Most classes did fairly well with the test except for one class. I am planning on two approaches to help these students.
 - Addition of questions about data within the scientific method portions of lab exercises.
 - POGIL (Process Oriented Guided Inquiry Learning) assignment designed to help students develop data analysis skills—but adapted to the Ecology course.



1. According to the data in Model 1, how many females fall within the range 146–155 cm tall?
2. According to the data in Model 1, how many males are 181 cm or above in height?
3. Using the graph(s) in Model 1, determine the approximate average height of males and of females.
4. Refer to the data in Model 1.
 - a. How many males are taller than 175 cm and approximately what percentage of the total is that?
 - b. Which graph(s)/chart(s) illustrate the answer to the previous question?
5. Which type of graph or chart in Model 1 shows a side by side comparison of data?
6. Which type of graph or chart in Model 1 shows trends in data across an entire data set?
7. Describe two trends in male and female height using the line graph.
8. Use complete sentences to compare the presentation of height data in the three graphs. Discuss any information that is located on more than one graph, and any unique information that is available on each.
9. If you wanted to see if a correlation exists between the height of an individual and his/her hand length, what would be the best type of graph/chart to make? Explain your reasoning.
10. What conclusions can you draw comparing the height, hand length, and knuckle width of males and females? State your conclusions in complete sentences.

3. What suggestions do you have for improving or changing the assessment tool?
Potentially re-evaluate the questions based on the statistical analysis of each question (Brightspace generates this information).

Add some questions that focus on more of the managing information sample dimensions.

Sample Dimensions to Assess

1. Accesses information from a variety of sources
2. Evaluates information for currency, usefulness, truthfulness, and accuracy
3. Organizes information for an intended purpose
4. Presents information clearly and concisely, using traditional or contemporary technologies

4. (If applicable) What changes did you make to this course over the past year based on previous assessment results? Did the changes help?

Instead of doing one lab exercise focused on scientific method, I added pieces of the process to a series of labs. This way students could master each step before moving onto the next one. It also allowed more attempts to process the information. For example, the first time they were asked to create an experiment their proposed experiments were not designed well.

Examples:

Hypothesis: If the grasshopper has wings, it will have a higher chance of getting away

Experiment: Put 2 different grasshoppers together with a predator; one with wings and one without to see which would survive.

Hypothesis: If the type of grass is different, then the growth of the grasshopper will be longer

Experiment: Put a grasshopper in different types of grass

The next lab exercise that required them to design an experiment they had feed-back about their first experiments as well as directions to solve problems from the first proposed experiments such as sample size, using a control group, addressing the hypothesis, and including better variable information.

Examples:

Hypothesis: If the bass population increases, then the frog population will decrease.

Experiment: In one pond I put 15 bass with 30 frogs. In a second pond put 30 bass with 30 frogs. In a third pond put 45 bass with 30 frogs. Check the population sizes over time to see which pond has the largest frog population.

Hypothesis: If the insect/invertebrate population increases, the frog population will increase.

Experiment: Put the same number of frogs in 3 different controlled environments. The 1st has no insects/invertebrates; 2nd has normal amount of insects/invertebrates; and 3rd has a high number of insects/invertebrates. Control the predator populations keeping predators the same in all experiments. Study to see if the frog population size increases.

Science Program and Course Assessment Form

Dual Credit: Roxanne Hoover, Stanberry

Table of Assessment Results

Course	Number of Students participating	Number of Students Meeting Expectations	Number of Students Not Meeting Expectations
Bio	7	7 87%, 90%, 70%, 98%, 90%, 87%, 87%	0

1. Describe the activity/assignment you used to assess "Managing Information."

Exam

2. What improvements or ideas do you have for approaching this topic the next time?

NA

3. What suggestions do you have for improving or changing the assessment tool?

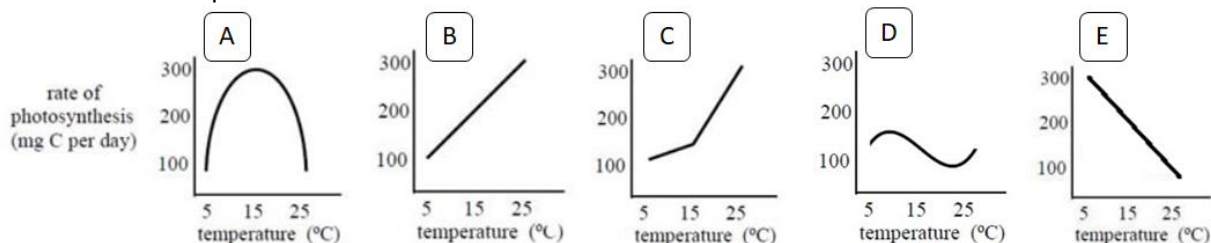
The 1st Scenario confused the students when going to the answer sheet. (FGHIS instead of ABC)

4. (If applicable) What changes did you make to this course over the past year based on previous assessment results? Did the changes help?

none

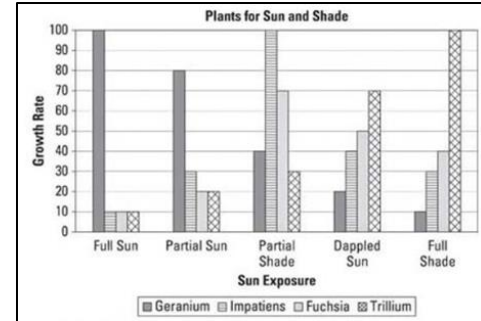
Appendix B: Sample Managing Information Assessment Test Questions

7. Suppose you have gathered the following data on the rate of photosynthesis at various temperatures: at 5°C photosynthesis was 100 mg C per day; at 15°C it was 200 mg C per day, and at 25°C it was 300 mg C per day. Which of the graphs below best represents this relationship?



8. You are going to plant some flowers in your garden, however the area has full shade to partial shade throughout the day. Which types of plants should you choose to plant based on the graph?

- A. Trillium and Geraniums
- B. Geraniums and Impatiens
- C. Fuchsia and Geraniums
- D. Impatiens and Trillium
- E. Impatiens and Fuchsia



Some students performed three studies to measure the average speed on a flat surface of a remote-controlled car with different types of wheels. No modifications were made to the car aside from changing the wheels, and the car's batteries were fully charged before each trial. Each study was conducted indoors in a temperature-controlled room. A straight track was constructed and measured to be 75 feet long. The surface was returned to its original condition after each trial. The car's travel time was measured from start to finish with a stopwatch.

Study 1: The students fitted the car with hard rubber wheels, which had deep treads (see Table 1)

Study 2: The students fitted the car with soft rubber wheels, which were smooth and lacked treads (see Table 2)

Study 3: The students fitted the car with hard rubber wheels with studs imbedded into them (see Table 3)

12. During which of the following was the travel time of the car the slowest?

- A. Study 2, Trial 1
- B. Study 2, Trial 2
- C. Study 3, Trial 1
- D. Study 1, Trial 2

Table 1		
Trial	Time (s)	Speed (ft/s)
1	22.8	3.28
2	23.2	3.23
3	22.5	3.33
Average:	22.8	3.28

Table 2		
Trial	Time (s)	Speed (ft/s)
1	57	1.31
2	56.4	1.33
3	56.7	1.32
Average:	56.7	1.32

Table 3		
Trial	Time (s)	Speed (ft/s)
1	11.3	6.64
2	11.6	6.47
3	12.1	6.20
Average:	11.7	6.44

9. The fastest times resulted from using which wheels?

- A. The speeds remained constant
- B. Hard rubber wheels with studs
- C. Soft rubber wheels with no treads
- D. Hard rubber wheels with deep treads

10. According to Study 1, the average speed for all three trials was:

- A. Greater than the speed measured in Trial 3
- B. Less than the speed measured in Trial 1
- C. Greater than the speed measured in Trial 2
- D. Equal to the speed measured in Trial 2

11. Based on the information and data, the higher average speeds were probably the result of:

- A. Greater friction
- B. Temperature variations
- C. Too much sunlight
- D. Statistical error

Associate in Arts - Teaching

IN AY24, the department assessed AAT Program Outcomes #5 and #6

5. Demonstrate an understanding of individual/group motivation and behavior to create a learning environment that encourages active engagement in learning, positive social interaction, and self-motivation.

Course Number/Name	Assessment Method	Results	Action Plan or Completed Follow-Up	Comparison of Performance (delivery methods)
ED201 Teaching Profession with Field Experience	<p>Article Critique #1</p> <p>Demonstrate an understanding of individual/group motivation and behavior to create a learning environment that encourages active engagement in learning, positive social interaction, and self-motivation.</p>	<p><u>Fall 2023</u></p> <p><u>On Ground:</u></p> <p>17 students exceeded expectations</p> <p>2 students met expectations</p> <p>1 students did not meet expectations</p> <p><u>Online:</u></p> <p>11 student exceeded expectations</p> <p>9 students met expectations</p> <p>4 students did not meet expectations</p>		
ED200 Foundations of Education in a Diverse Society	<p>Chapter 4 Quiz</p> <p>Recognize the influence of classroom, school, and community culture on student relationships and the impact on the classroom</p>	<p><u>Fall 2023</u></p> <p><u>On Ground:</u></p> <p>3 students exceeded expectations</p> <p>5 students met expectations</p>		

	environment and learning.	<p>1 student did not meet the expectation</p> <p><u>Online with Adjunct Instructor</u></p> <p>2 students exceeded</p> <p>8 students met</p> <p>1 student did not meet</p>		
ED270 Educational Psychology	<p>Classroom Management Plan</p> <p>Recognize principles of classroom management, motivation, and engagement.</p>	<p><u>Fall 2023</u></p> <p><u>On Ground:</u></p> <p>11 students exceeded expectations</p> <p><u>Online:</u></p> <p>7 students exceeded expectations</p> <p>2 students met expectations</p> <p>2 did not meet expectations</p>		
ED275 Educational Technology	<p>App/Software Presentation</p> <p>Management of time, space,</p>	<p><u>Spring 2023</u></p> <p><u>On Ground:</u></p>	The online students are exposed to so many different apps/software programs, whereas	Students enjoy researching apps/software programs in their own content area/age level. Consider having

	transitions, and activities.	<p>11 students exceeded expectations</p> <p>3 students met expectations</p> <p>1 student did not meet expectations</p> <p><u>Online:</u></p> <p>10 students exceeded expectations</p> <p>1 student did not meet expectations</p>	<p>the online only research their app.</p> <p>Consider adding another layer to the online students such as a “share and tell” about their app through a discussion board that requires a video component.</p>	this be a team/group effort.
ED285 Education of the Exceptional Learner	<p>Lesson Plan #3 Rationale</p> <p>Identify resources, including technology and community resources, which are available to facilitate the education of exceptional learners</p>	<p><u>Spring 2023:</u></p> <p>On Ground</p> <p>11 students exceeded expectations</p> <p>1 student met expectations</p> <p>2 students did not meet expectations</p>		
ED295 Education Capstone	<p>Portfolio Artifact/Reflection #5 (Missouri Teacher Standard #5)</p> <p>Compile one reflection explaining</p>	<p><u>Fall 2023:</u></p> <p>9 students exceeded expectations</p>		

	the relationship that selected artifacts have to each of the nine Missouri Teacher Standards.	1 student did not meet expectations		
ED265 Multicultural Education	<p>Freedom Writers</p> <p>Recognize the influence of classroom, school, and community culture on student relationships and the impact on the classroom environment and learning</p>	<p><u>Fall 2023</u> <u>Online/Taught By Adjunct:</u></p> <p>0 students exceeded expectations</p> <p>12 students met expectations</p> <p>4 students did not meet expectations</p>		

6. Demonstrate effective verbal, nonverbal, and media communication techniques with students, colleagues, and families to foster active inquiry, collaboration, and supportive interaction in the classroom.

Course Number/Name	Assessment Method	Results	Action Plan or Completed Follow-Up	Comparison of Performance (delivery methods)
ED201 Teaching Profession with Field Experience	<p>Mid-Term Interview Research Project</p> <p>Demonstrate effective verbal and nonverbal communication techniques.</p>	<p><u>Fall 2023</u> <u>On Ground:</u></p> <p>16 students exceeded expectations</p> <p>2 students met expectations</p>	<p>These interviews should be completed face-to-face or over the phone.</p> <p>Some of the candidates being interviewed want to complete these by</p>	<p>On Ground and online students have the option to work alone on this project or together in small groups.</p> <p>On ground students select groups most of the time, but</p>

		<p>2 students did not meet expectations</p> <p><u>Online:</u></p> <p>14 students exceeded expectations</p> <p>3 student met expectations</p> <p>6 student did not meet expectations</p>	<p>email. This doesn't help our NCMC students practice their verbal communication techniques.</p>	<p>online students select individually most of the time.</p>
ED200 Foundations of Education in a Diverse Society	<p>School Board Meeting Reflection</p> <p>Learner expression in speaking, writing and other media.</p>	<p><u>Fall 2023</u></p> <p><u>On Ground:</u></p> <p>4 students exceeded expectations</p> <p>1 student met the expectations</p> <p>4 student did not meet expectations</p> <p><u>Online Taught by Adjunct:</u></p> <p>0 students exceeded</p> <p>6 met</p> <p>5 did not meet</p>		
ED270 Educational Psychology	Comprehensive Diagnostic Report	<u>Fall 2023</u>	<p>Pushing into classrooms with my on ground students paid off. They had</p>	<p>Online students aren't getting as much from this experience as they</p>

	Sensitivity to culture, gender, intellectual and physical differences	<p><u>On Ground:</u></p> <p>10 students exceeded expectations</p> <p>1 student did not meet expectations</p> <p><u>Online:</u></p> <p>6 students exceeded expectations</p> <p>2 student met expectations</p> <p>3 did not meet expectations</p>	<p>much more successful experiences. I was able to assist with classroom management and assist on the spot rather than after they came back to class.</p> <p>Work with online students to understand this isn't just a 10 hour field experience. This is an on going field experience where students are motivated to learn and engage in weekly lessons to see progression. Schedule evening Microsoft Teams meeting to go over expectations.</p>	could be. See action plan for ways to improve.
ED275 Educational Technology	<p>Final Exam: Tech Like a Pirate Book</p> <p>Technology and media communication tools.</p>	<p><u>Spring 2023</u></p> <p><u>On Ground:</u></p> <p>15 students exceeded expectations</p> <p><u>Online:</u></p> <p>9 students exceeded expectations</p>		This is such a great textbook for this class. Students on ground and online speak to how much they enjoy this book because it is relevant and applicable to any age level/content area.

		<p>1 student met expectations</p> <p>1 student did not meet expectations</p>		
ED285 Education of the Exceptional Learner	<p>Tiered Field Observation and Interview Series</p> <p>Identify resources, including technology and community resources, which are available to facilitate the education of exceptional learners.</p>	<p>Spring 2023:</p> <p>10 students exceeded expectations</p> <p>1 student met expectations</p> <p>3 student did not meet expectations</p>	<p>Progress monitor students as they are completing their field experience to ensure it is getting done in an appropriate time span.</p>	<p>I tried on ground and a course by arrangement online to see how teaching this class online went. I didn't love it. I missed the face-to-face components of discussion IEPS, accommodations, modifications, and categories of IDEA.</p> <p>Offering as a one day a week hybrid Model Spring 2024.</p>
ED295 Education Capstone	<p>Portfolio Defense</p> <p>Present and defend the portfolio to a professional panel</p>	<p><u>Fall 2023:</u></p> <p>10 students exceeded expectations</p>	<p>First year of online implementation was a success. Individual portfolio consultations monthly are beneficial and allow students to ask question and me to monitor their progress on their standard reflections.</p>	<p>Offered online only. Could it be taught as an eight-week session (second session)?</p>
ED265 Multicultural Education	<p>Discussion Board</p> <p>Week 3 Time to Travel</p>	<p><u>Fall 2023</u> <u>Online/Taught By Adjunct:</u></p> <p>15 students met expectations</p>	<p>We are considering requiring students to comment on 1 or 2 of their peer's posts. We want to make connections,</p>	

	Recognize the need to be sensitive to student differences in communication	1 student did not meet	learn, and see what others have to say to improve their writing and communication skills.	
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Associate in Science

The outcomes assessed this year were:

- Analyze data to draw defensible conclusions
- Evaluate scientific and mathematical evidence and argument

The assessment method was to use an exam designed for students to evaluate information from a table, model, graph, etc. Each full time faculty member contributed questions to be used on this exam. The focus is assessing the ability of the student to evaluate information, rather than on science knowledge. The results below are from the math department. For results from the science department, see the section above on Managing Information.

This year the math department is assessing the Associate in Science Degree Goals instead of the general education goal which includes:

- Analyze data to draw defensible conclusions
- Evaluate scientific and mathematical evidence and argument

To assess these goals, a project using COVID data was used to try to find the equation of best fit to the data. Linear, exponential and logistic equations were considered and compared. The project was similar but not identical for College Algebra and Statistics courses. We didn't collect the data from Teresa Swan (adjunct in Savannah) or the dual credit instructors.

Looking at the following data, NCMC appears to have similar results for the Associate in Science goals for students taking either College Algebra or Statistics as their general education math requirement. It also appears to have similar results for on-ground or on-line delivery. However, it does appear that dual credit students (courses with Q) have a better success rate than regular college students. This is not surprising since dual credit students are typically better, more motivated students.

Fall 2023 Data:

Course	# Completed the course	# Submitted	# Exceeded	# Met	# Did not meet
MT122-1	10	8	4	3	1
MT122-E	13	10	7	2	1
MT122-Q	5	4	2	2	0
MT125-1	13	12	2	5	5
MT125-2	8	5	0	3	2
MT125-E	7	4	1	2	1
MT125-Q	8	4	1	3	0
Total	64	47	17	20	10

Occupational Programs

A general education component is included in all programs offered by the college, other than short-term technical certificates. This is assessed through participation in course and program assessment in the transfer courses, which are required, as described above. The Missouri Department of Elementary and Secondary Education requires that completers of career programs take a Technical Skills Assessment, wherever such an assessment is available and appropriate. The assessment should be industry-recognized. Program outcomes may also be assessed directly through embedded assignments, portfolios, and other methods as described below.

Behavioral Health Support

Program Level Goal #4: Be able to prepare reports using health care documentation.

Course Number/Name	Assessment Method	Results	Action Plan or Completed Follow-Up	Comparison of Performance (delivery methods)
		Fall 2023		
BH285-Clinical Encounters I	Successful completion of the course is defined as 70% or higher.	<u>Online:</u> 6 Students exceeded expectations.	For Fall of 24, students will create a client and follow them from start to discharge in addition to the case studies and simulations they have been doing.	The objectives for this course are rigorous and evaluating the possibility of 4 credits to commensurate achievement.

Up to this point, students have been assessed on this program goal based on their overall course performance. Based on this measure, six of six students exceeded expectations on Program Level Goal 4, but course grades do not only evaluate students' ability to prepare reports using health care documents. For the fall 2024 semester, the assessment tool will be modified to measure student performance on reports prepared using health care documentation as discussed in the action plan, rather than an overview of students' grades.

Business

Program Goal:	Apply leadership and teamwork skills to collaborate and accomplish objectives
Assessment Method:	Hands on projects: Management students are required to complete several assignments in designated teams. They write a paper together, complete an exam, as well as many little activities. There are many other examples, but these are the larger assessments they do in a team. The unit concludes with a team presentation and each student fills out an evaluation on their team members. This is the teamwork example from this course, but there are several courses the implement working in teams. All courses are assessed through course assessments.
Analyze Results:	This is usually the student's favorite unit; they enjoy having this experience. Assessment scores tend to trend up during this unit as it is harder to skip class or miss an assignment when the team is depending on you.
Follow up:	These are great assessments of applying business skills to work-related situations. Student love "real-world" simulations where they can apply the knowledge they have learned in the classroom. We are pleased with all of these; however, we would like to get our pass rate up for the MOS certification exam.

Childhood Development

Program Goal: Using Content Knowledge to Development Meaningful Curriculum

This is assessed through the program in CD 120 Organization and Administration, CD 240 Infant/Toddler Curriculum, CD 242 Preschool Curriculum, CD 260 Early Childhood Practicum. The final assessment of this goal takes place in CD 280 Professionalism where students create a portfolio including learning experiences, reflections on different methodologies and approaches to curriculum delivery. The continued differences come not from online or on-ground courses but from students who are working in the field opposed to those who come into the program with very little experience. The opportunities in our service region to see high quality programs and curriculum are minimal.

Action Plan: Create an NCMC Lab School using state- grant funding that will not only provide childcare in Grundy County which is a childcare desert but to provide high-quality , hands-on experiences for NCMC students. Nursing, Psychology, Teaching, and other departments will benefit from this addition to campus.

Computer Science

Program Outcome: Apply appropriate techniques to manage and maintain computers, information systems, and networks of different scales.

For the Computer Operating Systems course (IT266), the emphasis was on installing, maintaining and managing operating systems of computers. The course was assessed using homework and exercises, tests, and external tool-Cengage MindTap. No changes are planned based on this year's results.

Semester	Assessment Tool	Total	Exceeds	Met	Did Not Meet
Fall 2023	Homework	5	4	0	1
Fall 2023	Exercises	5	4	1	0
Fall 2023	Tests	5	1	2	2
Fall 2023	MindTap	5	3	1	1

Criminal Justice

Program Outcome: Demonstrate an understanding of the basic laws, Constitutional rights of victims and offenders, and the legal procedures of the criminal justice system.

This was assessed indirectly using curriculum mapping to course assessment in CJ 219 - Demonstrate an understanding of the procedures of criminal courts and the trial process.

This course was assessed in the Fall 2023. The course did show satisfactory outcomes for most of the assessed student learning outcomes. After determining areas for improvement it was decided to create an action to find a learning platform (Cengage is commonly used in the criminal justice program) to supplement instruction for this course. After checking with the publisher, there is not currently an option for a suitable text; however, they do believe this should change in the near future. Once a text book is completed and Cengage is available I will adopt that new book and begin using the Cengage MindTap platform for this course.

Diagnostic Medical Sonography

This is a new program, but the plan is to assess Program Outcome #1 this year:

Communicate effectively with all members of the healthcare team.

- a. Assessment Method: Lab Observation and Final Lab Evaluation
 - i. Analyze Results: Student success in lab simulations and final lab evaluation.
 - ii. Action Plan: Performance analyzed and critiqued every lab period
correction or adjustment are discussed with the student at that time.
- b. Assessment Method: Preceptor Evaluation
 1. Analyze Results: Students receive a preceptor evaluation daily while in the clinical setting and turn them in bi-weekly to the Clinical Coordinator for review.
 - i. Action Plan: Preceptor feedback is reviewed, and any issues are discussed with the student and adjustments are made on a bi-weekly basis, if needed.
- c. Assessment Method: Communication in Healthcare Presentation
 - i. Analyze Results: Students will research and present their project to the class.
 - ii. Action Plan: Instructor will provide instructional feedback.

Emergency Medical Technology – Paramedic

The EMT-Paramedic program has two Program Outcomes:

1. Utilize appropriate assessment and triage skills in all areas of medical/trauma situations.
2. Apply knowledge and skills learned to safe professional practice as an EMT-P.

Both are assessed this year.

1. Utilize appropriate assessment and triage skills in all areas of medical/trauma situations
 - a. Assessment Method: Classroom discussion and Labs
 - i. Analyze: Participate in class discussions and practice skills related to medical/trauma situations during labs
 - ii. Action Plan: Evaluated by instructor through labs, quizzes, tests
 - b. Assessment Method: Ride-Along hours with Ambulance Crew
 - i. Analyze: How students handle situations during an emergency call
 - ii. Action Plan: Evaluated by supervisor on the call
2. Apply knowledge and skills learned to safe professional practice as an EMT-P
 - a. Assessment Method: Classroom discussion and Labs
 - i. Analyze: Participate in class discussions and practice skills related to medical/trauma situations during labs
 - ii. Action Plan: Evaluated by instructor through labs, quizzes, tests
 - b. Assessment Method: Ride-Along hours with Ambulance Crew
 - i. Analyze: How students handle situations during an emergency call
 - ii. Action Plan: Evaluated by supervisor on the call

Occupational Therapy

The OTA program has seven Institutional Strategic Goals:

1. Educational Quality and Customer Satisfaction
2. Faculty and Staff development
3. Information Technology and Educational Innovation
4. Fiscal responsibility
5. Alumni and Community Partnerships (Interaction, FW, Mentoring and Collaboration)
6. Enrolment: Retention and Quality
7. Facilities – OTA lab supplies, safety and maintenance

The program is assessing goal number 5 (alumni and community partnerships) this year:

The OTA program will market internally and externally to engage our alumni to become active members of the program. The program will review data for a flexible SOTA club which reflects each cohort's learning needs and professional desires.

Assessment Method: Program Director will talk to students in general education classes about the OTA program. PD will work with IT to keep the website updated and increase marketing through website. Attend events in community and other campuses in Consortium to program knowledge of OTA program.

Analyze Results: PD and faculty have seen increase in applicants that apply to the program and have open houses for students interested in the program.

Action Plans: PD organizes days/times to speak with general education classes every semester.

Assessment Method: Explore hosting professional development workshops on the main State Fair Community College Campus.

Analyze Results: Mentoring will enhance professional development at a student level. Student Feedback is collected from graduating classes.

Action Plans: This will be completed and reviewed every August based on alumni feedback.

Assessment Method: Students are encouraged to develop activities that program OT and reach out to alumni and Missouri community. Review the charter and bylaws to incorporate the needs of the OTA students and to sustain the club.

Analyze Results: SOTA club is flexible and as active as each cohort can sustain. The focus of activities is based on the group. The SOTA club has done past activities as make video for Covid-19 for Pettis County Health Department and an event for Remember the Dream riding center.

Action Plans: The SOTA club meets once during each semester.

Pharmacy Technician

The Pharmacy Technician program has seven Program Outcomes. They include:

- Demonstrate effective written and verbal communication skills appropriate for the work environment
- Demonstrate professional and ethical behavior in the workplace
- Apply knowledge of federal and state regulations to maintain patient confidentiality including patient safety and quality assurance
- Apply knowledge of drug medication classifications and drug interactions to administer all forms
- Demonstrate correct drug calculations for all types of medications and supplements
- Practice proper inventory management including storage, handling, recall and returning expired medications
- Demonstrate proper hygiene and cleaning standards

Program will assess goals 3 and 4 this year:

3. Apply knowledge of federal and state regulations to maintain patient confidentiality including patient safety and quality assurance.

Assessment Method: Watching, completing and passing with 80% on final exam of National HIPAA Continuing Education Course on patient confidentiality and HIPAA regulations accredited by APHA.

Analysis: Students learn business goals (retail and hospital) of how patient information is presented, discussed and documented.

Action Plan: Evaluated by National CE course quiz and final exam, instructor and classmates review through discussion board of scenarios presented in the CE, quizzes, tests and National CPTe exam.

Assessment Method: Practice working in local retail and hospital pharmacies.

Analysis: Appropriate responses to work situations, understanding legal proceedings from current patient interaction and past situations with poor ethical decisions including pharmacy technician and pharmacists involvement, review of criminal and civil law cases and outcomes.

Action Plan: Evaluated by instructor, classmates and onsite pharmacists through discussion boards, quizzes, exams and weekly evaluations from internship staff and pharmacists onsite.

Assessment Method: Practice calling on insurance prior authorizations and rejections, calling medical staff to review prior authorization paperwork and calling/explaining to patients required information that family/care givers will need to pick-up or receive any information regarding medication not belonging to themselves.

Analysis: Appropriate responses to working situations, following policies and procedures, utilizing medical staff to complete patient confidentiality reports, understanding computer ecribe program for pharmaceutical information and documentation for insurance companies.

Action Plan: Evaluated by instructor, classmates and onsite pharmacist and staff through discussion boards, quizzes, exams and weekly evaluations from internship staff and pharmacist on site.

4. Apply knowledge of drug medication classifications and drug interactions to administer all forms.

Assessment Method: 8-week in class chapter course work, labs and online exams focusing on pharmacology, anatomy and medical chemistry.

Analysis: Engaging in discussion and recognition of interactions and multiple medications of same classifications during in class course work and lectures, learning how to speak out and challenge with professionalism when an interaction is believed to be involved and needs to be addressed with medical staff. Recognizing same mechanisms of action by different medications being used by patients. Understanding clearance of a medication and its metabolites.

Action Plan: Evaluated by instructor, classmates and onsite pharmacist and staff through discussion boards, quizzes, exams and weekly evaluations.

Assessment Method: Onsite pharmacy work in retail and hospital settings.

Analysis: Practice in labs and scenarios of student learning how to speak out and challenge dosages and prescription components with professionalism when an interaction is believed to be involved and needs to be addressed with medical staff. Working on retail and hospital software and understanding alerts given while inputting prescriptions and dosing. Recognizing frequently confused medications or ones

that are mistakenly used for another due to pronunciation or spelling errors. Recognizing length of therapies and writing notes to medical staff or stop orders and termination of therapies no longer needed.

Action Plan: Evaluated by instructor, classmates and onsite pharmacist and staff through discussion boards, quizzes, exams and weekly evaluations.

Assessment Method: Lab practice with all forms of medication for correct mixing, labeling and administration.

Analysis: Practice in lab with actual labeled medications learning to read labels, correctly activate and mix medications and correctly administer appropriate dosage form prepared for patient. Communication skills, speaking, writing, calling by telephone, used to explain how to properly administer medication with simple step-by-step specific directions in labs and scenarios with medical professionals and patients, caregivers and family members. Correct labeling and storage of medications once prepared and up until administration. If required, monitoring patient after dose given and how to document observation during this dosing.

Action Plan: Evaluated by instructor, classmates during labs, quizzes, exams and video self-reviews of communication process. Onsite pharmacist and staff of weekly reviews of students onsite.

Practical Nursing

The practical nursing program uses a detailed systematic evaluation plan (SEP) to meet state and program accreditation requirements. This report will focus on highlights regarding overarching program goals as defined by the state board, but the SEP provides additional data and information on PN program assessment. The program is in transition this year, as the long-standing evening/weekend program transitions to a daytime cohort with a spring start. The program will monitor student performance as this change occurs.

NCLEX-PN licensure pass rates are currently at 100%, which is an improvement over 94% last year. The program is working on a study analyzing impact of the ATI software on pass rate.

Radiologic Technology

The Radiologic Technology Program has ten Program Outcomes. They include:

1. Communicate effectively with all members of the healthcare team.
2. Achieve clinical requirements of an entry-level radiographer, as defined by employers.
3. Provide a safe environment for the patient and deliver age appropriate patient care in a variety of clinical situations.
4. Utilize appropriate radiation protection techniques for patients and personnel.
5. Perform routine and non-routine radiographic imaging procedures.
6. Evaluate radiographic images for proper diagnostic quality and take corrective action when needed.
7. Implement critical thinking and problem solving.

8. Educate the public and members of the healthcare team on the benefits and hazards of diagnostic radiation exposure.
9. Demonstrate ethical and professional behavior in support of the profession.
10. Appreciate the value of professional development and continuing education.

The program will assess the third and fourth goals this year.

3. Provide a safe environment for the patient and deliver age appropriate patient care in a variety of clinical situations.

Assessment Method: Outcome Assessment Goal 2—Students will use critical thinking skills (outcome 2.1 students will perform non-routine exams). See attached outcome assessment report template for specific measurement tools, benchmarks, and timeframes.

Analyze Results:

1. 2.1a The average score on the Procedures Competency Exam Form will be $\geq 80\%$ for trauma, pediatric, and mobile procedures. The benchmark was met with the average score being 100% for Spring 1 but Spring 2 has not yet been assessed.
2. 2.1b The average score on the Terminal Competency, section J will be ≥ 2.5 on a 3.0 scale. This data is collected at the end of program, and has not yet been assessed.

Action Plan: Continue to collect data pertaining to Program Outcome #2 and analyze as it becomes available.

2. Utilize appropriate radiation protection techniques for patients and personnel.

a. Assessment Method: Outcome Assessment Goal 1—Students will demonstrate clinical competency (outcome 1.2 Students will apply radiation protection). See attached outcome assessment report template for specific measurement tools, benchmarks, and timeframes.

Analyze Results:

1. 1.2a The average score on the Clinical Evaluation by Faculty, question #6 will be ≥ 2.5 on a 3.0 scale. The benchmark was met with an average score of 2.6 for Spring 1 but Spring 2 has not yet been assessed.
2. 1.2b The average score on the Procedure Competency Form, question #6 will be ≥ 2 on a 2.0 scale. The benchmark was met with an average score of 2.0 for Spring 1 but Spring 2 has not yet been assessed.

Action Plan: Continue to collect data pertaining to Program Outcome #1 and analyze as it becomes available.

Registered Nursing

Program goals include program completion rates, NCLEX-RN licensure pass rates, employment rates of graduates, alumni satisfaction, and employer satisfaction which are published on the NCMC website, in the nursing handbook, and on the Program Outcome Achievement Table. Program outcomes are addressed annually at faculty division meetings (see meeting minutes and the Systematic Evaluation Plan or SEP). The first 3 program outcomes are required by CNEA. The 5 program-level goals assessed are:

Outcome:	Assessment method	Analyze results	Future action plans or follow up										
Program Completion: 70% of students will complete the program within 150% of program length.	Program Completion Rate Table <table><tr><td>2019-2020</td><td>87.93%</td></tr><tr><td>2020-2021</td><td>78.26%</td></tr><tr><td>2021-2022</td><td>77.58%</td></tr><tr><td>2022-2023</td><td>NA</td></tr></table> Still tracking 2023 as we had some students reenter for this year.	2019-2020	87.93%	2020-2021	78.26%	2021-2022	77.58%	2022-2023	NA	Outcome met.	Will continue to assess and address as needed based on demographics and trends.		
2019-2020	87.93%												
2020-2021	78.26%												
2021-2022	77.58%												
2022-2023	NA												
NCLEX-RN pass rate 85% of graduates will pass the NCLEX-RN on the first attempt.	NCLEX pass rates from NCSBN <table><tr><td>2019-2020</td><td>93.14%</td></tr><tr><td>2020-2021</td><td>91.11%</td></tr><tr><td>2021-2022</td><td>90.9%</td></tr><tr><td>2022-2023</td><td>98.1%</td></tr></table>	2019-2020	93.14%	2020-2021	91.11%	2021-2022	90.9%	2022-2023	98.1%	Outcome met.	Will continue to assess along with MSBN and NCSBN data. Increase active learning and work to incorporate Next Generation NCLEX material into the curriculum		
2019-2020	93.14%												
2020-2021	91.11%												
2021-2022	90.9%												
2022-2023	98.1%												
Graduate Employment rate 85% of graduates who respond to the 6-12 m Graduate Survey will be employed	<table><tr><td>2019</td><td>100%</td></tr><tr><td>2020</td><td>96.15%</td></tr><tr><td>2021</td><td>95%</td></tr><tr><td>2022</td><td>97.31%</td></tr><tr><td>2023</td><td></td></tr></table> 6-12 m Graduate Survey Data for 2023 grads are still being tracked	2019	100%	2020	96.15%	2021	95%	2022	97.31%	2023		Outcome met.	Will continue to monitor and track workforce data reports.
2019	100%												
2020	96.15%												
2021	95%												
2022	97.31%												
2023													

Employer Satisfaction rate 90% of employers rate new graduates as 3 or better on a 4-point scale on how well the graduate outcomes prepared students for their current role as a practicing nurse	6-12 m Employer Survey <table><tr><td>2019</td><td>100%</td></tr><tr><td>2020</td><td>100%</td></tr><tr><td>2021</td><td>100%</td></tr><tr><td>2022</td><td>100%</td></tr><tr><td>2023</td><td></td></tr></table> Data for 2023 is still being tracked	2019	100%	2020	100%	2021	100%	2022	100%	2023		Outcome met.	Will continue to monitor, analyze, and trend the employer satisfaction rate. Will continue to encourage increased participation with the completion of the 6-12 m. employer survey.
2019	100%												
2020	100%												
2021	100%												
2022	100%												
2023													
Graduate Satisfaction rate <ul style="list-style-type: none">90% of alumni 6-12 month post-graduation score 3 or better (4 ranking highest degree of satisfaction) of overall program satisfaction.	6-12 m. Graduate Survey <table><tr><td>2019</td><td>100%</td></tr><tr><td>2020</td><td>96.15%</td></tr><tr><td>2021</td><td>90.16%</td></tr><tr><td>2022</td><td>100%</td></tr><tr><td>2023</td><td></td></tr></table> Data for 2023 is still being tracked	2019	100%	2020	96.15%	2021	90.16%	2022	100%	2023		Outcome met.	Will continue to monitor, analyze, and trend the graduate satisfaction rate.
2019	100%												
2020	96.15%												
2021	90.16%												
2022	100%												
2023													

Surgical Technology

The Surgical Technology Program has 7 Program Outcomes that include the following:

Upon completion of the Surgical Technology Program, graduates will be able to:

1. Communicate effectively with all members of the healthcare team.
2. Achieve clinical requirements of the entry-level surgical technologist, as defined by the ARC STSA.
3. Provide aseptic care and practices to ensure the best patient outcomes.
4. Demonstrate knowledge of the history of surgery, surgical technology, Code of Ethics and Standard of Practice for the Surgical Technologist.
5. Perform the role of a surgical technologist in surgical procedures.
6. Demonstrate ethical and professional behavior in support of the profession.
7. Appreciate the value of professional development and continuing education.

I will assess goal 3 and 4 for the 2023 year:

1. Provide aseptic care and practices to ensure the best patient outcomes.
 - a. Assessment Method – Lab Observation and Final Lab Evaluation
 - i. Analyze Results: Student success in lab simulations and final lab evaluation of aseptic technique and practices.
 - ii. Action Plan: Performance analyzed and critiqued every lab period with correction or adjustment discussed with the student every time.
 - b. Assessment Method – Clinical Preceptor Evaluation and Clinical Coordinator Observation

- i. Analyze Results: Students receive a preceptor evaluation daily while in the clinical setting during ST 140 and turn them in weekly to the Clinical Coordinator for review. The Clinical Coordinator attends and personally observes the student in the clinical setting a few times a semester and evaluates their performance.
- ii. Action Plan: Preceptor feedback and Clinical Coordinator observations are discussed with the student and adjustments are made on a weekly basis. Areas of concern are reviewed during the lab portions of ST 131 with the entire class to ensure all remember the correct practice.

Co-curricular Programs

Co-curricular programming encompasses organizations, clubs, and activities that enhance, supplement, and encourage persistence in an academic program or class. The college has discussed and normed expectations for several common co-curricular goals listed below, but individual programs may have other or more specific goals for co-curricular programming.

Upon completion of a co-curricular activity, successful students will be able to...

1. Apply knowledge and skills from an academic program to co-curricular activities.
2. Apply learning from co-curricular experiences to a classroom setting.
3. Articulate and exemplify the positive impact of community engagement.

Agriculture

First year agriculture students learn about co-curricular activities and the Professional Agriculture Student Organization in their College Seminar-Agriculture course work. They have the opportunity to participate in the State PAS Conference competing in Career Pathway interviews based off of the career plans they create in the College Seminar. Second year agriculture students can compete as well, evaluating their career progress after their first year in the agriculture program.

Another opportunity for agriculture students is the NCMC Livestock Judging team. Students complete course work in Livestock Evaluation and other Animals Science course, then apply their skills competitively at collegiate livestock judging events, evaluating cattle, hogs, sheep and goats. Students who are competing travel to competitions throughout the Midwest in both the fall and spring semesters. They demonstrate their skill set by serving as judges at county livestock judging shows during the summer months, which in-turn gives more exposure for the NCMC Agriculture Program.

Childhood Development

Students raise funds every year for a child advocacy experience in the community. T-shirts are designed and sold and the money is donated to either Foster Adopt or North Central Children's Advocacy Center. Assessment is observational, based on participation each year by students and indicates continuing value of this activity.

Criminal Justice

The Criminal Justice Club participates in the following co-curricular activities:

- Crime Scene
- Distracted Driving
- Crime Solving Simulation
- Host guest speakers/organizations
- Finger printing
- Travel – prisons, local agencies, etc.

Distracted Driving Fall 2023 –

The Distracted Driving event had been moved to the first week of school during the back-to-school organization fair. Due to extreme heat, we decided to move this event to later in the school year when temperatures were safer for students and officers. Attendance was down compared to the previous year. Students were able to interact with officers and other students while participating in field sobriety exercises. Student were assessed by observing their interactions during the simulation and use of in class room topics in the “field.” Overall students did well and were able to bring classroom topics to a co-curricular event. I plan to move this back to the organizational fair event and make no changes at this time.

Crime Scene Fall 2023 –

Students in the Criminal Justice Club participated in a crime scene simulation activity in the Fall 2023. Students recreated a “drug deal turned murder” on the Geyer Hall lawn. The date was specifically chosen to overlap with high school tours as a way to highlight the criminal justice program. Students worked with city and state law enforcement to demonstrate their knowledge and learn from industry professionals. Topics covered included; handling of evidence, legal and ethical considerations during an investigation, and legal terms.

History/National Government

The History and Government departments, in collaboration with the Constitution Day ad hoc Committee, held a college-wide voter registration and participation drive as part of the annual Constitution Day activities. We still have not come up with a great way to assess this activity, but we did help a few students learn how to register to vote and we passed out information to over 25 students. Some students indicated that they had recently discussed voter registration in their PL216 National Government course and had either updated their voter registration or planned to do so soon, which demonstrated good overlap between National Government and the Constitution Day voter registration and participation drive.

Next year, it would be helpful to track responses to gather more concrete data. Since 2024 is a presidential election year, and many people pay more attention to voting in presidential election years, we are also exploring additional ways to help with voter registration and participation information for students so that they know how to access nonpartisan resources.

Occupational Therapy Assisting

The OTA students have opportunities to be involved in co-curricular activities within the program and on a professional level. In the Foundations course, students gain knowledge through lecture content and demonstrate understanding on scheduled OT Hill Day at the Missouri State Capital. The OTA program is involved with the community service projects through their Student OTA club (American Heart Association, CarFit Special Trails, Autism 5k, Backpack Awareness and Wheelchair-Ramp/Revamp). They hosted a virtual handwriting without Tears camp for Pre-K to Second grade campers. They have utilized their 3D printer to develop items to help patients. They all belong to the professional American OT Association (AOTA) as a member. Students also have the opportunity to serve as members or in leadership roles in the Student Organization club. They have the opportunity to act as mentors for the upcoming students.

All of these opportunities for the students allows them to form collaborative relationships and partnerships with community groups and Federal and State opportunities to be involved at all levels. As far as how these are assessed and implemented into the core curriculum, these allow the increase of overall quality of graduates through the use of an on-going professional development evaluation tool to grade the student's professional growth throughout the program. It also allows the students to gain knowledge to bring back to fellow students and participate in discussion with course content.

Practical Nursing

Fall 2023- Both the Savannah and Trenton PN programs chose projects that articulate and exemplify community engagement. The Savannah SPNA completed a hygiene item drive to donate to local shelters. The goal for this project was collection of at least 50 items with the students exceeding that number. Trenton SPNA held a classroom "baby shower" in which students collected diapers, wipes, toys and clothes to help support the needs of our local Life Options group. One-hundred percent student support was received, and the activity was met at a level 3; Students "demonstrate team leadership or initiative in planning activities without being asked." These activities support our program outcomes of Leadership and Professionalism.

Radiologic Technology

The Radiologic Technology students have opportunities to be involved in co-curricular activities within the program and on a professional level. They are required to be active members of the national and state Radiologic Technology organizations (ASRT and MOSRT). They will attend the state conference in April of their senior year. These opportunities allow students to form collaborative relationships and partnerships with community groups at the state and national levels. The assessment used to measure success is the Outcome Assessment Goal 3—Students will demonstrate professionalism (outcome 3.1).

Registered Nursing

Each of the 3 PN to ADN cohorts has conducted a variety of co-curricular activities as part of the Student Nurse Association. The SNA is open to all PN to ADN students, with officers elected annually and meetings held regularly. Each year, the SNA cohorts decide as a group on a service project to complete.

Service projects tie into the curriculum by meeting our program outcome of Professionalism- Model nursing practice using professional, ethical, legal, and humanistic principles within regulatory guidelines.

Co-curricular activities for the 3 Student Nurse Association groups

- Donated 170 items to the Community Food Pantry in Grundy County (goal was 50 items)
- Warm Clothing Drive for Andrew County Schools (goal was 40 items and collected 75)
- Provided hygiene items in men and women's bathroom (goal of 40 items exceeded)

Outcome	Benchmark – level 1	Milestone – level 2	Capstone – level 3
Applies learning from classroom to co-curricular.	Participates in an activity that is directly tied to academic content	Successfully uses knowledge and skills from academic program in activity	Spontaneously demonstrates recognition of connections between curriculum and co-curriculum
Applies learning from co-curricular to classroom.	Participates in an activity that is directly tied to academic content	Successfully uses knowledge and skills from co-curricular activity in the classroom	Spontaneously demonstrates recognition of connections between curriculum and co-curriculum
Articulates and exemplifies community engagement.	Participates in a community or service activity	Engages fully in the activity and demonstrates appreciation of its impact	Demonstrates team leadership or initiative in planning activities without being asked. Connects activity to academic program.
<p>Discussion: The activities completed are related to the overall program outcomes of Teamwork and Collaborations and Leadership and Professionalism. These activities also demonstrate community service to our local area. Students set up their projects and set their own goals for measurement. Overall consensus was full class participation. Students from all programs were able to create and execute projects within their cohorts. There is a question on the exit survey that asks "Provide an example of how engagement in student governance activities has helped you achieve the graduate outcomes for the nursing program. Examples include SNA/SPNA, NCMC Student Government, and community service projects." This question helps to note projects that were completed by the SNA.</p>			

Science

A Geology Club was formed during the fall 2023 semester by two instructors. The club has leaders and is a part of Student Senate. They had several rock hunts and are working on polishing some of the rocks.

Geology Co-Curricular Goals

Upon participation in this club, successful students will be able to...

1. Locate and identify local rocks.
2. Apply techniques in cleaning and polishing rocks.

3. Scientifically classify and display rock specimens.

SUGAR CREEK ROCK HUNT. October 2023. Field trip to a local creek bed known for agates and quartz. Creek bank hunt as well as rock beds throughout the creek. Some have never walked a creek before. Grundy County, Missouri

Outcome #1: Locate a Variety of Rocks 7 participants	Level 1: Gather cool looking rocks.	Level 2: Basic Identification between rock types (for example: sandstone, quartz/quartzlike, fossils)	Level 3: Differentiate between quartz and agate
	100% success. Some students have never walked a creek bank before, so it was exciting.	100% success. Nice rock beds in sugar creek.	50% success rate. This takes practice. Look/feel of rock.
Outcome #2: Make Connections of land formations, rock/fossil implications, animal interactions, plant growth, etc.	Level 1: Walk in the creek bed and notice plants, insects, fish, etc. as well as rocks. (Large growth of equisetum, minnows, frogs)	Level 2: Notice erosion patterns and how that affects water flow, animal life, rock depositions.	Level 3: Apply observations on where you would find specific types of plants, rocks (density), insects, fish(current/depth), etc.
	100% success. Cool equisetum patches. Frogs. Earthworms. Fish.	100% success: Creek bank was fairly eroded. Had to hunt to find appropriate paths to get to the creek bed.	75% success rate. Some members were focused only on rocks.

ON-CAMPUS ROCK HUNT. November 2023. Campus walk in landscape rocks. Nice variety of rocks including lots of quartz and some agates. Goals: 1. Allow more students to participate. Campus did not have the mobility issues that creek beds present. 2. Collect quartz, jasper, agates, etc. to tumble.

Outcome #1: Locate a variety of rocks. 6 participants	Level 1: All collected an assortment of rocks	Level 2: Be able to sight ID quartz	Level 3: Find and ID Jasper
	100%	100%	50%

Teacher Education - SMSTA

Better Women's Conference ---- Professional Learning

Teacher education students were invited to provide childcare for the Better Women's Conference hosted in Trenton, MO. Students planned and implemented stations for the students to participate in.

Students learn about the lesson planning process in their education classes and this helped them be able to apply these techniques when they facilitated their stations during this event. We had 10 students participate in this activity.

Outcome	Benchmark – level 1	Milestone – level 2	Capstone – level 3
Applies learning from classroom to co-curricular.	Participates in an activity that is directly tied to academic content.	Successfully uses knowledge and skills from academic program in activity.	Spontaneously demonstrates recognition of connections between curriculum and co-curriculum.
Applies learning from co-curricular to classroom.	Participates in an activity that is directly tied to academic content.	Successfully uses knowledge and skills from co-curricular activity in the classroom.	Spontaneously demonstrates recognition of connections between curriculum and co-curriculum
Articulates and exemplifies community engagement.	Participates in a community or service activity	Engages fully in the activity and demonstrates appreciation of its impact.	Demonstrates team leadership or initiative in planning activities without being asked. Connects activity to academic program.