

**Course Assessment Report
Washtenaw Community College**

Discipline	Course Number	Title
Nursing	115	NUR 115 05/18/2021- Pharmacology
College	Division	Department
	Health Sciences	Nursing
Faculty Preparer		Mary Burns-Coral
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

Yes
05/17/2019

2. Briefly describe the results of previous assessment report(s).

<p>The entire nursing curriculum changed in 2016-2017 to a concept-based curriculum. While this course continues to teach Pharmacology, it uses the concept-based curriculum and testing policies of the nursing program. Since the department stopped using ATI, we are not able to determine if the intended changes in the last assessment report have succeeded.</p> <p>NUR 115 has always been a challenging but vital course. Students who successfully pass this course appear to do well in their next semester when admitted to or starting the nursing program.</p> <p>The format of the course with Virtual Simulation, quizzes, exams, and discussion boards meets the concept-based curriculum guidelines. However, all the Student Learning Outcomes (SLO) were not met so changes needed to occur in the entire course to improve these three outcomes and meet the needs of the student. These changes include knowledge quizzes for each module to improve student learning. These quizzes may be taken as many times as necessary and does not affect the gradebook.</p> <p>The Master Syllabus needs to be updated. This Course Coordinator would like to add one more SLO to the Master Syllabus. The fourth SLO would link to the three most comprehensive Virtual Simulation Guided Reflection questions (see example</p>

attached) to reflect meeting the QSEN end of program outcomes and the Student Learning Outcomes.

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

1. Adding one more SLO to the Master Syllabus to reflect using three of the more challenging Guided Reflection questions as part of the Assessment Tool.

Note: Another SLO was not added when the Master Syllabus was updated since three SLO's were comprehensive and covered the content of the course. Instead a fourth assessment was added with the most current Master Syllabus update which was the Dosage and Calculation ATI proctored exam. Students in the nursing program were having difficulty with dosage and calculation problems on their exams.

2. Linking the current three SLOs to the Cumulative Final Exam as the Assessment Tool for the course along with the 4th SLO using three of the Guided Reflection Questions.

Note: The current first two SLO's were aligned with the Three Guided Reflection question sets in Blackboard instead of using a 4th SLO as explained in Number One above. The third SLO was aligned with the Cumulative Final Exam and the ATI proctored exam.

3. Changing the language on each SLO on the Master Syllabus to percentage of students (90%) assessed to achieve each SLOs by 78% or higher.

Note: The language on each of the SLO's was not changed to 90% but rather stayed at 75% as many students were concurrently taking Microbiology, Pathophysiology and sometimes even NUR 108 concurrently along with Pharmacology making the outcome of 90% of students achieving 78% or higher almost impossible to achieve.

II. Assessment Results per Student Learning Outcome

Outcome 1: Recognize drug classifications and related prototypes using a pathophysiological approach.

- Assessment Plan
 - Assessment Tool: Outcome-related cumulative final exam questions

- Assessment Date: Spring/Summer 2022
- Course section(s)/other population: All sections
- Number students to be assessed: All students
- How the assessment will be scored: Answer key (Blackboard Exam)
- Standard of success to be used for this assessment: 75% of all students who take these questions on the final exam will score 78% or higher.
- Who will score and analyze the data: Department faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2020	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
188	181

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Five students from Fall 2020 withdrew from the course and two from Winter 2021 withdrew from the course.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.
One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Eleven cumulative final exam questions were aligned with this Student Learning Outcome (SLO) and measured using Blackboard Course Reports.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this

learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The total outcome average for Fall 2020 and Winter 2021 was 91% that scored 78% or higher.

The standard of success was met.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The majority of students in Fall 2020 (93%) and Winter 2021 (82%) were able to recognize drug classifications and drug prototypes using a pathophysiological approach based on these eleven questions on the Cumulative Final Exam.

Students were strong in this outcome.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students need more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this SLO.

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLOs in Winter 2021.

Outcome 1: Recognize drug classifications and related prototypes using a pathophysiological approach.

- Assessment Plan
 - Assessment Tool: Three outcome-related Guided/Documentation Reflection question sets
 - Assessment Date: Spring/Summer 2022
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: A grading rubric will score the Guided Reflection/Documentation question sets.

- Standard of success to be used for this assessment: 90% of all students who submit the Guided Reflection/Documentation question sets will score 78% or higher.
- Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2020	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
188	181

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Five students from Fall 2020 withdrew from the course and two from Winter 2021 withdrew from the course.
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4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment. One hundred and sixty-eight students were in DL sections.
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5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Three Virtual Simulation Guided Reflection question sets were aligned with this Student Learning Outcome (SLO) and measured using Blackboard Course Reports.
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6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: <u>Yes</u>
The Fall 2020 and Winter 2021 total outcome average was 90.6% that scored 78% or higher.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The majority of students in Fall 2020 (93%) and Winter 2021 (82%) were able to recognize drug classifications and drug prototypes using a pathophysiological approach based on these eleven questions on the Cumulative Final Exam.

Students were strong in this outcome.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students need more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this SLO.

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLOs in Winter 2021.

Outcome 1: Recognize drug classifications and related prototypes using a pathophysiological approach.

- Assessment Plan
 - Assessment Tool: ATI Dosage Calculation Fundamentals Proctored Exam
 - Assessment Date: Spring/Summer 2022
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: External evaluation by ATI Assessment Technologies LLC.
 - Standard of success to be used for this assessment: 80% of students will score Level I or Level II or higher on the exam.
 - Who will score and analyze the data: ATI Assessment Technologies LLC will score and Course Coordinator will analyze the data.
1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
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	2021	
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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
100	89

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Two students withdrew from the course in Winter 2021. ATI testing was not part of the curriculum for Fall 2020.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.
One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Eighty-nine students out of 96 students from Winter 2021 cohort were assessed using a proctored ATI Fundamentals Dosage and Calculation Exam in the last 1-2 weeks of the course. ATI scored each student's test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes
Ninety-three percent of the Winter 2021 cohort (89 of 96 students) scored an average of 92.8%.
Note: ATI does not level their proctored Dosage and Calculation exams but rather gives an average for each cohort.
The standard of success was met for the Winter 2021 cohort.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

The majority of students in Fall 2020 (93%) and Winter 2021 (82%) were able to recognize drug classifications and drug prototypes using a pathophysiological approach based on these eleven questions on the Cumulative Final Exam.

Students were strong in this outcome.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students need more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this SLO.

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLOs in Winter 2021.

Outcome 2: Recognize the pharmacodynamics, pharmacokinetics, and pharmacotherapeutics of each prototype and apply to patient situations.

- Assessment Plan
 - Assessment Tool: Outcome-related cumulative final exam questions
 - Assessment Date: Spring/Summer 2022
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Answer key (Blackboard Exam)
 - Standard of success to be used for this assessment: 75% of all students who take these questions on the final exam will score 78% or higher.
 - Who will score and analyze the data: Department faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2020	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
188	181

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Five students from Fall 2020 withdrew from the course and two from Winter 2021 withdrew from the course.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.

One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Twenty-three questions on the Cumulative Final Exam were aligned with this Student Learning Outcome (SLO) and measured using Blackboard Course Reports.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

The Fall 2020 and Winter 2021 outcome average was 74.4%.

The standard of success was not met.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Six out of seven cohorts were able to achieve this outcome on the Guided Reflection Question sets which demonstrates their knowledge of how to apply these concepts to patient situations.

All four of the Winter 21 cohorts scored 91% or higher on the Dosage and Calculation Proctored ATI exams. The seven ATI Dosage and Calculation modules and tests in the Winter 2021 semester assisted the students in achieving this goal.

Three out of the seven cohorts were able to achieve this outcome on the cumulative final exam. This is an improvement from the previous course assessment on these NCLEX style application type questions.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students need more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this Student Learning Outcome (SLO's).

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLO's in Winter 2021.

Faculty teaching this course in Winter of 2021 recognized that at least 80% of students were obtaining their answers to all of the ATI tests from outside sources and students were not spending the minimum recommended amount of time on the lessons and the tests.

ATI was made aware of what happened in Winter of 2021 and will be working on changing their questions and investigating those outside sources.

Syllabus was changed in Spring/Summer of 2021 to decrease the weight of the ATI Module lessons and tests and also require the minimum amount of recommended time on lessons and tests as part of their grade.

While the students did not meet the standard of success using the Cumulative Final Exam questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

Outcome 2: Recognize the pharmacodynamics, pharmacokinetics, and pharmacotherapeutics of each prototype and apply to patient situations.

- Assessment Plan
 - Assessment Tool: Three outcome-related Guided Reflection question sets
 - Assessment Date: Spring/Summer 2022
 - Course section(s)/other population: All sections

- Number students to be assessed: All Students
- How the assessment will be scored: A grading rubric will score the Guided Reflection question sets.
- Standard of success to be used for this assessment: 90% of all students who submit the Guided Reflection question sets will score 78% or higher.
- Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2020	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
188	181

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Five students from Fall 2020 withdrew from the course and two from Winter 2021 withdrew from the course.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.
One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Three Guided Reflection question sets from Virtual Simulation were aligned with this Student Learning Outcome (SLO) and measured using Blackboard Course Reports.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

The Fall 2020 to Winter 2021 total outcome average was 90.6%

The standard of success was met.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Six out of seven cohorts were able to achieve this outcome on the Guided Reflection Question sets which demonstrates their knowledge of how to apply these concepts to patient situations.

All four of the Winter 21 cohorts scored 91% or higher on the Dosage and Calculation Proctored ATI exams. The seven ATI Dosage and Calculation modules and tests in the Winter 2021 semester assisted the students in achieving this goal.

Three out of the seven cohorts were able to achieve this outcome on the cumulative final exam. This is an improvement from the previous course assessment on these NCLEX style application type questions.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students need more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this Student Learning Outcome (SLO's).

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLO's in Winter 2021.

Faculty teaching this course in Winter of 2021 recognized that at least 80% of students were obtaining their answers to all of the ATI tests from outside sources and students were not spending the minimum recommended amount of time on the lessons and the tests.

ATI was made aware of what happened in Winter of 2021 and will be working on changing their questions and investigating those outside sources.

Syllabus was changed in Spring/Summer of 2021 to decrease the weight of the ATI Module lessons and tests and also require the minimum amount of recommended time on lessons and tests as part of their grade.

While the students did not meet the standard of success using the Cumulative Final Exam questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

Outcome 2: Recognize the pharmacodynamics, pharmacokinetics, and pharmacotherapeutics of each prototype and apply to patient situations.

- Assessment Plan
 - Assessment Tool: ATI Dosage and Calculation Fundamentals Proctored Exam
 - Assessment Date: Spring/Summer 2022
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: External evaluation by ATI Assessment Technologies LLC.
 - Standard of success to be used for this assessment: 80% of students will score Level I or Level II or higher on the exam.
 - Who will score and analyze the data: ATI Assessment Technologies LLC will score and Course Coordinator will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
100	89

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Two students withdrew from the course in Winter 2021. ATI testing was not part of the curriculum for Fall 2020.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.

One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

ATI Testing was not a part of the entire Fall 2020 cohort.

Eighty-nine students who took the exam of the ninety-six students from Winter 2021 cohort were assessed using a proctored ATI Fundamentals Dosage and Calculation Exam. ATI scored each students test.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

Ninety-three percent of the Winter 2021 cohort (89 of 96 students) scored an average of 92.8% on the proctored Fundamentals Dosage and Calculation Exam.

Note: ATI does not level their proctored Dosage and Calculation exams but rather gives an average for each cohort.

The SLO was met for the Winter 2021 cohort.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Six out of seven cohorts were able to achieve this outcome on the Guided Reflection Question sets which demonstrates their knowledge of how to apply these concepts to patient situations.

All four of the Winter 21 cohorts scored 91% or higher on the Dosage and Calculation Proctored ATI exams. The seven ATI Dosage and Calculation modules and tests in the Winter 2021 semester assisted the students in achieving this goal.

Three out of the seven cohorts were able to achieve this outcome on the cumulative final exam. This is an improvement from the previous course assessment on these NCLEX style application type questions.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students need more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this Student Learning Outcome (SLO's).

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLO's in Winter 2021.

Faculty teaching this course in Winter of 2021 recognized that at least 80% of students were obtaining their answers to all of the ATI tests from outside sources and students were not spending the minimum recommended amount of time on the lessons and the tests.

ATI was made aware of what happened in Winter of 2021 and will be working on changing their questions and investigating those outside sources.

Syllabus was changed in Spring/Summer of 2021 to decrease the weight of the ATI Module lessons and tests and also require the minimum amount of recommended time on lessons and tests as part of their grade.

While the students did not meet the standard of success using the Cumulative Final Exam questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

Outcome 3: Recognize nursing considerations along with safety implications and drug dosage calculations for prototypical drugs in each classification and apply to patient situations.

- Assessment Plan
 - Assessment Tool: Outcome-related cumulative final exam questions
 - Assessment Date: Spring/Summer 2022
 - Course section(s)/other population: All sections

- Number students to be assessed: All students
- How the assessment will be scored: Answer key (Blackboard Exam)
- Standard of success to be used for this assessment: 75% of all students who take these questions on the final exam will score 78% or higher.
- Who will score and analyze the data: Department faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2020	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
188	181

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Five students from Fall 2020 withdrew from the course and two from Winter 2021 withdrew from the course.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.

One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Twenty-six questions cumulative final questions were aligned with this Student Learning Outcome (SLO) and measured using Blackboard Course Reports.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

The Fall 2020 to Winter 2021 total outcome average was 72.9%.

The standard of success was not met.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

All four of the Winter 21 cohorts scored 91% or higher on the Dosage and Calculation Proctored ATI exams. The seven ATI Dosage and Calculation modules and tests in Winter 21 semester assisted the students in achieving this goal.

One out of seven cohorts were able to achieve 78% or higher on the cumulative final exam.

Students are challenged by these application style questions on the Cumulative Final Exam since they are all new questions.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students needed more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this Student Learning Outcome (SLO's).

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLO's in Winter 2021.

Faculty teaching this course in Winter of 2021 recognized that at least 80% of students were obtaining their answers to all of the ATI tests from outside sources and students were not spending the minimum recommended amount of time on the lessons and the tests.

ATI was made aware of what happened in Winter of 2021 and will be working on changing their questions and investigating those outside sources.

Syllabus was changed in Spring/Summer of 2021 to decrease the weight of the ATI Module lessons and tests and also require the minimum amount of recommended time on lessons and tests as part of their grade.

While the students did not meet the standard of success using the Cumulative Final Exam questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

Outcome 3: Recognize nursing considerations along with safety implications and drug dosage calculations for prototypical drugs in each classification and apply to patient situations.

- Assessment Plan
 - Assessment Tool: ATI Dosage Calculation Fundamentals Proctored Exam
 - Assessment Date: Fall 2022
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: External evaluation by ATI Assessment Technologies LLC
 - Standard of success to be used for this assessment: 80% of students will score Level I or Level II or higher on the exam
 - Who will score and analyze the data: ATI Assessment Technologies LLC will score and Course Coordinator will analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
	2021	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
100	89

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Five students from Fall 2020 withdrew from the course and two from Winter 2021 withdrew from the course.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

Thirteen students were in a weekly virtual environment.

One hundred and sixty-eight students were in DL sections.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

ATI Testing was not a part of the entire Fall 2020 cohort.

Eighty-nine students out of 96 in Winter 2021 students were assessed using a proctored ATI Fundamentals Dosage and Calculation Exam in the last 1-2 weeks of the course. ATI scored each students exam.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: Yes

Ninety-three percent (89 of 96 students) of the Winter 2021 cohort scored an average of 92.8% on the proctored Fundamentals Dosage and Calculation Exam.

Note: ATI does not level their Dosage and Calculation Exams but rather uses an average for a cohort.

The SLO was met for the Winter 2021 cohort.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

All four of the Winter 21 cohorts scored 91% or higher on the Dosage and Calculation Proctored ATI exams. The seven ATI Dosage and Calculation modules and tests in Winter 21 semester assisted the students in achieving this goal.

One out of seven cohorts were able to achieve 78% or higher on the cumulative final exam.

Students are challenged by these application style questions on the Cumulative Final Exam since they are all new questions.

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8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of online material. Synthesis videos and PowerPoints were added in Fall of 2019 but students needed more application style practice questions along with physiological system reviews to prepare students for the higher-level thinking required to strengthen this Student Learning Outcome (SLO's).

ATI Modules and tests specific to Pharmacology and Dosage and Calculation were added to enhance SLO's in Winter 2021.

Faculty teaching this course in Winter of 2021 recognized that at least 80% of students were obtaining their answers to all of the ATI tests from outside sources and students were not spending the minimum recommended amount of time on the lessons and the tests.

ATI was made aware of what happened in Winter of 2021 and will be working on changing their questions and investigating those outside sources.

Syllabus was changed in Spring/Summer of 2021 to decrease the weight of the ATI Module lessons and tests and also require the minimum amount of recommended time on lessons and tests as part of their grade.

While the students did not meet the standard of success using the Cumulative Final Exam questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

The changes of incorporating the ATI Dosage and Calculation Module lessons/practice tests and Dosage and Calculation proctored exam were beneficial for the Winter 2021 students in attaining confidence in their ability to calculate drug doses safely.

This should enable those students to be confident in their calculation skills throughout the entire nursing curriculum. Linking the first two SLOs with the

Guided Reflection question sets are beneficial by increasing critical thinking and clinical judgment which is required for nursing students to be successful on the NCLEX style exam questions throughout the nursing curriculum.

Students are challenged academically when taking microbiology, pathophysiology, and sometimes Nursing Concepts I along with pharmacology which is the rationale for not changing the percentage of students to 90% achieving the Student Learning Outcomes.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

The Student Learning Outcomes (SLO) were not met so changes need to be made in the entire course to improve two of the three SLOs. Knowledge quizzes were added previously for each module but only a few students utilized these each semester as a study guide.

ATI Pharmacology Made Easy and Dosage and Calculation Modules were added in Winter in 2021.

The Master Syllabus needs to be updated to include requiring Microbiology and Pathophysiology be taken prior to taking Pharmacology to improve two of the three SLO's.

The Guided Reflection Questions sets need to be revised to include more critical thinking and clinical judgment questions to increase the student's understanding of nursing assessments and nursing interventions for the Cumulative Final Exam questions.

The first two SLOs should not be linked with the Assessment Tool which is the ATI Dosage and Calculation Fundamentals proctored exam since the third SLO is the only outcome linked to dosage and calculation.

The Assessment Tool which is the ATI Dosage and Calculation Fundamentals proctored exam should be changed to state that 90% of the students taking this proctored exam will score 90% or higher as the measurement of success instead of a Level I or Level II on the exam since ATI does not use this leveling for all of their Dosage and Calculation proctored exams.

Decreasing the number of Cumulative Final Exam questions used to evaluate the SLOs to between five to eight questions per SLO is recommended instead of using all the questions on the Cumulative Final Exam.

The co-requisite requirement for Microbiology and Pathophysiology should be changed to a pre-requisite with a B- average similar to anatomy and physiology to improve student understanding of this course's SLOs.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This course assessment will be shared in the Fall 2021 Nursing Faculty meeting.

- 4.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	ATI Dosage and Calculation Fundamentals proctored exam requirement should state that 90% of the students taking this proctored exam will attain a score of 90% or higher instead of a Level I or Level II. This exam should also be removed from SLO #1 and SLO#2 as an assessment tool.	ATI does not level any of their Dosage and Calculation Proctored exams. SLO #1 and SLO #2 are not linked to the student's ability to successfully and safely calculate dosage and calculation questions, only SLO #3.	2022
Pre-requisite	Require that Microbiology and Pathophysiology must be taken prior to taking Pharmacology and be passed with a B-average.	Students taking NUR 115 Pharmacology now only have two opportunities to pass this challenging nursing course. Requiring Microbiology and Pathophysiology	2022

		prior to taking this course and requiring a B-average will increase student's knowledge base and help them be more successful in comprehending Pharmacological concepts. This requirement is in-line with the anatomy and physiology requirement.	
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5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

- [W21 NUR 115 Dosage & Calculation Data](#)
- [F20-W21 Section Report Assessments](#)
- [NUR 115 F20-W21 Course Assessment Data](#)

Faculty/Preparer: Mary Burns-Coral **Date:** 07/06/2021
Department Chair: Theresa Bucy **Date:** 07/06/2021
Dean: Valerie Greaves **Date:** 07/08/2021
Assessment Committee Chair: Shawn Deron **Date:** 10/28/2021

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Nursing	115	NUR 115 05/17/2019- Pharmacology
Division	Department	Faculty Preparer
Health Sciences	Nursing	Mary Burns-Coral
Date of Last Filed Assessment Report		

I. Review previous assessment reports submitted for this course and provide the following information.

1. Was this course previously assessed and if so, when?

Yes

06/03/13

2. Briefly describe the results of previous assessment report(s).

The assessment used the NUR 115 Course Student Learning Outcomes from a previous Master Syllabus from Fall 2011 to Fall 2016.

Summary: "Students who successfully pass NUR 115 appear to do well in the next semester of the program, specifically their first medical-surgical nursing course sequence. When comparing student performance on the Pharmacology ATI 2007 version with the 2010 version, the percentage was much higher on the earlier version (F09-SS11). There was not a strong relationship between comprehensive departmental final exam and the standardized ATI test (i.e. Sp/Sum 2011). Students who took the DL section of NUR 115 scored significantly lower on the standardized ATI test (W12, SS12). NUR 115 continues to be a challenging but vital course. Since this is required early in the APNURS program (Semester 2), and much later in the APNURE program, it would be interesting to see if there is a difference in student performance between programs."

3. Briefly describe the Action Plan/Intended Changes from the previous report(s), when and how changes were implemented.

Action Plan:

* Discuss areas of weakness (i.e. neurological pharmacology) among all NUR 115 faculty and determine strategies to reinforce this content in Fall of 2013.

* Continue to compare student outcomes for F2F vs DL sections.

* Monitor for changes in ATI scores starting in F12 with the implementation of the new ATI policy for Nursing program.

No changes intended.

How Changes were Implemented:

* All faculty teaching NUR 115 were made aware of neurological pharmacology weakness and the course content was strengthened for the neurological content.

* ATI Testing was eliminated as an assessment of the NUR 115 course student learning outcome in Fall of 2016 as well as in all of the nursing courses due to a new concept-based curriculum in Fall 2016.

* Faculty teaching NUR 115 continued to evaluate outcomes between the F2F and DL sections by examining the results of the cumulative final exam. The cumulative final exam percentage was increased each year. Virtual Simulation was also introduced as the application part of the content.

II. Assessment Results per Student Learning Outcome

Outcome 1: Recognize drug classifications and related prototypes using a pathophysiological approach.

- Assessment Plan
 - Assessment Tool: Comprehensive Departmental Exam
 - Assessment Date: Spring/Summer 2017
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students (~120)
 - How the assessment will be scored: Exam will be scored using the answer key (Par test/Blackboard exams).
 - Standard of success to be used for this assessment: 90% of all students who take this exam will score 78% or higher.
 - Who will score and analyze the data: Department Faculty
1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
235	110

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students in both Fall 2018 face to face and online sections and one online section in the Winter 2019 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

In Fall of 2018, students from both face-to-face and online sections were assessed. In Winter of 2019, there was one section of F2F and four online sections, but the data was not available for this group of students, so only one section of online students was assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Cumulative Final Exam: 11 questions/60 questions applied to SLO #1 and were scored using an answer key.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No
Fall 2018: 91% of students achieved 78% or higher for SLO #1.
Winter 2019: 76% of students achieved 78% or higher for SLO #1.
The standard was not met. However, per our nursing testing policy, the exams gradually have more application style questions for the final exam, and the final exam is cumulative.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students are starting to gain the complex thinking skills needed to answer application-style questions to enable them to enter the nursing program or proceed

to other nursing courses.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of drug classifications for the prototypes to improve their learning.

Drug classification knowledge questions have been added to the master course to improve student learning. These knowledge quizzes may be taken as many times as necessary and are not part of the gradebook.

While the students did not meet the standard of success using the cumulative final test questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

The reason they have difficulty with the cumulative final exam is because they are learning the information and how to express it in NCLEX-RN related questions. It is essential to use these application style exam questions to prepare them for success in the nursing program.

Outcome 2: Recognize the pharmacodynamics, pharmacokinetics, and pharmacotherapeutics of each prototype and apply to patient situations.

- Assessment Plan
 - Assessment Tool: Comprehensive Departmental Exam
 - Assessment Date: Spring/Summer 2017
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students (~120)
 - How the assessment will be scored: Exam will be scored using the answer key (Par test/Blackboard exams).
 - Standard of success to be used for this assessment: 90% of all students who take this exam will score 78% or higher.
 - Who will score and analyze the data: Department Faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
235	110

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students in both Fall 2018 face to face and online sections and one online section in the Winter 2019 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

In Fall of 2018, students from both face-to-face and online sections were assessed. In Winter of 2019, there was one section of F2F and four online sections, but the data was not available for this group of students, so only one section of online students was assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Cumulative Final Exam: 23 questions/60 questions applied to SLO #2 and were scored using an answer key.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

Fall 2018: 50% of students achieved 78% or higher for SLO #2.

Winter 2019: 53% of students achieved 78% or higher for SLO #2.

The standard was not met. However, per our nursing testing policy, the exams gradually have more application style questions for the final exam and the final exam is cumulative.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students are starting to gain the complex thinking skills needed to answer application-style questions to enable them to enter the nursing program or proceed to other nursing courses.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Students need more reinforcement of the pharmacokinetics, pharmacotherapeutics, and pharmacodynamics for each prototype to improve their learning. Knowledge check quizzes have been added to each medication module for the online and face to face sections to reinforce the pharmacokinetics, pharmacodynamics, and pharmacotherapeutics for each drug prototype to improve knowledge retention.

While the students did not meet the standard of success using the cumulative final test questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

The reason they have difficulty with the cumulative final exam is because they are learning the information and how to express it in NCLEX-RN related questions. It is essential to use this application style exam questions to prepare them for success in the nursing program.

Outcome 3: Recognize nursing considerations along with safety implications and drug dosage calculations for prototypical drugs in each classification and apply to patient situations.

- Assessment Plan
 - Assessment Tool: Comprehensive Departmental Exam
 - Assessment Date: Spring/Summer 2017
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students (~120)
 - How the assessment will be scored: Exam will be scored using the answer key (Par test/Blackboard exams)
 - Standard of success to be used for this assessment: 90% of all students who take this exam will score 78% or higher.
 - Who will score and analyze the data: Department Faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2018	2019	

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
235	110

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

All students in both Fall 2018 face to face and online sections and one online section in the Winter 2019 were assessed.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

In Fall of 2018, students from both face-to-face and online sections were assessed. In Winter of 2019, there was one section of F2F and four online sections, but the data was not available for this group of students, so only one section of online students was assessed.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Cumulative Final Exam: 26 questions/60 questions applied to SLO # 3 and were scored using an answer key.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

Fall 2018: 48% of students achieved 78% or higher on SLO #3.

Winter 2019: 41% of students achieved 78% or higher on SLO #3.

The standard was not met. However, per our nursing testing policy, the exams gradually have more application style questions for the final exam and the final exam is cumulative.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Students are starting to gain the complex thinking skills needed to answer application-style questions to enable them to enter the nursing program or proceed to other nursing courses.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Nursing considerations, safety implications, and drug dose calculations have been added to the knowledge quizzes for each module to improve student learning. These knowledge quizzes are not part of the gradebook.

While the students did not meet the standard of success using the cumulative final test questions, there is other evidence in the course that they do understand the concepts and are attaining the knowledge to be successful.

The reason they have difficulty with the cumulative final exam is because they are learning the information and how to express it in NCLEX-RN related questions. It is essential to use these application-style exam questions to prepare them for success in the nursing program.

Students need more reinforcement of the nursing considerations for each prototype. More reinforcement is needed for the drug dose calculations. Working on developing knowledge check quizzes in each module for the online and face to face sections which clearly describe the nursing considerations they should recognize for every prototype. I am also including practice drug dose calculations for each module.

III. Course Summary and Intended Changes Based on Assessment Results

1. Based on the previous report's Intended Change(s) identified in Section I above, please discuss how effective the changes were in improving student learning.

The entire nursing curriculum changed in 2016-2017 to a concept-based curriculum. While this course continues to teach Pharmacology, it uses the concept-based curriculum and testing policies of the nursing program. Since the department stopped using the ATI, we are not able to determine if the intended changes in the last assessment report have succeeded.

NUR 115 has always been a challenging but vital course. Student who successfully pass this course appear to do well in their next semester when admitted or starting the nursing program.

2. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

The format of the course with Virtual Simulation, quizzes, exams, and discussion boards meets the concept-based curriculum guidelines. However, all the Student Learning Outcomes (SLO) were not met so changes need to occur in the entire course to improve these three outcomes and meet the needs of the student. These changes include knowledge quizzes for each module to improve student learning. These quizzes may be taken as many times as necessary and does not affect the gradebook.

The Master Syllabus needs to be updated. This Course Coordinator would like to add one more SLO to the Master Syllabus. The fourth SLO would link to the three most comprehensive Virtual Simulation Guided Reflection questions (see example attached) to reflect meeting the QSEN end of program outcomes and the Student Learning Outcomes.

3. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

This course assessment will be shared in the Fall of 2019 at the August or September 2019 Nursing Faculty Meeting.

4. Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
Assessment Tool	<p>1. Adding one more SLO to the Master Syllabus to reflect using three of the more challenging Guided Reflection questions as part of the Assessment Tool.</p> <p>2. Linking the current three SLOs to the Cumulative</p>	Using individual SLOs is a more effective way to assess this course instead of just the total score on a Cumulative Final Exam.	2019

	<p>Final Exam as the Assessment Tool for course along with the 4th SLO using three of the Guided Reflection Questions.</p> <p>3. Changing the language on each SLO on the Master Syllabus to percentage of students (90%) assessed to achieve each SLOs by 78% or higher.</p>		
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5. Is there anything that you would like to mention that was not already captured?

6.

III. Attached Files

- [Fall 2018 SLO #3 Outcome Results](#)
- [Sample Patient Guided Reflection Questions](#)
- [Fall 2018 SLO #1 Outcome Results](#)
- [Winter 2019 SLO #1 Outcome Results](#)
- [Fall 2018 SLO #2 Outcome Results](#)
- [Winter 2019 SLO #2 Outcome Results](#)
- [Winter 2019 SLO #3 Outcome Results](#)

Faculty/Preparer: Mary Burns-Coral **Date:** 07/02/2019
Department Chair: Theresa Bucy **Date:** 08/01/2019
Dean: Valerie Greaves **Date:** 08/07/2019
Assessment Committee Chair: Shawn Deron **Date:** 08/29/2019

Course Assessment Report
Washtenaw Community College

Discipline	Course Number	Title
Nursing	115	NUR 115 03/14/2013- Pharmacology
Division	Department	Faculty Preparer
Math, Science and Health	Nursing & Health Science	Gloria Velarde
Date of Last Filed Assessment Report		

I. Assessment Results per Student Learning Outcome

Outcome 1: Recognize drug classifications and related prototypes.

- Assessment Plan
 - Assessment Tool: Assessment Technologies Institute, LLC - Pharmacology Exam
 - Assessment Date: Spring/Summer 2012
 - Course section(s)/other population: APNURS students in all sections
 - Number students to be assessed: ~ 80/year APNURS students comprise about 1/2 of all students who enroll in NUR 115.
 - How the assessment will be scored: Assessment Technologies Institute (ATI) scores the standardized test and provides an item analysis to the instructor.
 - Standard of success to be used for this assessment: 75 percent of all APNURS students will achieve a score at or above the Proficiency Level 2 on the ATI Pharmacology test on their first attempt.
 - Who will score and analyze the data: ATI scores the exam and the NUR 115 Course Coordinator will then analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2011, 2010, 2009	2012, 2011, 2010	2012, 2011, 2010

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
490	274

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Only students who successfully completed the course per Nursing Program standards (overall 78%) were given this tool.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All APNURS and APNURE students who successfully completed NUR 115 in all sections offered.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Proctored assessment - Description (per Assessment Technologies Institute): This 60-item test offers an assessment of the student's basic comprehension and mastery of pharmacologic principles and knowledge of prototype drugs. Concepts assessed include: basic pharmacologic principles (pharmacodynamics, pharmacokinetics, safe medication administration, medication error prevention, age specific considerations) and knowledge related to the safe administration and monitoring of prototype drugs that are used to treat infections, pain and inflammation; as well as those that affect the immune, nervous, cardiovascular, respiratory, renal, digestive, endocrine, reproduction systems and the blood. The student has 65 minutes to complete this assessment. (Two forms of this assessment are available.)

Scored by: ATI

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

- o Fall 2009 - 43 took ATI / 27 met benchmark = 62.7%
- o Winter 2010 - 21 took ATI / 12 met benchmark = 57.1%
- o SpSum 2010 - 29 took ATI / 11 met benchmark = 37.9%
- o Fall 2010 - 34 took ATI / 15 met benchmark = 44.1%
- o Winter 2011 - 37 took ATI / 21 met benchmark = 56.8%
- o SpSum 2011 - 26 took ATI / 9 met benchmark = 34.6%
- o Fall 2011 - 41 took ATI / 14 met benchmark = 34.1%
- o Winter 2012 - 21 took ATI / 8 met benchmark = 38.1%
- o SpSum 2012 - 22 took ATI / 8 met benchmark = 36.4%

Overall, for nine (9) semesters, 45.6% scored at proficiency level 2

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Only the Comprehensive Department final exam tests knowledge of drug classifications. When looking at the item analysis, students do well with these test questions as it evaluates learning at the knowledge level. Due to the huge number of medications used in practice, recognizing classifications for specific prototypes is a more realistic approach to learning.

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections performed very similar to F2F sections (76.7% and 76.3%, respectfully) on final exam.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Consider the number of questions which ask students to match prototype with correct classification - i.e. reduction in order to assess higher level learning since these are the types of questions that will appear on the NCLEX-RN. Since Winter 2012, we limited drug classifications to only those addressing drugs for new material covered since prior unit exam (i.e. reduced classification questions from 30 to 5).

There needs to be a detailed item analysis of the final exam questions to identify those areas that a larger percentage of students missed. It was difficult to do this between DL and F2F sections since DL administers the final on Blackboard and F2F using PAR tests.

Outcome 1: Recognize drug classifications and related prototypes.

- Assessment Plan
 - Assessment Tool: Comprehensive Departmental Exam
 - Assessment Date: Fall 2012
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students
 - How the assessment will be scored: Exam will be scored using the answer key.
 - Standard of success to be used for this assessment: 90% of all students who take this exam will score 78% or higher.
 - Who will score and analyze the data: Departmental faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
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2011, 2010, 2009	2012, 2011, 2010	2012, 2011, 2010
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2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
490	449

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Early drops/withdrawals

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students in all sections that remained in course when final exam was given.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Cumulative final exam - answer key (departmentally-developed)
 The final exam was collaboratively developed by two (2) NUR 115 instructors in an effort to have a common final for assessment consistency. This is a 103-item exam.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

- o Fall 2009 - 52 took final / 36 met benchmark = 69.2%
- o Winter 2010 - 51 took final / 40 met benchmark = 78.4%
- o SpSum 2010 - 56 took final / 44 met benchmark = 78.6%
- o Fall 2010 - 51 took final/ 27 met benchmark = 52.9%
- o Winter 2011 - 62 took final / 53 met benchmark = 85.5%
- o SpSum 2011 - 43 took final / 41 met benchmark = 95.3%
- o Fall 2011 - 53 took final / 14 met benchmark = 73.6%
- o Winter 2012 - 39 took final / 28 met benchmark = 71.8%
- o SpSum 2012 - 42 took final / 34 met benchmark = 80.9%

Overall, for nine (9) semesters, 76.2% scored 78 percent or higher on the cumulative final. Standard of success (90%) was met in 1 of 9 semesters.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

Only the Comprehensive Department final exam tests knowledge of drug classifications. When looking at the item analysis, students do well with these test questions as it evaluates learning at the knowledge level. Due to the huge number of medications used in practice, recognizing classifications for specific prototypes is a more realistic approach to learning.

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections performed very similar to F2F sections (76.7% and 76.3%, respectfully) on final exam.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Consider the number of questions which ask students to match prototype with correct classification - i.e. reduction in order to assess higher level learning since these are the types of questions that will appear on the NCLEX-RN. Since Winter 2012, we limited drug classifications to only those addressing drugs for new material covered since prior unit exam (i.e. reduced classification questions from 30 to 5).

There needs to be a detailed item analysis of the final exam questions to identify those areas that a larger percentage of students missed. It was difficult to do this between DL and F2F sections since DL administers the final on Blackboard and F2F using PAR tests.

Outcome 2: Recognize the effects of each prototype on disorders and diseases in each body system.

- Assessment Plan
 - Assessment Tool: Assessment Technologies Institute, LLC - Pharmacology Exam
 - Assessment Date: Spring/Summer 2012
 - Course section(s)/other population: All APNURS students enrolled in all sections
 - Number students to be assessed: ~ 80/year APNURS students comprise about 1/2 of all students who enroll in NUR 115.
 - How the assessment will be scored: Assessment Technologies Institute (ATI) scores the standardized test and provides an item analysis to the instructor.
 - Standard of success to be used for this assessment: 75 percent of all APNURS students will achieve a score at or above the Proficiency Level 2 on the ATI Pharmacology test on their first attempt.
 - Who will score and analyze the data: ATI scores the exam and the NUR 115 Course Coordinator will then analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2011, 2010, 2009	2012, 2011, 2010	2012, 2011, 2010

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
490	274

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Only students who successfully completed the course per Nursing Program standards (overall 78%) were given this tool.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All APNURS and APNURE students who successfully completed NUR 115 in all sections offered.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Proctored assessment - Description (per Assessment Technologies Institute): This 60-item test offers an assessment of the student's basic comprehension and mastery of pharmacologic principles and knowledge of prototype drugs. Concepts assessed include: basic pharmacologic principles (pharmacodynamics, pharmacokinetics, safe medication administration, medication error prevention, age specific considerations) and knowledge related to the safe administration and monitoring of prototype drugs that are used to treat infections, pain and inflammation; as well as those that affect the immune, nervous, cardiovascular, respiratory, renal, digestive, endocrine, reproduction systems and the blood. The student has 65 minutes to complete this assessment. (Two forms of this assessment are available.)

Scored by: ATI

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

- o Fall 2009 - 43 took ATI / 27 met benchmark = 62.7%
- o Winter 2010 - 21 took ATI / 12 met benchmark = 57.1%

- SpSum 2010 - 29 took ATI / 11 met benchmark = 37.9%
- Fall 2010 - 34 took ATI / 15 met benchmark = 44.1%
- Winter 2011 - 37 took ATI / 21 met benchmark = 56.8%
- SpSum 2011 - 26 took ATI / 9 met benchmark = 34.6%
- Fall 2011 - 41 took ATI / 14 met benchmark = 34.1%
- Winter 2012 - 21 took ATI / 8 met benchmark = 38.1%
- SpSum 2012 - 22 took ATI / 8 met benchmark = 36.4%

Overall, for nine (9) semesters, 45.6% scored at proficiency level 2

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

ATI Tests

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were sixteen (16) items that students performed best (70% or more answered the item correctly) for topics in the following:

- Basic concepts - dosage calculations - 3 items (out of 5) *
- CV/Uro - 6 items (out of 19) **
- Respiratory - 2 items (out of 5)
- Neuro - 2 items (out of 14)
- Bone/Joint - 1 item (out of 3)
- Immune - 1 item (out of 9)
- Eye/Ear - 1 item (out of 1)

Strongest areas noted to be CV and basic concepts.

Comprehensive departmental exam

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections performed very similar to F2F sections (76.7% and 76.3%, respectfully) on final exam.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Understanding drug actions relies on prior A&P and pathophysiology

knowledge. Some students take these courses > 2 yrs before taking course, therefore, retention of the sciences may be a factor in not meeting the course benchmarks.

ATI Tests

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections significantly lower as compared to F2F sections (55.6% and 29.4%, respectfully) on the standardized Pharmacology ATI test.

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were 25 items of the 60-item test that were missed by >50% of students. These fell within the following body systems:

- Neuro (CNS) - 12 items (out of 14) **
- CV/Uro - 4 items (out of 19)
- Immune - 4 items (out of 9) *
- Endocrine - 2 items (out of 3)
- Respiratory - 2 items (out of 5)
- Bone/Joint - 1 item (out of 3)

It will be important to highlight/emphasize those areas in class (2 top areas marked with asterisk based on percentage of all items in a specific body system). *Note: It was difficult to determine full extent of weakness in those systems with limited questions on the standardized test. There have been trials of breaking the Neurological content in the F2F sections into more exams.

Comprehensive departmental exam:

There needs to be a detailed item analysis of the final exam questions to identify those areas that a larger percentage of students missed. It was difficult to do this between DL and F2F sections since DL administers the final on Blackboard and F2F using PAR tests.

Outcome 2: Recognize the effects of each prototype on disorders and diseases in each body system.

- Assessment Plan
 - Assessment Tool: Comprehensive Department Exam
 - Assessment Date: Fall 2012
 - Course section(s)/other population: All sections
 - Number students to be assessed: All students

- How the assessment will be scored: Exam will be scored using the answer key.
- Standard of success to be used for this assessment: 90% of the student who take this exam will score 78% or higher.
- Who will score and analyze the data: Departmental faculty.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2011, 2010, 2009	2012, 2011, 2010	2012, 2011, 2010

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
490	449

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Early drops/withdrawals

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students in all sections that remained in course when final exam was given.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Cumulative final exam - answer key (departmentally-developed)
 The final exam was collaboratively developed by two (2) NUR 115 instructors in an effort to have a common final for assessment consistency. This is a 103-item exam.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: <u>No</u>
<ul style="list-style-type: none"> ○ Fall 2009 - 52 took final / 36 met benchmark = 69.2% ○ Winter 2010 - 51 took final / 40 met benchmark = 78.4% ○ SpSum 2010 - 56 took final / 44 met benchmark = 78.6% ○ Fall 2010 - 51 took final/ 27 met benchmark = 52.9% ○ Winter 2011 - 62 took final / 53 met benchmark = 85.5%

- SpSum 2011 - 43 took final / 41 met benchmark = 95.3%
- Fall 2011 - 53 took final / 14 met benchmark = 73.6%
- Winter 2012 - 39 took final / 28 met benchmark = 71.8%
- SpSum 2012 - 42 took final / 34 met benchmark = 80.9%

Overall, for nine (9) semesters, 76.2% scored 78 percent or higher on the cumulative final. Standard of success (90%) was met in 1 of 9 semesters.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

ATI Tests

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were sixteen (16) items that students performed best (70% or more answered the item correctly) for topics in the following:

- Basic concepts - dosage calculations - 3 items (out of 5) *
- CV/Uro - 6 items (out of 19) **
- Respiratory - 2 items (out of 5)
- Neuro - 2 items (out of 14)
- Bone/Joint - 1 item (out of 3)
- Immune - 1 item (out of 9)
- Eye/Ear - 1 item (out of 1)

Strongest areas noted to be CV and basic concepts.

Comprehensive departmental exam

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections performed very similar to F2F sections (76.7% and 76.3%, respectfully) on final exam.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Understanding drug actions relies on prior A&P and pathophysiology knowledge. Some students take these courses > 2 yrs before taking course, therefore, retention of the sciences may be a factor in not meeting the course benchmarks.

ATI Tests

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections significantly lower as compared to F2F sections (55.6% and 29.4%, respectfully) on the standardized Pharmacology ATI test.

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were 25 items of the 60-item test that were missed by >50% of students. These fell within the following body systems:

- Neuro (CNS) - 12 items (out of 14) **
- CV/Uro - 4 items (out of 19)
- Immune - 4 items (out of 9) *
- Endocrine - 2 items (out of 3)
- Respiratory - 2 items (out of 5)
- Bone/Joint - 1 item (out of 3)

It will be important to highlight/emphasize those areas in class (2 top areas marked with asterisk based on percentage of all items in a specific body system). *Note: It was difficult to determine full extent of weakness in those systems with limited questions on the standardized test. There have been trials of breaking the Neurological content in the F2F sections into more exams.

Comprehensive departmental exam:

There needs to be a detailed item analysis of the final exam questions to identify those areas that a larger percentage of students missed. It was difficult to do this between DL and F2F sections since DL administers the final on Blackboard and F2F using PAR tests.

Outcome 3: Recognize nursing implications for prototypical drugs in each classification through the application of the nursing process.

- Assessment Plan
 - Assessment Tool: Assessment Technologies Institute, LLC - Pharmacology Exam
 - Assessment Date: Spring/Summer 2012
 - Course section(s)/other population: All APNURS students in all sections
 - Number students to be assessed: ~ 80/year APNURS students comprise about 1/2 of all students who enroll in NUR 115.
 - How the assessment will be scored: Assessment Technologies Institute (ATI) scores the standardized test and provides an item analysis to the instructor.
 - Standard of success to be used for this assessment: 75 percent of all APNURS students will achieve a score at or above the Proficiency Level 2 on the ATI

Pharmacology test on their first attempt.

- Who will score and analyze the data: ATI scores the exam and the NUR 115 Course Coordinator will then analyze the data.

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2011, 2010, 2009	2012, 2011, 2010	2011, 2010, 2012

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
490	274

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Only students who successfully completed the course per Nursing Program standards (overall 78%) were given this tool.

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All APNURS and APNURE students who successfully completed NUR 115 in all sections offered.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Proctored assessment - Description (per Assessment Technologies Institute):

This 60-item test offers an assessment of the student's basic comprehension and mastery of pharmacologic principles and knowledge of prototype drugs. Concepts assessed include: basic pharmacologic principles (pharmacodynamics, pharmacokinetics, safe medication administration, medication error prevention, age specific considerations) and knowledge related to the safe administration and monitoring of prototype drugs that are used to treat infections, pain and inflammation; as well as those that affect the immune, nervous, cardiovascular, respiratory, renal, digestive, endocrine, reproduction systems and the blood. The student has 65 minutes to complete this assessment. (Two forms of this assessment are available.)

Scored by: ATI

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: No

- Fall 2009 - 43 took ATI / 27 met benchmark = 62.7%
- Winter 2010 - 21 took ATI / 12 met benchmark = 57.1%
- SpSum 2010 - 29 took ATI / 11 met benchmark = 37.9%
- Fall 2010 - 34 took ATI / 15 met benchmark = 44.1%
- Winter 2011 - 37 took ATI / 21 met benchmark = 56.8%
- SpSum 2011 - 26 took ATI / 9 met benchmark = 34.6%
- Fall 2011 - 41 took ATI / 14 met benchmark = 34.1%
- Winter 2012 - 21 took ATI / 8 met benchmark = 38.1%
- SpSum 2012 - 22 took ATI / 8 met benchmark = 36.4%

Overall, for nine (9) semesters, 45.6% scored at proficiency level 2

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

ATI Tests

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were twelve (12) items that students performed best (70% or more answered the item correctly) for topics in the following:

- Basic concepts - dosage calculations - 3 items (out of 5) *
- CV/Uro - 6 items (out of 19) **
- Respiratory - 2 items (out of 5)
- Neuro - 2 items (out of 14)
- Bone/Joint - 1 item (out of 3)
- Immune - 1 item (out of 9)
- Eye/Ear - 1 item (out of 1)

Strongest areas noted to be CV and basic concepts.

Comprehensive departmental exam

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections performed very similar to F2F sections (76.7% and 76.3%, respectfully) on final exam.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Understanding drug actions relies on prior A&P and pathophysiology knowledge. Some students take these courses > 2 yrs before taking course, therefore, retention of the sciences may be a factor in not meeting the course benchmarks.

ATI Tests

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections significantly lower as compared to F2F sections (55.6% and 29.4%, respectfully) on the standardized Pharmacology ATI test.

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- Neuro (CNS) - 12 items (out of 14) **
- CV/Uro - 4 items (out of 19)
- Immune - 4 items (out of 9) *
- Endocrine - 2 items (out of 3)
- Respiratory - 2 items (out of 5)
- Bone/Joint - 1 item (out of 3)

It will be important to highlight/emphasize those areas in class (2 top areas marked with asterisk based on percentage of all items in a specific body system). *Note: It was difficult to determine full extent of weakness in those systems with limited questions on the standardized test. There have been trials of breaking the Neurological content in the F2F sections into more exams.

Comprehensive departmental exam:

There needs to be a detailed item analysis of the final exam questions to identify those areas that a larger percentage of students missed. It was difficult to do this between DL and F2F sections since DL administers the final on Blackboard and F2F using PAR tests.

Outcome 3: Recognize nursing implications for prototypical drugs in each classification through the application of the nursing process.

- Assessment Plan
 - Assessment Tool: Comprehensive Department Exam

- Assessment Date: Fall 2012
- Course section(s)/other population: All sections
- Number students to be assessed: All Students
- How the assessment will be scored: Exam will be scored using the answer key.
- Standard of success to be used for this assessment: 90% of the students who take this exam will score 78% or higher.
- Who will score and analyze the data: Departmental Faculty

1. Indicate the Semester(s) and year(s) assessment data were collected for this report.

Fall (indicate years below)	Winter (indicate years below)	SP/SU (indicate years below)
2011, 2010, 2009	2012, 2011, 2010	2012, 2011, 2010

2. Provide assessment sample size data in the table below.

# of students enrolled	# of students assessed
490	449

3. If the number of students assessed differs from the number of students enrolled, please explain why all enrolled students were not assessed, e.g. absence, withdrawal, or did not complete activity.

Early drops/withdrawals

4. Describe how students from all populations (day students on campus, DL, MM, evening, extension center sites, etc.) were included in the assessment based on your selection criteria.

All students in all sections that remained in course when final exam was given.

5. Describe the process used to assess this outcome. Include a brief description of this tool and how it was scored.

Cumulative final exam - answer key (departmentally-developed)
 The final exam was collaboratively developed by two (2) NUR 115 instructors in an effort to have a common final for assessment consistency. This is a 103-item exam.

6. Briefly describe assessment results based on data collected for this outcome and tool during the course assessment. Discuss the extent to which students achieved this learning outcome and indicate whether the standard of success was met for this outcome and tool.

Met Standard of Success: <u>No</u>
<ul style="list-style-type: none"> ○ Fall 2009 - 52 took final / 36 met benchmark = 69.2% ○ Winter 2010 - 51 took final / 40 met benchmark = 78/4%

- SpSum 2010 - 56 took final / 44 met benchmark = 78.6%
- Fall 2010 - 51 took final/ 27 met benchmark = 52.9%
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- Fall 2011 - 53 took final / 14 met benchmark = 73.6%
- Winter 2012 - 39 took final / 28 met benchmark = 71.8%
- SpSum 2012 - 42 took final / 34 met benchmark = 80.9%

Overall, for nine (9) semesters, 76.2% scored 78 percent or higher on the cumulative final. Standard of success (90%) was met in 1 of 9 semesters.

7. Based on your interpretation of the assessment results, describe the areas of strength in student achievement of this learning outcome.

ATI Tests

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were twelve (12) items that students performed best (70% or more answered the item correctly) for topics in the following:

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- Bone/Joint - 1 item (out of 3)
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Strongest areas noted to be CV and basic concepts.

Comprehensive departmental exam

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections performed very similar to F2F sections (76.7% and 76.3%, respectfully) on final exam.

8. Based on your analysis of student performance, discuss the areas in which student achievement of this learning outcome could be improved. If student met standard of success, you may wish to identify your plans for continuous improvement.

Understanding drug actions relies on prior A&P and pathophysiology knowledge. Some students take these courses > 2 yrs before taking course, therefore,

retention of the sciences may be a factor in not meeting the course benchmarks.

ATI Tests

Comparison of DL vs. F2F sections - Although for only two (2) semesters (W12 and SS12), DL sections significantly lower as compared to F2F sections (55.6% and 29.4%, respectfully) on the standardized Pharmacology ATI test.

An in-depth analysis of student performance on the 2010 version of the Pharmacology ATI test was done. This included those students who took NUR 115 during F11, W12, and SS12 (n=84). There were 25 items of the 60-item test that were missed by >50% of students. These fell within the following body systems:

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- CV/Uro - 4 items (out of 19)
- Immune - 4 items (out of 9) *
- Endocrine - 2 items (out of 3)
- Respiratory - 2 items (out of 5)
- Bone/Joint - 1 item (out of 3)

It will be important to highlight/emphasize those areas in class (2 top areas marked with asterisk based on percentage of all items in a specific body system). *Note: It was difficult to determine full extent of weakness in those systems with limited questions on the standardized test. There have been trials of breaking the Neurological content in the F2F sections into more exams.

Comprehensive departmental exam:

There needs to be a detailed item analysis of the final exam questions to identify those areas that a larger percentage of students missed. It was difficult to do this between DL and F2F sections since DL administers the final on Blackboard and F2F using PAR tests.

II. Course Summary and Action Plans Based on Assessment Results

1. Describe your overall impression of how this course is meeting the needs of students. Did the assessment process bring to light anything about student achievement of learning outcomes that surprised you?

Students who successfully pass NUR 115 appear to do well in the next semester of the program, specifically, their first medical-surgical nursing course sequence.

When comparing student performance on the Pharmacology ATI 2007 version with the 2010 version, the percentage was much higher on the earlier version (F09 - SS11).

There wasn't a strong relationship between the comprehensive departmental final exam and the standardized ATI test. In semesters where students scored better on the final exam, they scored poorly on the Pharmacology ATI test (i.e. SpSum 2011).

Students who took the DL section of NUR 115 scored significantly lower on the standardized ATI test (W12, SS12).

NUR 115 continues to be a challenging, but vital course. Since this is required early in the APNURS program (Semester 2), and much later in the APNURE program, it would be interesting to see if there is a difference in student performance between programs.

2. Describe when and how this information, including the action plan, was or will be shared with Departmental Faculty.

Will be sending out Course Assessment report to all full-time faculty this Summer 2013, to be followed by discussion during scheduled department meetings.

Action plan:

- o Discuss areas of weakness (i.e. neurological pharmacology) among all NUR 115 faculty and determine strategies to reinforce this content in Fall 2013.
- o Continue to compare student outcomes for F2F vs. DL sections.
- o Monitor for changes in ATI scores starting in F12 with the implementation of new ATI policy for Nursing Program.

Intended Change(s)

Intended Change	Description of the change	Rationale	Implementation Date
No changes intended.			

3. Is there anything that you would like to mention that was not already captured?

Sample test items on comprehensive final exam that relate to outcomes (I have referenced 5 questions for each outcome):

Outcome #1: see #99, 100, 101, 102, 103

Outcome #2: see #7, 9, 12, 13, 15 (+ many others ...)

Outcome #3: see #16, 18, 20, 21, 24 (+ many others ...)

III. Attached Files

[NUR 115 - ATI Test Description \(2010 vers\)](#)

[NUR 115 Data Table](#)

[NUR 115 - ATI Summary \(2010 vers\)](#)

[NUR 115 Comprehensive final exam](#)

Faculty/Preparer: Gloria Velarde

Date: 7/3/13

Department Chair: Vickie Salter

Date: 7/16/13

Dean: Martha Showalter

Date: 7/17/13

Assessment Committee Chair: Michelle Garey

Date: 8/23/13

COURSE ASSESSMENT REPORT

I. Background Information

1. Course assessed:
 Course Discipline Code and Number: **NUR 115**
 Course Title: **Pharmacology**
 Division/Department Codes: **HAT / NHSD**

2. Semester assessment was conducted (check one):

- Fall 2009
- Winter 20__
- Spring/Summer 20__

3. Assessment tool(s) used: check all that apply.

- Portfolio
- Standardized test
- Other external certification/licensure exam (specify):
- Survey
- Prompt
- Departmental exam
- Capstone experience (specify):
- Other (specify):

4. Have these tools been used before?

- Yes
- No – new since Fall 2006

If yes, have the tools been altered since its last administration? If so, briefly describe changes made.

5. Indicate the number of students assessed/total number of students enrolled in the course.
Since last MSF revision – 6 semesters used for assessment (i.e. F07, W08, SS08, F08, W09, SS09) –
Enrolled = 320
Assessed = 166

6. Describe how students were selected for the assessment.
All APNURS students who received a passing grade (i.e. C- or higher) in NUR 115

II. Results

1. Briefly describe the changes that were implemented in the course as a result of the previous assessment.

N/A – this is the first course assessment since MSF was revised in 2007.

2. List each outcome that was assessed for this report exactly as it is stated on the course master syllabus.

- 1. Recognize the drug classifications and related prototypes.**
- 2. Recognize the effects of each prototype on disorders and diseases in each body system.**
- 3. Recognize nursing implications for prototypical drugs in each classification through the application of the nursing process.**

3. Briefly describe assessment results based on data collected during the course assessment, demonstrating the extent to which students are achieving each of the learning outcomes listed above. *Please attach a summary of the data collected. –See attached Semester results*

The reports received from Assessment Technologies Institute provided data for each group and individual scores to determine the percentage of students who met the course benchmark. Further, the results are broken down by subscales. The earlier version (2.1) broke down content into body system-specific categories that were easier to use in relation to where to make subsequent changes, while the more current test version (2007) used more general and abstract subscales that follow the NCLEX-RN blueprint.

COURSE ASSESSMENT REPORT

4. For each outcome assessed, indicate the standard of success used, and the percentage of students who achieved that level of success. *Please attach the rubric/scoring guide used for the assessment.*

Outcomes 1-3: ATI test benchmark not met in any of the 6 groups/semesters. The Pharmacology ATI is given in Semester 2 of the nursing program. As this is the first nursing sequence, this highly integrative test may be challenging to this level of student due to their limited exposure to standardized testing and their ability to apply previously learned content from the sciences.

5. Describe the areas of strength and weakness in students' achievement of the learning outcomes shown in assessment results.

Strengths: When looking at subscales on the report, students consistently scored highest on basic pharmacological principles (both versions); reproductive meds (2.1 version) and medication administration (2007 version).

Weaknesses: When the ATI test versions changed (no longer breaking down subscales by body system), it became difficult to determine the specific content area that needed revision/emphasis. The Nursing Department has been communicating with ATI re: the desired report format that can best be used for course assessment.

III. Changes influenced by assessment results

1. If weaknesses were found (see above) or students did not meet expectations, describe the action that will be taken to address these weaknesses.

2. Identify intended changes that will be instituted based on results of this assessment activity (check all that apply). Please describe changes and give rationale for change.

- a. Outcomes/Assessments on the Master Syllabus

Change/rationale: The measure for achievement will be changed from the 60th percentile rank-national to Proficiency Level 2, which is based on a cut score percentage. This change was recommended by ATI, Inc. based on expert studies. (As defined by ATI, a student meeting the criterion for Proficiency Level 2 is expected to readily meet NCLEX-RN® standards in this content area; should demonstrate a level of knowledge in this content area that more than adequately; supports academic readiness for subsequent curricular content; and should exceed minimum expectations for performance in this content area).

- b. Objectives/Evaluation on the Master Syllabus

Change/rationale:

- c. Course pre-requisites on the Master Syllabus

Change/rationale:

- d. 1st Day Handouts

Change/rationale:

- e. Course assignments – assign completion of ATI practice tests with 90% proficiency before taking proctored assessment

Change/rationale: **to assist student in preparation for ATI standardized tests.**

- f. Course materials (check all that apply)

Textbook

Handouts – incorporate Lab Values sheet with numerical ranges consistent with ATI practice tests for the Pharmacology ATI.

Other: Section/Unit objectives established taking in SS08 – will continue to refine to highlight significant content areas

COURSE ASSESSMENT REPORT

g. Instructional methods: Changed to one (1) primary instructor in F09. Used team-teaching approach from SS08 through SS09.

Change/rationale: To ensure consistency of course materials for each section; primary instructor is responsible for following ATI results/trends for ongoing course assessments.

h. Individual lessons & activities

Change/rationale:

3. What is the timeline for implementing these actions? Fall 2009 for primary (one lead instructor) Fall 2010 for additional handouts/assignments pertaining to content

IV. Future plans

1. Describe the extent to which the assessment tools used were effective in measuring student achievement of learning outcomes for this course. While each student's individual composite score was useful to assess their overall understanding of pharmacology, without properly delineating the major content areas (subscales), it was not helpful in determining the lecture topic(s) that are in need of modification. Only earlier test versions broke down topics into body systems which is how the course is organized.

2. If the assessment tools were not effective, describe the changes that will be made for future assessments.

Work with ATI to modify report format – using body systems for subscales

3. Which outcomes from the master syllabus have been addressed in this report?

All X Selected

If "All", provide the report date for the next full review: 2012

If "Selected", provide the report date for remaining outcomes:

Submitted by:

Print: Gloria Velarde Faculty/Preparer Signature: Gloria Velarde Date: 12/16/09
Print: Gloria Velarde Department Chair Signature: Gloria Velarde Date: 12/16/09
Print: Granville Lee Dean/Administrator Signature: Granville Lee Date: 12/16/09