

**Eastern West Virginia Community and Technical College
COURSE ASSESSMENT REPORT**

Course Title and Number: NU 142 Drug and Dosage Calculations II	Academic Term and Year of Assessment Activity (Ex: Fall, 2014) Spring 2019
Report Submitted By: Jill Landis	Number of Students Assessed: 20
Date Report Submitted: 07/10/19	Number of Sections Included: 1
Course Delivery Format (list all modalities used in sections assessed. Ex: web based, VDL, traditional section, hybrid course, etc.): Traditional	

Course Role in the Curriculum

Provide a description of the role the course serves in the curriculum (i.e. general education requirement, program technical core, restricted elective, etc.). Note all as appropriate.

NU 142 is a mandatory course in the nursing curriculum which must be taken in the second semester. The student must be in the nursing program and must have completed NU 132 with a "C" or above. Drug and Dosage Calculations are utilized in the nursing profession and the student must be able to apply the concepts to safely deliver nursing care. The course expands the nursing student's ability to read, interpret, and solve increasingly complex dosage calculation problems. Critical thinking skills are applied to age and acuity specific variations in select populations. The methods of calculations were taught in both NU 132 and NU 142 but this course expanded the knowledge to encompass IV drips in critical care along with utilizing drug inserts to obtain information in mixing and administering IV medications.

Previous Assessment Reports and Results

Date of Previous Assessment: Spring 2017

List of Outcomes Not Met: See below

Summary of Actions Taken to Address Unmet Learning Outcomes: Append additional pages if necessary. If appending, include notation in box to "See attached".

Previously, many of the quizzes were take home. Six students scored below the 800 benchmark and had to take the 2nd version. It seemed that many of the students needed more one on one individual attention. They needed more practice questions to be available to them. Many wanted to take short cuts to the problems instead of completing all the steps to correctly answer the question. After some more individual attention and practice questions, all six of the remaining students successfully scored the benchmark of 800 or above on the 2nd version. The benefit of the HESI exam was to determine how the class and each student compared to other nursing students nationally.

Assessment Methods

Provide a description of the assessment process used. Include description of instrument and performance standards in description. Note all methods.

Five exams were given for a total of 500 points. They also had a Final exam worth 100 points and the HESI was worth 100 points. The students did well in the class. Only one student scored below 800 on the HESI exam and had to take the second version. The class average was 1028 on the first version (54.04 percentile nationally). The national average was 968. The range was 678-1238. Many of the students felt that this class was not long enough to prepare you for the HESI. They had printed out formulas and worked on many practice questions and they felt that that prepared them the best for the HESI. One student took the second version of the HESI exam and scored 800 or above. Although on the NCLEX there are very few calculation questions, there may be one or two, and Nursing competencies for Nursing jobs require that nurses take a math exam. All 20 students passed the class. The exams were

matched to the college core values, the course objectives and the student learning objectives. 100% of the objectives were met with the exams and the HESI exam.

Course Level Assessment Summary of Outcomes, Indicators and Results Add additional rows to table if necessary			
Learning Outcomes (Insert learning outcomes assessed during this cycle)	Indicator (Insert indicators used for each outcome: exam question, scoring rubric, etc. Be specific)	Percent of Correct Responses	Performance Standard Met (75%)* (yes or no)
Outcome 1: Nursing Judgement, Professional Identity, and Human Flourishing Demonstrates the ability to convert units of measurement and calculating dosages/amounts to administer using correct notation and labeling.	Students will score 800 or above on the HESI assessment exam for Drug Calculations which included 55 questions on drug calculations and administrations. These included but not limited to grams, milligrams, kilograms, milliliters, liters and household measurements.	100%	Yes
Outcome 2: Nursing Judgement Identify medication administration errors and assess accuracy of ordered and calculated medication dosages.	The drop rate is the number of drops per minute to maintain a certain rate. They are listed as drops per minute. The drop rate depends on the drop factor/drip factor of the IV tubing. The drop factor is the number of drops it takes to equal 1ml and will be listed on the tubing box. A microdrip/microdrop is 60gtts/ml. If you are using a microdrip, it is exactly the same as the ml/hr ordered. D10W at 40ml/hr a) 10 gtt/ml b) 15gtt/ml c) 20 gtt/ml d) 60 gtt/ml	100%	Yes
Outcome 3: Identify medication administration errors and assess accuracy of ordered and calculated medication dosages. *Also measures Nursing Judgement	Dopamine 400mg in 250ml D5W at 3 mcg/kg/min, pt's weight is 60 kg a. Concentration b. mcg/hr c. mcg/min d. ml/hr	100%	Yes
Outcome 4: Calculate pediatric dosages based on body weight *Also measures Nursing Judgement	The pediatrician orders Amoxicillin 20mg/kg/day- divided to be given every 8 hours. The patient weighs 30kg. How many ml will the nurse	100%	Yes

and Human Flourishing	expect to administer for each dose?		
Outcome 5: Calculate adult dosages based on body weight. *Also measures Nursing Judgement	A patient is diagnosed with a DVT. The physician orders Heparin. Using the nomogram provided, calculate the bolus dose in units. The patient weighs 220 lbs.	100%	Yes
Outcome 6: Interpret drug labels, package directions, tables, charts and graphs in order to administer medications correctly. *Also measures Spirit of Inquiry	To facilitate paralysis to complete a MRI in an intubated and sedated patient, the physician orders Vecuronium 8 mg IV. After reconstitution how many ml will the nurse expect to administer? An insert label was provided with this question.	100%	Yes

* Please note if using a different minimum performance standard.

Assessment Results	
Provide a summary of results including tables/charts. Incorporate information from previous assessments as appropriate. Append additional pages if necessary. If appending, include notation in box to "See attached".	
Overall the class performed very well and only one student failed to meet the 800 benchmark on the HESI the first time. They were successful the second time. The lengthy word problems tend to be an issue with students. Learning to know what is relevant and what are distractors has been an issue in the past.	
Class of 2020	Class 2018
Class average 1028 (National Average 968)	Class average 833(National Average 936)
Range 678-1238	Range 470-1211
Percentile Nationally 54.04	Percentile Nationally 63.7
Percent of students scoring over 800-95%	Percent of students scoring over 800-68.4%

Conclusion
Provide a brief summary of conclusions derived based on analysis of data. Append additional pages if necessary. If appending, include notation in box to "See attached".
All the outcomes were met. One student did not meet the 800 benchmark on the first attempt. They met the benchmark on the second attempt. Will continue to assess and monitor. There will be drug calculations on various exams in the other courses that will follow.

Action Plan and Date for Reassessment
Identify action plan for improvement or maintaining current performance levels including outcomes identified for re-assessment, curriculum revision, LOT proposal, new or revised course activities to reinforce learning outcomes, etc. Append additional pages if necessary. If appending, include notation in box to "See attached".
Will continue to mandate a minimum score of 800 on the HESI exam with the possibility of taking the second version. Will continue to provide practice questions and internet links for word problems on their own. Faculty office doors are always open, and available. Will reassess in

Spring 2021.

**Assessment Committee Recommendation/Approval
(To be posted by Assessment Committee Chair)**

- Approved as presented
- Approved with recommendations for future reports (Explanation Required)
- Resubmission Required. Reason for Resubmission:

Date: 11/12/2019