The ability to calculate medication dosages correctly is an essential skill for Registered Nurses. Many medication errors are directly related to either the administration of an incorrect dose or incorrect infusion rate caused by calculation errors; therefore, medication calculation competency is required throughout the curriculum.

USE OF CALCULATORS IN THE CURRICULUM
A basic 4-function calculator is the only type that may be used for Basic Math and Medication Calculation testing. Scientific/electronic storage calculators are prohibited.

BASIC MATH COMPETENCY
All students will be given a basic math test during orientation.

Students who do not demonstrate competency (100%) will be required to:

- Obtain remediation
- Retest on basic math competency

If 100% is not achieved on the retest, the student will be required to:

- Obtain remediation through affiliate’s math lab and submit proof of attendance.
- Take a second retest.

Basic math competency must be achieved prior to beginning med-math calculations in Nursing 111. Students who remain unsuccessful in retesting and/or who do not comply with the remedial plan face administrative action, which may result in dismissal from the program.

The following resources are available to help students achieve medication mathematics competency in all courses:

- Review math test with course chairperson/designee
- Complete math worksheet(s) available on Blackboard
- Complete math problems in your math calculation textbook
- Utilize “Calculating drug dosages: an interactive approach to learning nursing math (2007) available in the library (CD ROM #65)
- An ATI math calculation program is also available for purchase

Rules for Rounding Medication Math Calculations: (included in stem of test question)

1. For numbers greater than 1, carry out to the hundredths place (2 places after the decimal) and round to the nearest tenth (mL, mg, kg, etc.)EXAMPLES:
   - 5.67 kg is rounded to 5.7 kg
   - 5.21 mL is rounded to 5.2 mL
   - 45.16 mg is rounded to 45.2 mg

2. For numbers less than 1, carry out to the thousandths place (3 places after the decimal) and round to the nearest hundredth (mL, mg, kg, etc.).EXAMPLES:
   - 0.823 mL is rounded to 0.82 mL
   - 0.688 mg is rounded to 0.69 mg
3. For medication math testing purposes, Intravenous rates (mL/hr and gtts/(drops) min) are rounded to the nearest whole number. **Examples:**
   - 85.5 mL is rounded to 86 mL
   - 31.2 gtt (drops) is rounded to 31 gtts/min

4. When weight is included in the question round the weight to the nearest tenth and then calculate, otherwise all other rounding is completed at the end.
   - Pounds to kilograms, divide by 2.2
   - Kilograms to pounds, multiply by 2.2

**MEDICATION CALCULATION COMPETENCY**

NURSING 111
Nursing 111 students must achieve 100% on one test, with one opportunity to re-test after mandatory remediation. **Failure to meet the medication calculation requirements for the course will result in administrative action and possible failure of the course.**

NURSING 121 (Pre-requisite - Nursing 111)
Nursing 121 students must achieve 100% on one test with one opportunity to re-test after mandatory remediation. **Failure to meet the medication calculation requirements for the course will result in administrative action and possible failure of the course.**

NURSING 211 AND NURSING 214   (Pre-requisite -- Nursing 111 and Nursing 121)
NSG 211 and NSG 214 students must achieve 100% on one test for each course with one opportunity to re-test after mandatory remediation. **Failure to meet the medication calculation requirements for the courses will result in administrative action and possible failure of the course.**

**PLEASE NOTE:**
Students enrolled in a Nursing course who are not simultaneously taking a skills/assessment course must take the medication mathematics calculation examination pertinent to the semester of the nursing course. Students in this situation need to meet the same requirement for medication mathematics testing success as the students in the skill/assessment class for the given semester, in order to progress. **Failure to meet the medication calculation requirements for the courses will result in administrative action and possible failure of the course.**

Nursing assessment courses are sequential. A successful grade must be achieved in order to progress to the next nursing assessment course.

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CURRICULUM