

Policy U-8
FLORIDA STATE UNIVERSITY
COLLEGE OF NURSING

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TITLE: DRUG MATH

POLICY: A student must achieve 100% accuracy to meet the drug math requirement of each clinical course. Three attempts to achieve 100% accuracy are permitted at all levels. If a student fails to achieve 100% by the third test, the student fails the course.

RATIONALE: Any student's participation in clinical experience requires that she/he meet the academic and professional standards of behavior that ensure patient comfort and safety.

PROCEDURE FOR STUDENTS ADMITTED AFTER JANUARY 2009:

1. Drug math is introduced in NUR 3056C with integration of the concepts and techniques of drug math into medication administration. Drug math competency exams will be scheduled one week apart toward the end of the Semester I.
2. Additional drug math concepts will be presented in NUR 3225C and NUR 4445C. Three drug math competency exams will be scheduled (one week apart) each term.
3. Demonstration of drug math competency by achieving 100% will provide evidence that the student is prepared for the drug math in clinical experiences for the subsequent semester.
 - a. In preparation for the drug math competency exams, drug math questions will be a part of NUR 3056C, NUR 3225C, NUR 4445C, and NUR 4766 exams and quizzes.
 - b. Test # 2 and # 3 will consist of all concepts from course drug math objectives.
 - c. The College of Nursing will provide simple calculators for use with the tests.
 - d. Sixty (60) minutes will be allowed for the exam.
 - e. Improvement plans will be developed for students who do not pass test # 1 or 2.
 - f. Sample questions will be available for student review.
 - g. Student mentors will be available for tutoring.

PROCEDURE FOR STUDENTS ADMITTED PRIOR TO JANUARY 2009:

1. Drug math is introduced in NUR 3146 with integration of the concepts and techniques of drug math into medication administration. Drug math competency exams will be scheduled one week apart toward the end of the Term I semester.
2. Additional drug math concepts will be presented in NUR 3226, NUR 4227 and NUR 4465 theory classes. Three drug math competency exams will be scheduled (one week apart) each term.
3. Demonstration of drug math competency by achieving 100% will provide evidence that the student is prepared for the drug math in clinical experiences for the subsequent semester.
 - a. In preparation for the drug math competency exams, drug math questions will be a part of NUR 3146, NUR 3226, NUR 4227, and NUR 4465 exams, quizzes, and labs.
 - b. Test # 2 and # 3 will consist of all concepts from Term objectives.
 - c. The College of Nursing will provide simple calculators for use with the tests.
 - d. Sixty (60) minutes will be allowed for the exam.
 - e. Improvement plans will be developed for students who do not pass test # 1 or 2.
 - f. Sample questions will be available for student review.
 - g. Student mentors will be available for tutoring.

Approved by:	Management Team		4/07/04	
	Faculty	4/23/03	4/23/04	4/18/08
	Dean		4/27/04	4/18/08

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FLORIDA STATE UNIVERSITY
COLLEGE OF NURSING
Attachment #1

SEMESTER I DRUG MATH OBJECTIVES

In order to pass Semester I Drug Math exam with 100% accuracy the student will:

1. Recognize abbreviations for recommended times for administering medications.
2. Be able to convert between military time and A.M.-P.M. time.
3. Be able to read a drug label.
4. Be able to convert between apothecaries' and metric system of measurement.
5. When given a statement of physician order, will be able to determine how much medication the nurse would administer to the patient (oral drugs, parenteral drugs, and dosages measured in units).
6. Accurately calculate the following: (a) milliliters given per hour (ml/h), (b) milliliters given per minute (ml/min), (c) drops given per minute (gtt/min), and (d) when the total volume and length of time over which the IV is to infuse is given.
7. Be able to calculate reconstitution problems for oral or parenteral administration.
8. Be able to convert a heparin drip from units/hour to milliliters/hour, and vice versa.

SEMESTER III DRUG MATH OBJECTIVES

In order to pass Semester III drug math exam with 100% accuracy the student will:

1. Recognize abbreviations for recommended times for administering medications
2. Be able to convert between military time and A.M.-P.M. time
3. Be able to read a drug label
4. Be able to convert between apothecaries' and metric system of measurement

5. When given a statement of physician order, will be able to determine how much medication the nurse would administer to the patient (oral drugs, parenteral drugs, and dosages measured in units).
6. Accurately calculate the following: (a) milliliters given per hour (ml/h), (b) milliliters given per minute (ml/min), (c) drops given per minute (gtt/min), and (d) when the total volume and length of time over which the IV is to infuse is given.
7. Be able to calculate reconstitution problems for oral or parenteral administration.
8. Be able to convert a heparin drip from units/hour to milliliters/hour, and vice versa.
9. When given a percentage solution, be able (a) to convert to grams per milliliters and (b) to calculate answers to problems.
- 10.. When given a problem using solutions in the form or 1:1,000, be able (a) to identify the constitution of the solution and (b) to calculate answers to problems.
11. Be able to convert a heparin drip from units/hour to milliliters/hour, and vice versa.
12. Given the patient's weight, amount of medication, amount of intravenous fluids, and physician's order, calculate the following infusion drips: (a) mcg/kg/min, (b) mcg/min, and (c) mg/kg/hour, (d) ml/hr.

PEDIATRIC DRUG MATH OBJECTIVES

1. Recognize abbreviations for recommended times for administering medications.
2. Be able to convert between military time and A.M.-P.M. time.
3. Be able to read a drug label.
4. Be able to convert between apothecaries' and metric system of measurement.
5. When given a statement of physician order, will be able to determine how much medication the nurse would administer to the patient (oral drugs, parenteral drugs, and dosages measured in units).
6. Accurately calculate the following: (a) milliliters given per hour (ml/h), (b) milliliters given per minute (ml/min), (c) drops given per minute (gtt/min), and (d) when the total volume and length of time over which the IV is to infuse is given.
7. Be able to calculate reconstitution problems for oral or parenteral administration.

8. When given a percentage solution, be able (a) to convert to grams per milliliters and (b) to calculate answers to problems.
9. When given a problem using solutions in the form of 1:1,000, be able (a) to identify the constitution of the solution and (b) to calculate answers to problems.
10. Be able to convert a heparin drip from units/hour to milliliters/hour, and vice versa.
11. Given the patient's weight, amount of medication, amount of intravenous fluids, and physician's order, calculate the following infusion drips: (a) mcg/kg/min, (b) mcg/min, and (c) mg/kg/hour, (d) ml/hr.
12. When given a child's weight, calculate low and high dose range for each dose and for the day.
13. When given an infant's weight, calculate intravenous fluid requirements for the day and for the hour.