

SOUTHERN MAINE COMMUNITY COLLEGE

South Portland, Maine 04106

Title: Dosage Calculations on line
Catalog Number: NURS 100
Credit Hours: 1
Total Contact Hours: 16
Instructor: Sally Powers, MS, RN
spowers@smccme.edu
Tel : 741-5705 (office)

Course Description

This course is required for pre-nursing students to acquire the mathematical skills and knowledge used by nurses in the clinical setting. Students must have strong basic math skills (knowledge of decimals, fractions, metric system, conversions between systems of measurement, ratio-proportion, and ability to do basic algebraic equations) required for medication administration. Emphasis is placed on the safety and accuracy required for medication administration. This course will include clinically based problems that provide students with practice and mastery of clinical calculations. Students taking the on-line version of this course must be able to work independently.

Prerequisite: MAT 050

Course Objectives

After successfully completing the course, the student will be able to:

1. Explain the content of medication labels.
2. Explain the components of a medication order.
3. Use appropriate drug abbreviations.
4. Calculate medication dosages with the formula, ratio and proportions, or dimensional analysis system.
5. Calculate oral dosages from tablets, capsules, and liquids.
6. Explain the procedure for reconstitution of powdered medications.
7. Calculate the dose for administration of reconstituted medications.
8. Calculate dosage of drugs for subcutaneous and intramuscular routes.
9. Discuss the correct selection of syringes for medication administration.
10. Determine correct dosages for heparin administration.
11. Demonstrate the correct dose of insulin according to a medical order.
12. Calculate the drug dosage needed according to body weight.
13. Calculate the flow rate for IV drugs or IV solutions.
14. Determine the drop factor for IV flow rates.

UNITS COVERED IN NUR 100:

Unit 1	Math Review (self-study for those who need it)
Chapter 6	Metric System (self-study)
Chapter 7	Apothecary- Household System and conversions (metric to household conversions)
Chapter 8	Converting Within and Between Systems

Chapter 9	Conversions Relating to Weight
Chapter 10	Medication Administration
Chapter 11	Understanding Medication Orders
Chapter 13	Reading Medication Labels
Chapter 15	Dosage Calculations Using the Formula Method
Chapter 17	Calculation of Oral Medication (formula method)
Chapter 18	Parenteral Medication
Chapter 19	Reconstitution
Chapter 20	Insulin
Chapter 21	Intravenous Solutions and Equipment
Chapter 22	Intravenous Calculations
Chapter 23	Heparin
Chapter 25	Pediatric and Adult Dosage Based on Body Weight

Course Requirements

This course is offered in an online format and thus requires a high degree of self motivation and commitment. Students should complete the SMCC online student orientation as well as “Is Online Learning Right For Me?” The student is expected to assume responsibility for meeting course objectives and is responsible for prior learning.

Two on campus exams are required and will be available at a proctored site on the SMCC South Portland campus. Please refer to the topical outline for the specific dates. Exams **must** be taken on the assigned day and during the assigned hours. A basic calculator is allowed. Cell phone or scientific calculators are not allowed

Expectations

1. As a fully online course, it is expected that the student will have uninterrupted access to a computer and basic computer skills.
2. Per SMCC online course policy, the student is expected to log in by the end of the add/drop period. Failure to sign in by the end of add/drop will result in a “now-show” designation, which can affect GPA and financial aid.
3. The student is expected to log in to the online classroom at least twice weekly. Failure to do so will result in the student being withdrawn from the course.
4. Students are responsible for any information posted on announcements, discussion board.
5. Students should expect to spend *at least* three hours per week per credit hour studying “outside” the online classroom.
6. Repetition is key to success in this course. Students should make full use of their textbook, online resources, and instructor developed dosage calculation problems.
7. Students are expected to consult the instructor immediately if issues arise.
8. As prospective health professionals, students are expected to adhere to the same standards of behavior and commitments as are required by students in the upper level courses.
 - Interactions that are respectful and civil, including verbal, written and electronic communication
 - Responsibility for one’s actions and commitment to improvement and growth

Student Evaluation and Grading

Grading: Students must attain a final grade B- (80%) or better to pass the course. No quizzes or exams or additional work are offered for “extra” credit.

If more than one quiz is missed, no matter what the grades on other assignments, the student will fail the course. The final exam will not be reviewed per nursing department policy. For answers to be correct the math and the label must be correct.

- Grades **will not** be rounded up (e.g. a grade of 79.6 is 79.6, not 80).
- Grade components:

Online quizzes	pass/fail
Midterm	45% ONSITE
Final exam (cumulative)	55% ONSITE

Attendance Policy

The course is being hosted on Blackboard. The student is expected to log in to the online **classroom at least twice weekly**. Failure to do so will result in the student being automatically withdrawn from the course. Refer to the Student Handbook for policies on withdrawal from a class. This is a “no fault” policy, which means the reason(s) for absence are not considered in determining implementation of the policy.

Quizzes/exams must be taken by the last scheduled day. **No exceptions** will be made to this policy. The final exam may not be reviewed per the Nursing Department policy.

Students are expected to be courteous and professional in behavior. Conflicts need to be resolved in a respectful way.

Text, Tools, and/or Supplies

Morris, D. G. (2010). *Calculate with Confidence*, 6th edition. Mosby, Inc.

Nondiscrimination Statement

Southern Maine Community College is an equal opportunity/affirmative action institution and employer. For more information, please call 207-741-5798.

If you have a disabling condition and wish to request accommodations in order to have reasonable access to the programs and services offered by SMCC, you must register with the disability services coordinator, Tiffany Bentley, who can be reached at 207-741-5629 (TTD 207-741-5667).

Further information about services for students with disabilities and the accommodation process is available upon request at this number.

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