IMPERIAL VALLEY COLLEGE

Basic Course Information

Semester:	**Spring**	Instructor Name:	Terrie Sullivan, RN, MSN, PHN
Course Title & #:	**NURS100 Medication Math**	Email:	terrie.sullivan@imperial.edu
CRN #:	**21136**	Webpage (optional):	
Classroom:	**online**	Office #:	**2125**
Class Dates:	April 19 – June 11, 2021	Office Hours:	I will not be on campus during the Spring semester. Will have scheduled virtual office hours Tuesday & Wednesday 6-7pm Th & F: 0900- 9:30am. Available M-F anytime on Pronto
Class Days:	**online**	Office Phone #:	
Class Times:	online	Emergency Contact:	
Units:	1	Class Format:	Online Asychronous

Course Description

This course focuses on those components of safe medication calculation and administration. The emphasis is on accuracy of calculation and the critical thinking involved in client/patient safety. This is an intense class on med math calculations that is required of all RN majors. Clinical application is integrated into the clinical nursing courses.
In NURS100, the student is required to apply mathematical principles to the calculation of drug dosages. This includes addition, subtraction, multiplication & division of decimals and fractions. A thorough knowledge of the metric system with emphasis on the conversions is required. Dimensional analysis as it applies to calculating drug dosages is included.

Course Prerequisite(s) and/or Corequisite(s)

Student Learning Outcomes

Upon completion of this class the student will be able to:
1. Pass a comprehensive final exam on dosage calculations at 78% including critical care and pediatric problems.

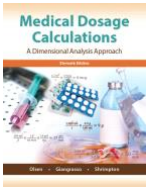
Course Objectives

1. Calculate basic mathematic problems including addition, subtraction, multiplication & division of fractions & decimals.
2. Convert metric, apothecary and household measures accurately.
3. Solve dosage problems using dimensional analysis

4. Calculate adult & pediatric dosages.
5. Calculate intravenous flow rates.
6. Interpret drug orders and labels relevant to the safe administration of drugs.
7. Discuss the "Six rights" of clients relative to administration of medications.
8. Describe the routes of administration

Textbooks & Other Resources or Links

REQUIRED
Medical Dosage Calculations Plus My Nursing Lab with Pearson eText -- Access Card Package, 11/e ISBN 9780134480602



You will register thru Canvas.

Course Requirements and Instructional Methods

Classroom work:
Weekly modules and assignments open on Sunday 1200am and are due on Friday @11pm
The student is expected to log into the class at least 3-4 times per week.
Tests: There will be exams covering the topics reviewed online in the weekly modules. They will be taken in Canvas.
THERE ARE NO MAKE-UP EXAMS REGARDLESS OF EXCUSE.
Assignments: There will be homework assignments from the required My Nursing Lab (MNL)(Pearson) online site. These are part of your grade. These assignments will be outlines in Canvas. The assignment will cover the topics discussed in modules and on MNL.

Late work will be accepted with a 10% deduction per day until Sunday eveing at 1159pm. After Sunday, late work will not be accepted.

Online and Hybrid courses must demonstrate compliance with the IVC Regular and Effective Contact Policy for Distance Education.
Out of Class Assignments: The Department of Education policy states that one (1) credit hour is the amount of student work that reasonably approximates not less than one hour of class time and two (2) hours of out-of-class time per week over the span of a semester. WASC has adopted a similar requirement..

Course Grading Based on Course Objectives

This is a nursing course therefore the grading is per the nursing department grading scales.
A = 93-100%
B = 84-92%

C = 78-83%
F = Below 78%

Course Policies

Attendance

- A student who fails to attend the first meeting of a class or does not complete the first mandatory activity of an online class will be dropped by the instructor as of the first official meeting of that class. Should readmission be desired, the student's status will be the same as that of any other student who desires to add a class. It is the student's responsibility to drop or officially withdraw from the class. See General Catalog for details.
- Regular attendance in all classes is expected of all students. A student whose continuous, unexcused absences exceed the number of hours the class is scheduled to meet per week may be dropped. For online courses, students who fail to complete required activities for two consecutive weeks may be considered to have excessive absences and may be dropped.
- Absences attributed to the representation of the college at officially approved events (conferences, contests, and field trips) will be counted as 'excused' absences.

What does it mean to "attend" an online class?

Attendance is critical to student success and for IVC to use federal aid funds. Acceptable indications of attendance are:

- Student submission of an academic assignment
- Student submission of an exam
- Student participation in an instructor-led Zoom conference
- Documented student interaction with class postings, such as an interactive tutorial or computer-assisted instruction via modules
- A posting by the student showing the student's participation in an assignment created by the instructor
- A posting by the student in a discussion forum showing the student's participation in an online discussion about academic matters
- An email from the student or other documentation showing that the student has initiated contact with a faculty member to ask a question about an academic subject studied in the course.
- Logging onto Canvas alone is NOT adequate to demonstrate academic attendance by the student

Other Course Information

Academic honesty in the advancement of knowledge requires that all students and instructors respect the integrity of one another's work and recognize the important of acknowledging and safeguarding intellectual property.

There are many different forms of academic dishonesty. The following kinds of honesty violations and their definitions are not meant to be exhaustive. Rather, they are intended to serve as examples of unacceptable academic conduct.

- Plagiarism is taking and presenting as one's own the writings or ideas of others, without citing the source. You should understand the concept of plagiarism and keep it in mind when taking exams and preparing written materials. If you do not understand how to "cite a source" correctly, you must ask for help.
- Cheating is defined as fraud, deceit, or dishonesty in an academic assignment, or using or attempting to use materials, or assisting others in using materials that are prohibited or inappropriate in the context of the academic assignment in question.

Anyone caught cheating or plagiarizing will receive a zero (0) on the exam or assignment, and the instructor may report the incident to the Campus Disciplinary Officer, who may place related documentation in a file. Repeated acts of cheating may result in an F in the course and/or disciplinary action. Please refer to the General Catalog for more information on academic dishonesty or other misconduct. Acts of cheating include, but are not limited to, the following: (a) plagiarism; (b) copying or attempting to copy from others during an examination or on an assignment; (c) communicating test information with another person during an examination; (d) allowing others to do an assignment or portion of an assignment; (e) using a commercial term paper service.

How do I show academic honesty and integrity in an online "classroom"?

- KEEP YOUR PASSWORDS CONFIDENTIAL.
  - You have a unique password to access online software like Canvas. Never allow someone else to log-in to your account.
- COMPLETE YOUR OWN COURSEWORK.
  - When you register for an online class and log-in to Canvas, you do so with the understanding that you will produce your own work, take your own exams, and will do so without the assistance of others (unless directed by the instructor).

Examples of Academic Dishonesty that can occur in an online environment:

- Copying from others on a quiz, test, examination, or assignment;
- Allowing someone else to copy your answers on a quiz, test, exam, or assignment;
- Having someone else take an exam or quiz for you;
- Conferring with others during a test or quiz (if the instructor didn't explicitly say it was a group project, then he/she expects you to do the work without conferring with others);
- Buying or using a term paper or research paper from an internet source or other company or taking any work of another, even with permission, and presenting the work as your own;
- Excessive revising or editing by others that substantially alters your final work;
- Sharing information that allows other students an advantage on an exam (such as telling a peer what to expect on a make-up exam or prepping a student for a test in another section of the same class);
- Taking and using the words, work, or ideas of others and presenting any of these as your own work is plagiarism. This applies to all work generated by another, whether it be oral, written, or artistic work. Plagiarism may either be deliberate or unintentional.

IVC Student Resources

IVC wants you to be successful in all aspects of your education. For help, resources, services, and an explanation of policies, visit http://www.imperial.edu/studentresources or click the heart icon in Canvas.

Anticipated Class Schedule/Calendar

*****Tentative, subject to change without prior notice*****

Week 1 Overview: Students will be introduced to the online course environment and IVC policies and procedures. Students will also learn more about their online classmates.		
	• Week 1 Objectives: By the end of this unit, students will be able to: • Interpret the course syllabus • Navigate the Canvas learning environment • Complete the Getting Started module • Understand the College's add and drop policies, procedures and online learning requirements • Enroll and learn the My Nursing Lab (MNL) online • Know more about your fellow online classmates • Learn and understand the dimensional analysis method of dosage and drug calculations Week 1 Assignment 1. Purchase the textbook:Medical Dosage Calculations Plus My Nursing Lab with Pearson eText -- Access Card Package, 11/e ISBN 9780134480602 List Price: $119.80 2. This is the e-book and my lab that you will be using. It is not necessary to purchase the textbook separately. I have put the Instructions in the Modules on how to register and it has the course ID in my Nursing Lab. 3. Read & Understand the Syllabus 4. Read & Understand the Getting Started Module and Course Policies 5. Read & Understand Week 1 Module. 6. Read Chapter 1 and participate in the Assignment #1 in Canvas on Review of Arithmetic.	All assignments and Exams Due Friday at 1100pm
Week 2 Overview: Students will be learning how to convert between household measurements to metric system measurements. Recognize that drugs dosages are measured in units, milliequivalents, grams, micrograms and milligrams		
	Week 2 Objectives: By the end of this week students will be able to: • List the commonly used units of measure in the metric system. • Express metric weights and volumes using correct notation rules. • Convert metric weights and volumes within the system.	

	• Recognize dosages that are measured in units, percentage, milliequivalents, in household measures, and apothecary measures , and using ratio strengths	
	WEEK 2 Assignment: 1. Read & Understand Week 2 Module on System Conversions 2. Read Chapters 3, 4 and 5 in Olsen e-text 3. Complete Study Guides System conversions 4. Review power points in Week 2 5. Review Study Guide and complete them 6. Complete the Assignment Week 2 My Nursing Lab online in the Weekly section 7. Complete Discussion #1 8. Complete Exam #2 System Conversions and Dosage Calculations in Canvas	All assignments and Exams Due Friday at 1100pm
Week 3 Overview: This week discusses the components of administering medications, reading a drug label to be able to determine how the dosages will be calculated.		
	Week 3 Objectives: By the end of this unit, students will be able to: • Identify scored tablets, unscored tablets, and capsules • Read drug labels to identify trade and generic names. • Locate dosage strengths and calculate average dosages • • Measure parenteral solutions using: a standard 3 mL syringe, a tuberculin syringe, 5 and 10 mL syringes., and 20 mL syringe.	
	WEEK 3 Assignment: 1. Read Chapters 2, 6, 7, in Olsen e-text. 2. Review power points in Week 3 3. Study Guides posted in Week 3 4. Complete Assignment Week 3 5. Complete Discussion #2 6. Complete Exam #2 in Canvas	All assignments and Exams Due Friday at 1100pm
Week 4 Overview: This week students will learn how to prepare medications using powder forms of drugs and how to calculate the appropriate amounts from the problems listed in the study guides.		
	Week 4 Objectives: By the end of this week students will be able to:	

	• prepare solutions from powdered drugs using directions printed on vial labels. • prepare solutions from powdered drugs using drug literature or inserts • determine the expiration date and time for reconstituted drugs • calculate dosages for reconstituted drugs • • calculate average parenteral dosages from the labels provided.	
	WEEK 4 Assignment: 1. Read chapter 8-9 in Olsen e-text. 2. Review power points in Week 4 3. Study Guides posted in Week 4 4. Complete Assignment Week 4 in MNL 5. Complete Discussion #3 6. Complete Exam 3 in Canvas	<u>All assignments and Exams Due Friday at 1100pm</u>
Week 5 Overview: This week the students will start to learn about intravenous (IV) solutions, how to calculate IV flow rates using gravity and by using electronic infusion devices.		
	Week 5 Objectives: By the end of this unit, students will be able to: • differentiate between primary, secondary, peripheral, and central IV lines. • explain the function of IV drip chambers, roller and slide clamps, and on-line and indwelling injection ports. • differentiate between volumetric pumps, syringe pumps, and PCAs. • identify the abbreviations used for IV fluid orders • identify the calibrations in gtt/mL (dropps/mL) on IV administration sets. • calculate flow rates using dimensional analysis. • flow rates to infuse ordered dosages. • heparin dosages. • mL/hr flow rates for an Electronic Infusion Device (EID) or IV pump • hourly dosage infusing from mL/hr rate.	
	WEEK 5 Assignment: 1. Read chapter 10 2. Study Guides Week 5 in Canvas 3. Review all weeks for final exam 4. Complete Discussion #4 5. Complete Exam #4	<u>All assignments and Exams Due Friday at 1100pm</u>

Week 6 Overview: This week students will learn the importance of calculating critical care dosages correctly		
	Week 6 Objectives: By the end of this unit, students will be able to: • use normal daily and hourly dosage ranges to calculate and assess dosages ordered. • dosages and flow rates based on kg body weight • • list the steps in preparing and administering IV medications from a solution bag	
	WEEK 6 Assignment: 1. Read chapter 11 2. Study Guides Week 6 in Canvas 3. Complete Discussion if posted 4. Complete Exam #5	
Week 7 Overview: This week students will learn the importance of calculating pediatric dosages correctly		
	Week 7 Objectives: By the end of this unit, students will be able to: • explain how suspensions are measured and administered. • calculate pediatric oral dosages. • list the precautions of IM and subcutaneous injection in infants and children. • calculate pediatric IM and subcutaneous dosages • calculate flow rates for the administration of pediatric IV medications. • dosages and flow rates based on kg body weight	
	Week 7 Assignment: • Read chapter 12 • Study Guides Week 7 in Canvas • Review all weeks for final exam • Complete Exam #6: Pediatrics	
Week 8	Review all weeks for final exam *****FINAL EXAM******	

*****Subject to change without prior notice*****