



### Basic Course Information

Semester:	<b>Summer 2022</b>	Instructor Name:	<b>Carmen Bravo, RN, MSN</b>
Course Title & #:	<b>Nursing 100 Medication Math</b>	Email:	<b>Carmen.bravo@imperial.edu</b>
CRN #:	<b>30178</b>	Webpage (optional):	<b>Imperial Valley College</b>
Classroom:	<b>Online</b>	Office #:	<b>I will be available via email and CANVAS</b>
Class Dates:	<b>June 20- July 7, 2022</b>	Office Hours:	<b>Per Appointment</b>
Class Days:	<b>Online</b>	Office Phone #:	<b>760-355-6348</b>
Class Times:	<b>Online</b>	Emergency Contact:	<b>Nursing Office 760-355-6348</b>
Units:	<b>1</b>	Class Format:	<b>Online</b>

\*\*\*\*\***Deadline to Drop WITH "W" is July 01, 2022**\*\*\*\*\*

### 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 evolved in client safety. This is an intense class on med math calculations that is required of all nursing majors. Clinical application is integrated into the clinical nursing courses. (CSU)

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

None

### Student Learning Outcomes

Upon completion of this class the student will be able to: Demonstrate understanding by passing a comprehensive final exam on dosage calculations at 78% or higher and overall grade for course of 78% or higher. (ILO2, ILO4) (ILO2, ILO4)

### Course Objectives

Upon satisfactory completion of the course, students will be able to:

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 "Seven rights" of clients relative to administration of medications.
8. Describe the routes of administration, po, IM, IV



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## Textbooks & Other Resources or Links

Dosage Calc 360 4-year access. Sandra Luz Martinez de Castillo, Maryanne Werner-McCulloug. FA Davis 2019, ISBN 9780803677135 <https://www.fadavis.com/product/calculating-drug-dosages-nursing-math-castillo-online-access-2>

## Course Requirements and Instructional Methods

During the 2021 Summer Session, NURS100 is offered as an online class.

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 with Proctorio.

**THERE ARE NO MAKE-UP EXAMS REGARDLESS OF EXCUSE.**

### Assignments:

There will be homework assignments from the required Dosage Calc 360 (FA Davis) 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 Dosage Calc 360 .

A student shall treat this course like a job.

There will be:

- ⇒ Homework: Chapter assignments in Dosage Calc 360 (points are assigned by the activity) overall percentage (100 points)
- ⇒ Weekly discussions (10 points each)
- ⇒ Weekly Exams (25-35 points each)
- 1 Final Exam (100 points )

### Classroom work:

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. HonorLock App will be used during the EXAMS.

**THERE ARE NO MAKE-UP EXAMS REGARDLESS OF EXCUSE.**

Late work will be accepted with a 10% deduction per day, until Sunday of the following week. After Monday 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.



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Honorlock will proctor your exams this semester. Honorlock is an online proctoring service that allows you to take your exam from the comfort of your home. You DO NOT need to create an account or schedule an appointment in advance. Honorlock is available 24/7, and all that is required is a computer, a working webcam/microphone, your ID, and a stable internet connection.

To get started, you will need Google Chrome and download the [Honorlock Chrome Extension \(Links to an external site.\)](#).

When you are ready to complete your assessment, log into Canvas, go to your course, and click on your exam. Clicking "Launch Proctoring" will begin the Honorlock authentication process, where you will take a picture of yourself, show your ID, and complete a scan of your room. Honorlock will be recording your exam session through your webcam, microphone, and recording your screen. Honorlock also has an integrity algorithm that can detect search-engine use, so please do not attempt to search for answers, even if it's on a secondary device.

Honorlock support is available 24/7/365. If you encounter any issues, you may contact them through live chat on the [support page \(Links to an external site.\)](#) or within the exam itself. Some guides you should review are [Honorlock MSRs \(Links to an external site.\)](#), [Student FAQ \(Links to an external site.\)](#), [Honorlock Knowledge Base \(Links to an external site.\)](#), and [How to Use Honorlock](#)

## Course Grading Based on Course Objectives

### 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%

**Student must pass the FINAL EXAM to pass the course. The grading for the course uses nursing criteria.**

## Attendance and Course Policies

The below information is the IVC attendance policy.

**• 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. 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.**

## **Online Etiquette**

• **What is netiquette?** Netiquette is internet manners, online etiquette, and digital etiquette all rolled into one word. Basically, netiquette is a set of rules for behaving properly online.

- Students are to comply with the following rules of netiquette:

- (1) identify yourself,
- (2) include a subject line,
- (3) avoid sarcasm,
- (4) respect others' opinions and privacy,
- (5) acknowledge and return messages promptly,
- (6) copy with caution,
- (7) do not spam or junk mail,
- (8) be concise,
- (9) use appropriate language,
- (10) use appropriate emoticons (emotional icons) to help convey meaning, and
- (11) use appropriate intensifiers to help convey meaning [do not use ALL CAPS or multiple exclamation marks (!!!!)].

### **How am I expected to act in an online "classroom" (especially Zoom)?**

Attending a virtual meeting can be a challenge when there are many students on one conference call.

Participating in such meetings may count as class attendance, but disruptive behavior may also result in you not being admitted to future meetings. Follow the tips below for best results:

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**1) Be RESPECTFUL**

- a. Your written, verbal, and non-verbal communications should be respectful and focused on the learning topics of the class.

**2) Find a QUIET LOCATION & SILENCE YOUR PHONE (if zooming)**

- a. People walking around and pets barking can be a distraction.

**3) EAT AT A DIFFERENT TIME.**

- a. Crunching food or chugging drinks is distracting for others.
- b. Synchronous zoom times are set in advance so reserve meals for outside class meetings.

**4) ADJUST YOUR LIGHTING SO THAT OTHERS CAN SEE YOU**

- a. It is hard to see you in dim lighting so find a location with light.
- b. If your back is to a bright window, you will be what is called “backlit” and not only is it hard on the eyes (glare) but you look like a silhouette.

**5) POSITION THE CAMERA SO THAT YOUR FACE AND EYES ARE SHOWING**

- a. If you are using the camera, show your face; it helps others see your non-verbal cues.
- b. You may be at home, but meeting in pajamas or shirtless is not appropriate so dress suitably. Comb your hair, clean your teeth, fix your clothes, etc. before your meeting time to show self-respect and respect for others.

**6) Be READY TO LEARN AND PAY ATTENTION**

- a. Catch up on other emails or other work later.
- b. If you are Zooming, silence your phone and put it away.
- c. If you are in a room with a TV – turn it off.

**7) USE YOUR MUTE BUTTON WHEN IN LOUD PLACES OR FOR DISTRACTIONS**

- a. Pets barking, children crying, sneezing, coughing, etc. can happen unexpectedly. It’s best if you conference in a private space, but if you can’t find a quiet place, when noises arise MUTE your laptop.

**8) REMEMBER TO UNMUTE WHEN SPEAKING**

- a. Follow your instructor’s directions about using the “raise hand” icon or chat function to be recognized and to speak, but make sure you have unmuted your device.
- b. Do not speak when someone else is speaking.

**9) REMAIN FOCUSED AND PARTICIPATE IN THE MEETING**

- a. Especially when the camera is on YOU, we can all see your actions. Engage in the meeting. Look at the camera. Listen to instruction. Answer questions when asked.
- b. Do not use the Zoom meeting to meet with your peers or put on a “show” for them.

- 10) PAUSE YOUR VIDEO IF MOVING OR DOING SOMETHING DISTRACTING** a. Emergencies happen. If you need to leave the room or get up and move about, stop your video.

## Academic Honesty

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.

- o 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.
- o 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.
  - o 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.
  - o 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.

## CIVILITY

- Civility is treating others and ourselves with respect, dignity and care. Civility is evident when we are sensitive to the impact that our communications, and behaviors have on others, and when we acknowledge each other's self-worth and unique contributions to the community as a whole. Incivility includes any and all forms of disrespect, behavior misconduct or disregard for instruction, the instructor or a fellow student. Students are expected to adhere to the standards of Student Conduct and the regulations adopted by the college. behavior misconduct. Students will treat faculty and other students with respect. Students are expected to promote self-accountability for their actions and foster respectful and professional conduct in all academic interactions. Students should report any form of harassment, disrespect or threatening action. Violations are subject to student disciplinary actions, including but not limited to the removal, suspension or expulsion of a student. Education Code Section 76034, IVC Code of Student Conduct.

## 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.

- Disabled Student Programs and Services (DSP&S) office is in Building 2100, telephone 760-355-6313.
- Student Health Center. A Student Health Nurse is available on campus. Make appointment online or contact 760-355-6128.

## Anticipated Class Schedule/Calendar

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

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
<b><u>Week 1</u></b> <b><u>Overview:</u></b>	<b><u>Student will be learning:</u></b> ⇒ Students will be introduced to the online course environment, Syllabus, Introduction, IVC policies and procedures. Students will also learn more about their online classmates. ⇒ How to convert between household measurements to metric system measurements.	<i>Dosage Calc 360 Online</i>

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
	<ul style="list-style-type: none"> <li>⇒ Recognize that drugs dosages are measured in units, milliequivalents, grams, micrograms and milligrams.</li> <li>⇒ Components of administering medications</li> <li>⇒ This week students will learn how to prepare medications using oral, parenteral and powder forms of drugs and how to calculate the appropriate amounts from the problems listed in the study guides.</li> </ul> <p><b><u>Week 1 Objectives:</u></b></p> <p><b>By the end of this unit, students will be able to:</b></p> <ul style="list-style-type: none"> <li>⇒ Read &amp; Understand the Syllabus</li> <li>⇒ Complete the Getting Started module</li> <li>⇒ Enroll and learn the Dosage Calc 360 online</li> <li>⇒ Know more about your fellow online classmates</li> <li>⇒ List the commonly used units of measure in the metric system.</li> <li>⇒ Express metric weights and volumes using correct notation rules.</li> <li>⇒ Convert metric weights and volumes within the system.</li> <li>⇒ Recognize dosages:               <ul style="list-style-type: none"> <li>o Measured in units.</li> <li>o Measured as percentages.</li> <li>o Using ratio strengths.</li> <li>o Measured in milliequivalents.</li> <li>o In household measures.</li> <li>o In the apothecary measures</li> </ul> </li> <li>⇒ prepare solutions from powdered drugs using directions printed on vial labels. prepare solutions from powdered drugs using drug literature or inserts.</li> <li>⇒ determine the expiration date and time for reconstituted drugs.</li> <li>⇒ calculate dosages for reconstituted drugs, oral medications in solid and liquid form and medications measured in milliequivalents</li> </ul>	



Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
	<ul style="list-style-type: none"> <li>⇒ calculate dosages based on weight.</li> <li>⇒ calculate average parenteral dosages from the labels provided</li> </ul> <p>Learn and understand the dimensional analysis method of dosage and drug calculations.</p> <p><b><u>Week 1 Assignment</u></b></p> <ol style="list-style-type: none"> <li>1. Purchase the textbook:</li> <li>2. This is the e-book and online activities that you will be using. I have put the Instructions in the Modules on how to register</li> <li>3. Read &amp; Understand the Syllabus</li> <li>4. Read &amp; Understand the Getting Started Module and Course Policies</li> <li>5. Read &amp; Understand Week 1 Module.</li> <li>6. Read Chapter 1 and participate in the Assignment #1 in</li> <li>7. Complete the following on CANVAS <ul style="list-style-type: none"> <li>⇒ Review the PowerPoints for <b>M2 Safety in Medication Administration, M3 Systems of Measurement, M6 Dimensional Analysis, M8 Calculating Oral Medication Doses, M9 Syringes and Needles, M10 Calculating Parenteral Medication Dosages, M11 Preparing Powdered Parenteral Medications</b></li> <li>⇒ Review the Exercises</li> <li>⇒ There is a discussion this week.</li> <li>⇒ Review power points</li> <li>⇒ Study Guides posted</li> </ul> </li> <li>8. Complete Exercise Assignments on <b><u>Dosage Calc 360 Online Program</u></b></li> <li>9. Complete Exam #1 in CANVAS Quiz</li> </ol>	
<p><b><u>Week 2 Overview:</u></b></p>	<p><b><u>Student will be learning:</u></b> This week you will learn the following topics.</p> <ul style="list-style-type: none"> <li>⇒ Intravenous (IV) solutions, how to calculate IV flow rates using gravity and by using electronic infusion devices.</li> </ul>	<p><i>Dosage Calc 360 Online</i></p>

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
	<p>⇒ Students will learn the importance of calculating pediatric dosages correctly</p> <p><b><u>Week 2 Objectives:</u></b>  <b>By the end of this unit, students will be able to:</b></p> <ul style="list-style-type: none"> <li>⇒ differentiate between primary, secondary, peripheral, and central IV lines.</li> <li>⇒ 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.</li> <li>⇒ identify the abbreviations used for IV fluid orders.</li> <li>⇒ identify the calibrations in gtt/mL (drops/mL) on IV administration sets.</li> <li>⇒ calculate flow rates using dimensional analysis.</li> <li>⇒ flow rates to infuse ordered dosages.</li> <li>⇒ heparin dosages.</li> <li>⇒ mL/hr flow rates for an Electronic Infusion Device (EID) or IV pump.</li> <li>⇒ explain how suspensions are measured and administered.</li> <li>⇒ calculate pediatric oral dosages.</li> <li>⇒ list the precautions of IM and subcutaneous injection in infants and children.</li> <li>⇒ calculate pediatric IM and subcutaneous dosages.</li> <li>⇒ list the steps in preparing and administering IV medications from a solution bag.</li> <li>⇒ explain why a flush is included in IV medication administration.</li> <li>⇒ calculate flow rates for the administration of pediatric IV medications.</li> <li>⇒ use normal daily and hourly dosage ranges to calculate and assess dosages ordered.</li> <li>⇒ dosages and flow rates based on kg body weight</li> </ul>	

Date or Week	Activity, Assignment, and/or Topic	Pages/ Due Dates/Tests
	<p><b><u>WEEK 2 Assignment:</u></b>            Read M10 Calculating Parenteral Medication Dosages, M11 Preparing Powdered Parenteral Medications, M12 Administering Insulin, M13, M14            ⇒ Review power points in Week 2            ⇒ Study Guides posted in Week 2            ⇒ Complete Assignment Week 2            ⇒ Complete Exam #2 and Discussion in Canvas            ⇒ Review and complete the exercises in Dosage Calculation 360</p>	
<p><b><u>Week 3 Overview:</u></b></p>	<p><b><u>Student will be learning:</u></b> This week you will be learning</p> <ul style="list-style-type: none"> <li>⇒ Calculate dosages in pediatric and geriatric populations, and calculating intake &amp; output.</li> <li>⇒ This week students will review for the final exam</li> </ul> <p><b><u>Week 3 Objectives:</u></b>  <b>By the end of this unit, students will be able to:</b></p> <ul style="list-style-type: none"> <li>⇒ Calculate pediatric and geriatric dosages.</li> <li>⇒ Calculate intake and output</li> <li>⇒ Calculate drips and intravenous infusions</li> <li>⇒ Verify safe dosages and calculate dose ranges.</li> <li>⇒ Take final exam and score at least a 78% per nursing standards</li> </ul> <p><b><u>WEEK 3 Assignment:</u></b></p> <ul style="list-style-type: none"> <li>⇒ Review the study guides and videos for the study guides for Week 5 peds and intake and output and conidations for special populations</li> <li>⇒ Review the PowerPoints <b>for M15 Verifying Safe Dose, M17 Calculating Intake and Output</b></li> <li>⇒ Review the Exercises in Dosage Calc 360</li> <li>⇒ Complete the Week 3 exam and discussion on Canvas</li> <li>⇒ Complete final exam in Canvas 7/7/2022</li> </ul>	<p><i>Dosage Calc 360 Online</i></p>

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