IMPERIAL VALLEY COLLEGE

Medication Mathematics NURS 100 Course Syllabus rev 02/04/2021

Basic Course Information

Semester:	**SPRING 2021**	Instructor Name:	**Julie Kunath, MS, APRN, AGPCNP, ACCNS-AG, CCRN-CMC**
Course Title & #:	**Med Math NURS 100**	Email:	**Julie.kunath@imperial.edu**
CRN #:	**20748**	Webpage (optional):	**Canvas, Zoom**
Classroom:	**Synchronous Online, zoom**	Office #:	**Office hours on Zoom & Pronto**
Class Dates:	**February 19th – April 16th , 2021**	Office Hours:	**T 10:00a – 12:00p, W 11:00a - 12:00p, F 10:05a – 11:50a; also via appt**
Class Days:	**Friday**	Pearson MyLabs Course ID#	**Kunath02087**
Class Times:	08:00a – 10:05a	Emergency Contact:	**Nursing Office (760) 355 - 6348**
Units:	1	Class Format:	Synchronous Online

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.

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

This course is a prerequisite for the nursing program.

Course Recommended Preparation

In NURS100, it is required to apply mathematical principles to the calculation of drug dosages. This includes addition, subtraction, multiplication, and 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.

Student Learning Outcomes

Upon course completion, the successful student will have acquired new skills, knowledge, and or attitudes as demonstrated by being able to:

1. Calculate the flow rate of a simple primary IV line in mL/h or gtts/min as measured by one (1) randomly identified question on the final exam with a class average for the question at 92% or better. (IL02, IL04)
2. Pass a comprehensive final exam on dosage calculations at 78% including critical care and pediatric problems. (IL02, IL04)

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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 "five rights" of clients relative to administration of medications.

Describe the routes of administration identifying the appropriate landmarks for each site.

Textbooks & Other Resources or Links

REQUIRED(One of the following packages)(Prices listed are from publisher www.pearson.com):

- Olsen, Giangrasso, and Shrimpton 2016. *Medical Dosage Calculations Plus MyLab Nursing with Pearson eText* – Access Card Package. 11th Ed. Pearson ISBN: 978-0134480602 ($131.72, includes a soft-bound printed textbook and a code to access MyLab with eText delivered.)
  OR
- Alternative: If you do not want a printed book (although having the text for future review is highly recommended) there is the option to purchase MyLabs with the eText. *MyLab Nursing with Pearson eText* – Instant Access – for Medical Dosage Calculations. ISBN: 978-0134452081 ($119.99 includes digital access to MyLab with eText)

Course Requirements and Instructional Methods

Course work:

Students are expected to log in to the course at least 3-4 times per week. Check-in assignment must be completed by due date the first week of class to confirm placement in the course.

Tests:

There will be exams covering the topics reviewed in the reading and online. They may consist of online exams within MyLab Nursing and/or in Canvas. Individual work of the problems needs to be shown and entered when indicated on quizzes and exams in order to receive full credit. Calculators are not allowed in the nursing program for med math tests, so it is important to know how to manually work through the math. Due to the condensed and short length of this course -

THERE ARE NO MAKE-UP EXAMS REGARDLESS OF EXCUSE.

Assignments:

There will be homework assignments in MyLab Nursing through Pearson accessible through a link in Canvas. Homework assignments may also be assigned in Canvas or from the textbook.

Late work will be accepted with a 10% deduction in point value per day after due date.

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. Students must maintain a "C" average grade as determined by the scale below:

A = 93-100%
B = 85-92%
C = 78-84%
F = Below 78%

The total course grade will be calculated using the following weighted categories:

- **CANVAS & MYLABS QUIZZES, HW, IN-CLASS WORK…….. 45%**
  - **Canvas Quizzes & MyLabs Post-Tests…….. 15%**
  - **In-Class Work & MyLabs Pre-Tests…….. 15%**
  - **MyLabs HW, Canvas HW, assigned HW …….. 15%**
- **Individual Project: Cumulative Review Packet …….. 5%**
- **EXAMS …….. 50%**
  - **Exam 1 (Ch 1-4) …….. 10%**
  - **Exam 2 (Ch 1-8) …….. 10%**
  - **Exam 3 (Ch 1-11) …….. 10%**
  - **Final Exam Cumulative (Ch 1-12) …….. 20%**

Total Final Grade Calculation = 100%

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.

Online Netiquette

- 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:

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.
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.

- 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.

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Anticipated Class Schedule/Calendar

Subject to change without prior notice

Date & Week	Activity, Assignment, and/or Topic	Reading/Quizzes/Tests
Week 1 February 19, 2021	• Review multiplication and division of fractions & decimals; Review basic arithmetic if needed. • Syllabus Review Activity, Basic Math HW • Ch. 1: Review of Arithmetic for dosage Calculations • Ch. 3: Dimensional Analysis	<u>Before Class</u> ⇒ Practice Math HW ⇒ Pre-Test Basic Math ⇒ Review Syllabus ⇒ Read: Ch 1 & 3 ⇒ Start MyLab HW Ch 1&3 ⇒ MyLab Pre-Test Ch1&3 ⇒ Add priority points, rules, and examples to your Cumulative Review Project for Ch 1 & 3 <u>During Class</u> ⇒ Syllabus Review HW ⇒ In-class Math Basics ⇒ Review Ch 1&3 problems <u>After Class</u> ⇒ Finish MyLab HW Ch 1&3 ⇒ MyLab Post-Quiz Ch 1 & 3 ⇒ Canvas Quiz Ch 1 & 3
Week 2 February 26, 2021	• Ch. 4: The Household and Metric Systems • Ch. 5: Converting from One System of Measurement to Another	<u>Before Class</u> ⇒ Read: Ch 4 & 5 ⇒ Start MyLab HW Ch 4&5 ⇒ MyLab Pre-Tests Ch4&5 ⇒ Add priority points, rules, and examples to your Cumulative Review Project for Ch 4 & 5 <u>During Class</u> ⇒ Review Ch 4&5 problems ⇒ Review Ch 1&3 problems <u>After Class</u> ⇒ Finish MyLab HW Ch 4&5 ⇒ MyLab Post-Quiz Ch 4 & 5 ⇒ Canvas Quiz Ch 4 & 5

Date & Week	Activity, Assignment, and/or Topic	Reading/Quizzes/Tests
Week 3 March 5, 2021	• Ch. 2: Safe and Accurate Medication Administration • Ch. 6: Oral Medication	Before Class ⇒ Read: Ch 2 & 6 ⇒ Start MyLab HW Ch 2&6 ⇒ MyLab Pre-Tests Ch 2&6 ⇒ Add priority points, rules, and examples to your Cumulative Review Project for Ch 2 & 6 ⇒ Study/Practice for Exam During Class ⇒ **EXAM 1 (Ch 1, 3, 4 & 5)** ⇒ Review Ch 2&6 problems After Class ⇒ Finish MyLab HW Ch 2&6 ⇒ MyLab Post-Quiz Ch 2 & 6 ⇒ Canvas Quiz Ch 2 & 6
Week 4 March 12, 2021	• Ch. 7: Syringes • Ch. 8: Solutions	Before Class ⇒ Read: Ch 7 & 8 ⇒ Start MyLab HW Ch 7 & 8 ⇒ MyLab Pre-Tests Ch7&8 ⇒ Add priority points, rules, and examples to your Cumulative Review Project for Ch 7 & 8 During Class ⇒ Review Ch 7&8 problems After Class ⇒ Finish MyLab HW Ch 7&8 ⇒ MyLab Post-Quiz Ch 7 & 8 ⇒ Canvas Quiz Ch 7& 8

Date & Week	Activity, Assignment, and/or Topic	Reading/Quizzes/Tests
Week 5 March 19, 2021	• Ch. 9: Parenteral Medications • Ch. 10: Flow Rates and Durations of Enteral and Intravenous Infusions	Before Class ⇒ Read: Ch 9 & 10 ⇒ Start MyLab HW Ch 9&10 ⇒ MyLab Pre-Tests Ch9&10 ⇒ Add priority points, rules, and examples to your Cumulative Review Project for Ch 9 & 10 ⇒ Study/Practice for Exam2 During Class ⇒ **EXAM 2 (Ch 1 - 8)** ⇒ Review Ch 9&10 problems After Class ⇒ Finish MyLab HW Ch9&10 ⇒ MyLab Post-Quiz Ch9&10 ⇒ Canvas Quiz on Ch 9&10
Week 6 March 26, 2021	• Ch. 11: Flow Rates and Dosage Rates for Intravenous Medications • Ch. 12: Pediatric Dosages	Before Class ⇒ Read: Ch 11 & 12 ⇒ Start MyLab HW Ch11&12 ⇒ MyLab Pre-Tests Ch11&12 ⇒ Add priority points, rules, and examples to your Cumulative Review Project for Ch 11 & 12 During Class ⇒ Review Ch 11&12 problems After Class ⇒ Finish MyLab HW Ch11&12 ⇒ MyLab Post-Quiz Ch11&12 ⇒ Canvas Quiz on Ch 11&12

Date & Week	Activity, Assignment, and/or Topic	Reading/Quizzes/Tests
Week 7 April 2, 2021	REVIEW: all material	Before Class ⇒ Re-Read any Chapters that are difficult ⇒ Complete any unfinished/late MyLabs HW ⇒ Complete assigned Comprehensive Self-Test ⇒ Add any missing priority points, rules, and examples to your Cumulative Review Project. This can be a great study guide for the Final Exam & Exam 3) During Class ⇒ **EXAM 3 (Ch 1–12)** ⇒ Review Comprehensive Self-Test ⇒ Review Problems After Class ⇒ Review & Practice for Final Exam
Week 8 April 9, 2021	**SPRING BREAK_NO CLASSES THIS WEEK**	
Week 9 APRIL 16, 2021	**CUMMULATIVE FINAL EXAM**	**Final Exam**

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