Basic Course Information *SUBJECT TO CHANGE*

Semester	**Fall 2016**	Instructor's Name	**Daniel G. Ortiz, Jr.**
Course Title&#	**VN114: Pharmacology I**	Instructor's Email	**daniel.ortiz@imperial.edu**
CRN #	**10998**	Webpage (optional):	**www.imperial.edu**
Room	**2135**	Instructor's Office	**2126**
Class Dates	**8/18/16- 12/08/16**	Office Hours By Appointment Only	**W: 1640- 1740** **TH: 1300-1350**
Class Days	**Thursday**	Office Hours:	**(760) 355-6493**
Class Times	**1400-1530**	Emergency Contact:	**Nursing Office Secretary**
Units	**1.5 unit**		**(760) 355-6348**

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.

Student Learning Outcomes

Upon completion of this class the student will be able to:

1. Calculate the flow rate of a simple primary intravenous line in ml/hr or drops/min as measured by one (1) randomly selected question on the final exam with a class average for the measured question at 92% or better.
2. Pass a comprehensive final exam on dosage calculations at 75% 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.

Unit Outcome Competencies:

The student will practice problems in class, in the Nursing Learning Center and at home to develop proficiency in calculations.

Textbooks & Other Resources or Links

REQUIRED

A. CD/Book: Calculating Drug Dosages: An Interactive Approach to Learning Nursing Math, 3rd Edition by Sandra Luz Martinez de Castillo, RN, MA, EdD Copyright © 2012 F.A. Davis Company

B. Dosage Calculations tutorials on https://www.atitesting.com/home.aspx

C. Sommer, S., Johnson, J., Roper, S. L., & Roberts, K. (2014). PN Pharmacology for nursing (6th ed.). Overland Park, KS: Assessment Technologies Institute.

RECOMMENDED

A. Purchase access to: www.DosageCalc.com
   a. The on-line modules provide all materials found in the recommended book, Calculating Drug Dosages.

B. Dimensional Analysis for Meds, 4th Edition Anna M. Curren, MA, RN Copyright© 2010 Delmar Cengage Learning or any Dimensional analysis dosage calculation book. Has to be Dimensional Analysis method

Course Requirements and Instructional Methods

Classroom work:

The student is expected to bring required materials to class. This includes the required study guides to be worked on during class time.

Tests:

There will be exams covering the topics reviewed in class. They will consist of in class exams and/or exams taken on Dosagecalc.com. **Note, All on-line content is time stamped and as such, must be submitted accordingly.**

THERE ARE NO MAKE-UP EXAMS REGARDLESS OF EXCUSE.

Out of Class Assignments:

There will be homework assignments from the required websites (dosgagecalc.com and ATI Testing website). The results of the assignments will be e-mailed and or printed out and turned into the instructor by the date that they are due. This assignments will be outlines in blackboard. The assignments will cover the topics discussed in class. **NO LATE WORK WILL BE ACCEPTED**.

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.

Course Grading Based on Course Objectives

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

A = 93-100%
B = 85-92%
C = 78-84%
D = 68-77%
F = Below 68%

Grades will not be "rounded".

To advance to the next semester, a total grade of 78% or above AND passing the final at 78% or above is required in this course and the co-requisite courses. The student is responsible for dropping (W) the class before the deadline as outlined on registration forms.

Attendance

It is the responsibility of each student to attend all class time and to contact the faculty person before the start of class of any need to be excused from class. The class will start as indicated above; any student who is tardy 15 minutes or more will be counted as absent, will not be allowed to take any scheduled or unannounced quizzes, test', or major exams. Absences are limited to the number of hours class meets in one week (One for a 1.50 unit course). A student who reaches the maximum allowable hours of absenteeism may be dropped by the instructor. This class has 17 Instruction days. If you are absent more than 1 day, you need to drop the class. If you no longer plan to attend class it is your responsibility, not the Instructor's, to drop you from the class. Students are strongly encouraged to meet all class sessions as homework and assignments will be provided at the end of lecture.

- 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.

Classroom Etiquette

I expect each student in this class to respectfully participate. While I enjoy teaching and I hope you have fun in this class, please act professionally and keep other students feelings in mind and refrain from rude, inappropriate behavior and language in class.

- Electronic Devices: Cell phones and electronic devices must be turned off and put away during class, unless otherwise directed by the instructor.
- Food and Drink are prohibited in all classrooms. Water bottles with lids/caps are the only exception. Additional restrictions will apply in labs. Please comply as directed by the instructor.
- Disruptive Students: Students who disrupt or interfere with a class may be sent out of the room and told to meet with the Campus Disciplinary Officer before returning to continue with coursework. Disciplinary procedures will be followed as outlined in the General Catalog.

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 (!!!!)].

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.

Additional Help – Discretionary Section and Language

Imperial Valley College offers various services in support of student success. The following are some of the services available for students. Please speak to your instructor about additional services which may be available.

- **Blackboard Support Site.** The Blackboard Support Site provides a variety of support channels available to students 24 hours per day.
- **Learning Services.** There are several learning labs on campus to assist students through the use of computers and tutors. Please consult your Campus Map for the Math Lab; Reading, Writing & Language Labs; and the Study Skills Center.
- **Library Services**. There is more to our library than just books. You have access to tutors in the Study Skills Center, study rooms for small groups, and online access to a wealth of resources.

Disabled Student Programs and Services (DSPS)

Any student with a documented disability who may need educational accommodations should notify the instructor or the Disabled Student Programs and Services (DSP&S) office as soon as

possible. The DSP&S office is located in Building 2100, telephone 760-355-6313. Please contact them if you feel you need to be evaluated for educational accommodations.

Student Counseling and Health Services

Students have counseling and health services available, provided by the pre-paid Student Health Fee.

- **Student Health Center**. A Student Health Nurse is available on campus. In addition, Pioneers Memorial Healthcare District provide basic health services for students, such as first aid and care for minor illnesses. Contact the IVC Student Health Center at 760-355-6128 in Room 1536 for more information.
- **Mental Health Counseling Services**. Short-term individual, couples, family, and group therapy are provided to currently enrolled students. Contact the IVC Mental Health Counseling Services at 760-355-6196 in Room 2109 for more information.

Student Rights and Responsibilities

Students have the right to experience a positive learning environment and to due process of law. For more information regarding student rights and responsibilities, please refer to the IVC General Catalog.

Information Literacy

Imperial Valley College is dedicated to helping students skillfully discover, evaluate, and use information from all sources. The IVC Library Department provides numerous Information Literacy Tutorials to assist students in this endeavor.

Anticipated Class Schedule/Calendar

Date	Description, Topic(s)	Assignment(s) Pages/ Due Dates/Tests
Week 1 August 18	Course Introduction and Syllabus Overview. Blackboard (BB) / Canvas, Learning Methods, ***Module 1:*** **Basic Math** - **Fractions**: Introduction to Fractions, Lowest Common Denominator, Addition of Fractions, Subtraction of Fractions, Multiplication of Fractions, Division of Fractions - **Decimals**: Working with Decimals, Addition of Decimals, Subtraction of Decimals, Multiplication of Decimals, Division of Decimals, Rounding of Decimals - **Roman Numerals**: Roman Numerals, Adding Roman Numerals, Subtracting Roman Numerals	**Complete Review Module 1 [e-mail score to instructor]** **Complete Review Test for Module 1 [e-mail score to instructor]** *******ALL e-mailed scores must be submitted by 0800 the following morning***** **ATI**: Ch 1
Week 2 August 25	***Module 2:*** **Methods of calculations** - **Ratio and Proportion**: Introduction to Ratio and Proportion, Linear Ratio and Proportion, Fractional Ratio and Proportion - **Dimensional Analysis**: Introduction to Dimensional Analysis, Dimensional Analysis Problems - **Formula Method**: Formula Method, Formula Method Problems	**Complete Review Module 2 [e-mail score to instructor]** Student Workbook p. 8-13
Week 3 September 1	***Module 2:*** **Methods of calculations Continued Dimensional Analysis**	**Complete Review Test for Module 2**

Date	Description, Topic(s)	Assignment(s) Pages/ Due Dates/Tests
	Desired over Have method **Adverse Effects, interactions, and contraindications**	**[e-mail score to instructor]** **ATI: Ch 3** **ATI: Ch 5**
Week 4 September 8	***Module 3:* Systems of Measurement** **- The Metric System**: Introduction to the Metric System, Metric Notations, Metric Conversions - **The Household System**: The Household System, Household Conversions - **Conversions**: Introduction to Conversions, Conversion Between Systems, Conversion Problems, Apothecaries' System, Household System, Dimensional Analysis and conversions between systems, Temperature Conversion Formulas, Military Time	**Complete Review Module 3** **[e-mail score to instructor]** **Complete Review Test for Module 3** **[e-mail score to instructor]** Student Workbook p. 14-20 **ATI: Ch 2** pp. 27-34
Week 5 September 18	***Module 4:* Intake and Output** - **Oral Intake**: Measuring Output - **Parenteral Intake**: Complex Parenteral Intake - **Tube Feedings**: Introduction to Tube Feedings, Calculating Tube Feedings	**Complete Review Module 4** **[e-mail score to instructor]** **Complete Review Test for Module 4** **[e-mail score to instructor]** Student Workbook p. 21-26
Week 6 September22	***Module 5:* - Reading Med Labels:** Components of a Medication Label, The Dosage Strength and Units of Measurement	**Complete Review Module 5** **[e-mail score to instructor]** **Complete Review Test for Module 5** **[e-mail score to instructor]** Student Workbook p. 31-40
Week 7 September 29	***Module 6:* - Oral Medications:** Introduction to Oral Drugs, Administration of Oral Drugs, Interpreting Oral Medication Orders - **Calculations of Oral Drugs**: The Medication Order, Oral Drug Dosage Calculation Problems	**Complete Review Module 6** **[e-mail score to instructor]** **Complete Review Test for Module 6** **[e-mail score to instructor]** Student Workbook p. 41-50
Week 8 October 6	**MID-TERM Modules 1-6**	Use of Simulated medication administration
Week 9 October 13	***Module 7:* Syringes and Needles** - Syringes: Introduction to Syringes, Types of Syringes - Needles: Introduction to Needles, Needles and Syringes	**Complete Review Module 7** **[e-mail score to instructor]** Student Workbook p. 51-60

Date	Description, Topic(s)	Assignment(s) Pages/ Due Dates/Tests
Week 10 October 20	***Module 8:*** **Parenteral Medications** - **Parenteral Medications**: Administration of Parenteral Drugs, The Parenteral Drug Order, Calculating Parenteral Drug Dosages	**Complete Review Module 8 [e-mail score to instructor]** **Complete Review Test for Module 8 [e-mail score to instructor]** Student Workbook p. 61-71
Week 11 October 27	***Module 9:*** **Reconstitution of Powdered Medication** - **Simple Reconstitution**: Introduction to Reconstitution, Single-Strength Reconstitution - **Complex Reconstitution**: Multiple-Strength Reconstitution, Solving Reconstitution Problems	**Complete Review Module 9 [e-mail score to instructor]** **Complete Review Test for Module 9 [e-mail score to instructor]** Student Workbook p. 73-83
Week 12 November 3	***Module 10:*** **IV Calculations** - **Introduction to IV Calculations**: IV Infusion Rates, Direct IV Medication Administration - **Labeling IV Bags**: Infusion Time, Completion Time, Labeling IV Bags	**Complete Review Module 10 [e-mail score to instructor]** **Complete Review Test for Module 10 [e-mail score to instructor]** Student Workbook p. 85-102 **ATI: CH 3** pp. 35-37 **Ch 4**
Week 13 November 10	***Module 11***: **Pediatric Calculations** - **Pediatric Calculations**: Children and Medications, Giving Medications to Children - **Determining Safe Dose**: Dosage Based on Body Weight, Dosage Based on BSA - **NG Fluid Replacement**: NG Fluid Replacement, Fluid Replacement Problems	**Complete Review Module 11 [e-mail score to instructor]** **Complete Review Test for Module 11 [e-mail score to instructor]** Student Workbook p. 103-114
Week 14 November 17	***Module 12:*** **Titration of IV Medications** - **Introduction to Titration**: About Titration, Information Needed for Titration Problems - **Solving Titration Problems**: Solving Common Titration Problems, Advanced Titration Problems	**Complete Review Module 12[e-mail score to instructor]** **Complete Review Test for Module 12 [e-mail score to instructor]** Student Workbook p.115-120
Week 15 November 24	**CAMPUS CLOSED**	
Week 16	Comprehensive review	NLC computer practice test

Date	Description, Topic(s)	Assignment(s) Pages/ Due Dates/Tests
December 1		
Week 17 December 8	**FINAL Modules 7-12**