

**Oklahoma State University Institute of Technology
Nursing & Health Sciences
Associate Degree Nursing Program
Spring 2018**

NURS 1322 NURSING DOSAGE CALCULATION

This course is designed to introduce the nursing major to the mathematical skills essential for calculating medication dosages. Content includes conversion between metric, apothecaries and household systems of measurement; calculation of oral and parenteral dosages; intravenous flow rate calculations; pediatric calculations; and intensive care calculations.

Course Purpose: To learn the mathematical skills essential for calculating medication dosages used in nursing practice.

Type of course: Theory

Credit Hours: 2; Total hours of theory per semester: 30

Class length - Full Semester

Class Format: Online

Class Days and Times: N/A

Prerequisites: ACT math sub score of 19 or higher or completion of remedial math courses.

Course must be completed with a passing grade before or concurrently with NURS 1128 prior to advancing to NURS 1229.

Instructor Name: Kathryn Bible, M.S., R.N.

Instructor Phone: (918) 293-5334

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Instructor email: kathryn.bible@okstate.edu

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Contact: My preferred method of contact is email. Please allow 24-48 hours to return your correspondence during the normal work week.

Instructor Office Hours, in CST, (or by appointment):

Monday: 1300-1600

Friday: 0900-1500

School Name: Nursing & Health Sciences

School Main Phone: 918-293-5337

School Office Hours: 8:30 am - 4:30 pm Monday-Friday

REQUIRED TEXT, REFERENCES, AND MATERIALS

Text: Ogden, S. & Fluharty, L. (2016). Calculation of drug dosages: A work text (10th ed.). St. Louis: Elsevier ISBN: 9780323310697

References: N/A

Materials: Pencil, paper, and access to a computer or tablet with internet capabilities

Uniform/Tools: calculator and webcam

Estimated Cost for Text: \$ 86

Estimated Cost for Uniform/Tools: \$ 35

Optional Resources: Web-based student resources through Evolve

Upon completion of the course, students should:

Course Objectives	Assessment of Objectives*
1. Demonstrate ability to utilize fractions, decimals, and percentages in calculating dosages	On-line discussion questions, chapter quizzes, and exams.
2. Convert within metric, apothecary, household system, and additional conversions of measurements	
3. Convert between metric, apothecary, household system, and additional conversions of measurements	
4. Demonstrate understanding of medication administration including medication administration rights, common routes, nurses' role, ability to read and interpret medication orders, MAR documentation, and medication labels	
5. Calculate correct doses of oral and parenteral medications	
6. Calculate correct doses of heparin, insulin, and reconstituted medications	
7. Calculate correct intravenous (IV) flow rates	
8. Identify methods of IV access and equipment used for IV therapy	
9. Calculate correct dosages based on weight	
10. Calculate correct dosages based of safe therapeutic range	
11. Calculate correct critical care IV flow rates	

Aspects of the course objective assessments may be used in the university's assessment of student learning. If applicable, an asterisk (*) above indicates this course is used in the university assessment program.

COURSE ACTIVITIES

In this course students will:

- Participate in self-guided exercises
- Complete reading assignments
- Complete practice problems
- Participate in discussion questions
- Complete chapter quizzes
- Complete exams

EVALUATION - GRADES WILL BE BASED ON THE QUALITY AND COMPLETION OF THESE TASKS:

COURSE ACTIVITY	POINTS POSSIBLE	<div style="border: 2px solid black; padding: 10px; text-align: center;"> OSUIT Grading Scale A = 92%-100% B = 84%-91% C = 75%-83% D = 66%-74% F = 65% & below </div>
Quizzes: 3 quizzes @ 10 pts each 10 quizzes @ 20 pts each	230	
Discussion Forum: Introduction- 10 pts 2 Discussion Questions @ 20 pts each	50	
Exams 2 exams @ 100 pts each	200	
Total	480*	

*The student’s grade for this assignment will be used in the university’s assessment of student learning. A 70% competency or higher receives a Pass rating. This Pass/Fail rating is independent of the student’s course grade.

Daily and/or weekly quizzes, small weekly assignments and similar type projects: Normal return time to student by next class meeting or no later than one (1) week.

Extensive assignments, large lab projects, extensive quizzes, exams and similar type projects: Normal return time to students in one (1) to two (2) weeks.

View grade in the online classroom under the gradebook and NOT under progress. Students who make less than 75% on an exam are encouraged to make an appointment with their course instructor and develop a plan to improve their study skills and future testing performance.

RECOMMENDED STUDENT COMPENTENCIES/SKILLS

An ACT math sub score of 19 or above or completion of remedial math courses; use of slide presentations, webcam, calculator and web-based resources are recommended.

AUTHORIZED TOOLS

Students may use any/all course materials, including books and notes, while participating in practice and learning activities. All quizzes and written assignments are to be completed independently; no collaboration with classmates is permitted and any instance of such will be considered academic dishonesty.

LATE WORK

Course activities are scheduled in the course schedule at the beginning of the semester and are expected to be completed by the due date/time posted in the course schedule. **Late work will not be accepted and no makeup will be provided unless previously arranged with the instructor.** Please contact me in a timely manner via email or phone if you have any questions or problems. If you have issues such as technical problems or an emergency that will not allow you to complete your assignments on time please contact me prior to the due date and time. It is

at the instructor's discretion to allow extra time to complete assignments due to unforeseen circumstances.

TESTING

1. Quizzes**

- a) Quizzes should be completed in order and by the listed date/time for completion. While quizzes have set due dates/times, they are all open from the first day of class—feel free to work ahead if you are able.
- b) Quizzes not submitted correctly or on time will be considered late.
- c) The quizzes will be available to review all responses immediately after submission only. Review question feedback provided for an example in solving dosage calculations problems.

2. Exams**

- a) The Exams will be taken online using Respondus Lockdown Browser
- b) Exams are scheduled in the course syllabus. There are 2 Exams in the course: Exam I will cover content from Unit 1 and Unit 2. Exam II will cover content from Unit 3.
- c) Examinations may be rescheduled in the case of an emergency absence, e.g. death in the immediate family or significant illness of the student with proof of emergency. Provide appropriate documentation (e.g., doctor's statement, obituary) to avoid losing points. In case of an emergency absence, the student must notify the instructor prior to the test time, and the instructor reserves the right to give an alternate examination.
- d) Failure to make arrangements within 24 hours for a make-up test will result in a grade of zero (0%) recorded for the examination missed. If an exam is rescheduled for a non-emergency absence, 5 points per calendar day will be deducted from the student's test score. The exam must be taken within seven days of the original scheduled examination.
- e) Exams not submitted correctly or on time will be considered late.
- f) The exams will be available to review the incorrect responses immediately after submission only.

COURSE DISCUSSIONS

1. Course Discussion**

- a) Assigned Discussions: There are three assigned discussion forums for this course: week 1-introduction, week 4-chapter 8 and week 13-chapter 17. For each of these assignments you will be asked to respond to a question posted by the instructor. You will provide an original post answering the question by Wednesday, 11:59 PM, CST and respond to/comment on the postings of at least 2 other students by Sunday, 11:59 PM, CST. Grading rubrics are posted with each discussion question. Due dates are located in the course schedule of the syllabus.
- b) Muddiest Point Forum: This discussion forum should be used to post general questions and comments regarding the course. This forum is viewed by the course instructor and visible to all students, but is not graded.

- c) **Instructor Role:** The instructor will review discussion posts and comment as necessary and appropriate to facilitate discussion, answer questions and correlate discussion to course objectives. Do not expect an instructor comment for every student post unless grading feedback is required.

2. **Additional Material:**

Web-based student resources provided on the Evolve website are optional learning opportunities meant for the student's own benefit. The site can be accessed via the link provided at the top of the course home page or by accessing the website directly at <https://evolve.elsevier.com/cs/>

****Grades for quizzes/exams are given immediately upon completion of the quiz and available to review. Manual grading of quizzes/exams will be completed and discussion forum grades will be posted no later than six business days after the due date (excluding college breaks). Once manual grading is complete, a notification will be posted on the News Forum.**

OTHER LAB AND CLASSROOM POLICIES

This course is administered entirely on-line through the learning management system or LMS, aka: *Desire2Learn* (D2L), Online Classroom, or Brightspace. For the purpose of this course, it will be referred to as LMS.

The course is organized into 3 units with the corresponding chapters of the textbook for each week. Units and/or weekly chapters can be accessed in the "content" area of the online course. Each unit follows a similar format including chapter objectives, readings, presentations, practice activities, discussion and/or chapter quizzes.

Assignment schedule, details and due dates will be posted in the course schedule located in the syllabus and on the weekly schedule on the LMS. **All assignments are due on the date listed per the course schedule no later than 11:59 PM, CST.** It is the responsibility of the student to make sure all assignments are submitted correctly and on time, according to the assignment instructions or they will be considered late. Any assignments not submitted correctly or on time will be considered late.

After submission of an assignment, you should receive an email to the account listed on your LMS profile. If a confirmation e-mail is not received, resubmit the assignment. If there appears to be a problem, contact OSUIT Technology Services (1-918-293-4700; http://osuit.edu/technology_services) and notify me of the problem prior to the assignment date/time deadline. Save the confirmation email in case of unforeseen circumstances regarding the assignment submission.

ONLINE COURSE INTERACTION

OSUIT requires all online courses to include interaction between students, peers and instructors. Our online courses use a variety of tools to build a community of learners and strengthen engagement between students and their peers, as well as between students and the instructor. Communication tools used in courses may include Discussion, News, and Email. Read the

syllabus completely to determine which of these methods you, your classmates and your instructor will use for interaction.

General guidelines for student conduct while interacting within an online course include: (1) Use proper language in all communications; (2) Harassment of any type will not be tolerated; (3) No jokes, insults or threats of an offensive nature.

For more information, go to: <http://osuit.edu/center/netiquette>

The objective in an online discussion is to be collaborative, *not* combative. Please, proofread your initial and peer responses carefully before you post them to make sure that they will not be offensive to others. Use discussions to develop your skills in collaboration and teamwork. Treat the discussion areas as a creative environment where you and your classmates can ask questions, express opinions, revise opinions, and take positions just as you would in a more "traditional" classroom setting. Students in the course may be from varied backgrounds and beliefs. Please be sensitive to other cultures when writing a post. Please refrain from writing words in all caps as this can be mistakenly translated as shouting in an online environment. Shouting in an online discussion is not an appropriate action.

SYLLABUS ATTACHMENT

View the Syllabus Attachment, which contains other important information, by visiting http://osuit.edu/center/student_syllabus_information or see copy provided in the course resources.

COURSE SCHEDULE

CO relates to course objectives and CHO relates to chapter objectives.

When followed by numbers, such as CO 1 or CHO 1.1, it indicates which objectives have been met by the listed activities.

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<u>Week 1</u> 01/04/18- 01/07/18	<ul style="list-style-type: none"> Course Orientation 	<ul style="list-style-type: none"> Explore the Learning Management System (LMS), also known as Desire2Learn, D2L, Online Classroom and Brightspace Identify course expectations 	<p><u>Reading:</u></p> <ul style="list-style-type: none"> Review syllabus & course expectations Review Orientation video <p><u>Assignments:</u></p> <p><u>Preparation:</u></p> <ul style="list-style-type: none"> Post questions regarding course expectations, syllabus, etc. in the Muddiest Point Forum under the Discussion Forum tab <p><u>Graded Assignment:</u> None this week</p>	
Unit I: Introduction to Dosage Calculation				
<u>Week 2</u> 01/08/18- 01/14/18	<ul style="list-style-type: none"> Introduction Math Review 	<p>Introduction Discuss introductions with peers in the course</p> <p>Chapter 1</p> <ul style="list-style-type: none"> 1.1 Changing an improper fraction to a mixed number and vice versa 1.2 Changing a fraction to an equivalent fraction with the lowest common denominator 1.3 Changing a mixed number to an equivalent fraction with the lowest common denominator 	<p><u>Reading:</u></p> <ul style="list-style-type: none"> Chapter 1 Fractions Chapter 2 Decimals Chapter 3 Percents <p><u>Assignments:</u></p> <p><u>Preparation:</u></p> <ul style="list-style-type: none"> Complete Pretests prior to reading for Chapter 1-3 <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> Complete Worksheets Ch. 1-3 Complete Post-test 1 & 2 for Chapter 1-3 	

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<p><u>Week 2 cont.</u> 01/08/18- 01/14/18</p>	<ul style="list-style-type: none"> • Introduction • Math Review 	<p>Chapter 1 continued</p> <ul style="list-style-type: none"> • 1.4 Adding and subtracting fractions with the same/different denominators or involving whole numbers • 1.5 Multiplying/dividing fractions and mixed numbers • 1.6 Reducing a complex fraction with and without mixed numbers <p>Chapter 2</p> <ul style="list-style-type: none"> • 2.1 Reading and writing decimal numbers • 2.2 Determining the value of decimal fractions • 2.3 Adding, subtracting, multiplying and dividing decimals • 2.4 Rounding decimal fractions to an indicated place value • 2.5 Multiplying and dividing decimal by 10 or a power of 10 • 2.6 Multiplying and dividing decimals by 0.1 or a multiple of 0.1 • 2.7 Converting a decimal fraction to a proper fraction and vice versa <p>Chapter 3</p> <ul style="list-style-type: none"> • 3.1 Changing a fraction or decimal to a percent and vice versa • 3.2 Changing a percent containing a fraction to a decimal 	<p><u>Practice Opportunities continued:</u></p> <ul style="list-style-type: none"> • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 1 ○ Student Practice Problems & Learning Activities <p>(Meets CHO 1-3)</p> <p><u>Graded Assignments</u></p> <p>Discussion Forum: Introduction</p> <ul style="list-style-type: none"> • Complete initial post by Wednesday @ midnight, CST • Complete peer responses by Sunday @ midnight, CST <p>Quizzes</p> <ul style="list-style-type: none"> • Quiz for Chapter 1 Fractions (Meets CHO 1.1-1.6) • Quiz for Chapter 2 Decimals (Meets CHO 2.1-2.7) <p>Quiz for Chapter 3 Percents (Meets CHO 3.1-3.4)</p>	<p>01/10/18 by 11:59 PM, CST</p> <p>01/14/18 by 11:59 PM, CST</p>

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
		<ul style="list-style-type: none"> 3.3 Finding what percent one number is of another 3.4 Finding the given percent of a number (Meets CO 1) 		
<p>Week 3 01/16/18-01/21/18</p> <p>**01/15/18** No Class Martin Luther King Holiday</p>	<ul style="list-style-type: none"> Metric & Household Measurements Calculations used in Patient Assessment 	<p>Chapter 6</p> <ul style="list-style-type: none"> 6.1 Recalling the metric measures of weight, volume and length 6.2 Computing equivalents within the metric system 6.3 Recalling approximate equivalents between metric and household measures 6.4 Computing equivalents between the metric and household systems of measure <p>Chapter 7</p> <ul style="list-style-type: none"> 7.1 Recall equivalent apothecary and metric measures 7.2 Compute equivalents between the apothecary and metric systems to calculate intake and output (I&O), weights, and lengths <p>(Meets CO 2 & 3)</p>	<p>Reading:</p> <ul style="list-style-type: none"> Chapter 6 Chapter 7 (Celsius/Fahrenheit conversion not required) <p>Assignments:</p> <p>Preparation:</p> <ul style="list-style-type: none"> Complete Pretests prior to reading for Chapter 6 & 7 <p>Practice Opportunities:</p> <ul style="list-style-type: none"> Complete Worksheets Chapter 6 & 7 Complete Post-test 1 & 2 for Chapter 6 & 7 Evolve Student Resources: <ul style="list-style-type: none"> Drug Calculations Companion-Module 3 Student Practice Problems & Learning Activities Flashcards for Ch. 6 (Meets CHO 6.1-7.2) <p>Graded Assignments:</p> <ul style="list-style-type: none"> Quiz for Ch. 6 & 7 (Meets CHO 6.1-7.2) 	<p>01/21/18 by 11:59 PM, CST</p>
<p>Week 4 01/22/18-01/28/18</p>	<ul style="list-style-type: none"> Safety in Medication Administration 	<p>Chapter 8</p> <ul style="list-style-type: none"> 8.1 Explain the fundamental need for patient safety programs 	<p>Reading:</p> <ul style="list-style-type: none"> Chapter 8 Safety in Medication Administration (**continued**) 	

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<p><u>Week 4 (cont.)</u> 01/22/18- 01/28/18</p>		<p>Chapter 8 (cont.)</p> <ul style="list-style-type: none"> • 8.2 Describe the impact of medical errors on patient outcomes • 8.3 Describe strategies to maintain patient and staff safety during medication administration • 8.4 Identify the special problems and issues of the elderly population related to medication administration (Meets CO 4) 	<p><u>Assignments:</u> <u>Preparation:</u></p> <ul style="list-style-type: none"> • Complete Pretests prior to reading for Chapter 8 <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> • Complete Worksheets Chapter 8 • Complete Post-test 1 & 2 for Chapter 8 • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 4 ○ Student Practice Problems & Learning Activities (Meets CHO 8.1-8.4) <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> • Discussion Question #1: Promoting Patient Safety in Medication Administration <ul style="list-style-type: none"> ○ Complete initial post by Wednesday @ midnight, CST ○ Complete peer responses by Sunday @ midnight, CST (Meets CHO 8.2-8.4) • Quiz for Ch. 8 (Meets CHO 8.1-8.4) 	<p>01/24/18 by 11:59 PM, CST</p> <p>01/28/18 by 11:59 PM, CST</p>

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<p>Week 5 01/29/18- 02/04/18</p>	<ul style="list-style-type: none"> • Interpretation of Physician’s Orders • Reading Medication Labels 	<p>Chapter 9</p> <ul style="list-style-type: none"> • 9.1 Explain the seven rights of medication administration <p>Chapter 9 (cont.)</p> <ul style="list-style-type: none"> • 9.2 Convert from 24 hour clock time to AM-PM time • 9.3 Identify the five components of a medication administration record (MAR) • 9.4 Demonstrate appropriate documentation on the (MAR) <p>Chapter 10</p> <ul style="list-style-type: none"> • 10.1 Identify the trade name of medication on the drug label • 10.2 Identify the generic name of medication on the drug label • 10.3 Identify the strength of medication on the drug label • 10.4 Identify the form of medication on the drug label • 10.5 Identify the route of administration for the medication on the drug label • 10.6 Identify the total amount or volume of the medication provided in the container from the drug label • 10.7 Identify directions for mixing or preparation of the medication, if required, on the drug label (Meets CO 4) 	<p>Reading:</p> <ul style="list-style-type: none"> • Chapter 9 Interpretation of Physician’s Orders **continued next page** • Chapter 10 Reading Medication Labels <p>Assignments:</p> <p>Preparation:</p> <ul style="list-style-type: none"> • Complete Pretests prior to reading for Chapter 9 & 10 <p>Practice Opportunities:</p> <ul style="list-style-type: none"> • Complete Worksheets Ch. 9 & 10 • Complete Post-test 1 & 2 for Chapter 9 & 10 • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 4 continued ○ Student Practice Problems & Learning Activities ○ Flashcards for Ch. 9 (Meets CHO 9.1-10.7) <p>Graded Assignments:</p> <ul style="list-style-type: none"> • Quiz for Ch. 9 (Meets CHO 9.1-9.4) • Quiz for Ch. 10 (Meets CHO 10.1-10.7) 	<p>02/04/18 by 11:59 PM, CST</p>

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
Unit 2: Oral and Parenteral Dosages				
<u>Week 6</u> 02/05/18- 02/11/18	<ul style="list-style-type: none"> • Oral Dosages • Parenteral Dosages 	Chapter 11 <ul style="list-style-type: none"> • 11.1 Solve problems of oral dosages for tablets, capsules, liquid medication • 11.2 Solve problems of oral dosages using milliequivalents • 11.3 Convert of all measures in one problem to one system of measurement as required Chapter 12 <ul style="list-style-type: none"> • 12.1 Solve parenteral dosage problems • 12.2 Convert all measures in one problem to one system of measurement, as required (Meets CO 5) 	<u>Reading:</u> <ul style="list-style-type: none"> • Chapter 11 Oral Dosages • Chapter 12 Parenteral Dosages <u>Assignments:</u> <u>Preparation:</u> <ul style="list-style-type: none"> • Complete Pretests prior to reading for Chapter 11 & 12 <u>Practice Opportunities:</u> <ul style="list-style-type: none"> • Complete Worksheets for Chapter 11 & 12 • Complete Post-test 1 & 2 for Chapter 11 & 12 • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 6 ○ Student Practice Problems & Learning Activities ○ Flashcards for Ch. 11 and 12 (Meets CHO 11.1-12.2) <u>Graded Assignments:</u> <ul style="list-style-type: none"> • Quiz for Ch. 11 & 12 (Meets CHO 11.1-12.2) 	02/11/18 by 11:59 PM, CST
<u>Week 7</u> 02/12/18- 02/18/18	<ul style="list-style-type: none"> • Dosages Measured in units • Reconstitution of Medications 	Chapter 13 <ul style="list-style-type: none"> • 13.1 Solve problems involving medication measured in unit dosages • 13.2 Identify the correct measurement of unit dosages on an insulin syringe 	<u>Reading:</u> <ul style="list-style-type: none"> • Chapter 13 Dosages Measured in units • Chapter 14 Reconstitution of Meds **continued next page**	

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<p><u>Week 7 (cont.)</u> 02/12/18- 02/18/18</p>		<p>Chapter 14</p> <ul style="list-style-type: none"> • 14.1 Solve drug dosage problems requiring reconstitution of a powdered medication into a liquid form • 14.2 Solve problems involving medications measured in unit dosages (Meets CO 6) 	<p><u>Assignments:</u> <u>Preparation:</u></p> <ul style="list-style-type: none"> • Complete Pretests prior to reading for Chapter 13 & 14 <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> • Complete Worksheets Ch. • Complete Post-test 1 & 2 for Chapter 13 & 14 • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 9 ○ Student Practice Problems & Learning Activities (Meets CHO 13.1-14.2) <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> • Quiz for Ch. 13 & 14 (Meets CHO 13.1-14.2) 	<p>02/18/18 by 11:59 PM, CST</p>
<p><u>Week 8</u> 02/19/18- 02/25/18</p>	<ul style="list-style-type: none"> • Review • Exam I 	<p>Exam I: Unit 1 & 2 Introduction to Dosage Calculation Oral and Parenteral Dosages (Meets CO 1-6)</p>	<p><u>Reading:</u></p> <ul style="list-style-type: none"> • No reading assignment <p><u>Assignments:</u> <u>Preparation:</u></p> <ul style="list-style-type: none"> • Review previous pre-tests, post-tests, and worksheets <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> • Complete Exam I review worksheet <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> • Exam I (Meets CHO 1.1-14.2) 	<p>02/25/18 by 11:59 PM, CST</p>

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
Unit 3: Intravenous and Pediatric Calculations				
<p>Week 9 02/26/18- 03/04/18</p>	<ul style="list-style-type: none"> IV flow rates 	<p>Chapter 15</p> <ul style="list-style-type: none"> 15.1 Solve drops per minute (gtt/min) when given the total volume and time of infusion for an IV solution or IV piggyback 15.2 Solve milliliters per hour (mL/hr) when given the total volume and time of infusion for an IV solution or IV piggyback (Meets CO 7) 15.3 Explain the methods of IV access, including heparin/saline lock and central venous catheters 15.4 Explain the various equipment used for IV therapy, such as electronic infusion devices, patient-controlled analgesia, macro/microdrip tubing and IV infusion by gravity 15.5 Describe the proper use of equipment used for IV therapy (Meets CO 8) 	<p>Reading:</p> <ul style="list-style-type: none"> Chapter 15 <p>Assignments:</p> <p>Preparation:</p> <ul style="list-style-type: none"> Complete Pretests prior to reading for Chapter 15 <p>Practice Opportunities:</p> <ul style="list-style-type: none"> Complete Worksheets Chapter 15 Complete Post-test 1 & 2 for Chapter 15 <p>Practice Opportunities (cont.):</p> <ul style="list-style-type: none"> Evolve Student Resources: <ul style="list-style-type: none"> Drug Calculations Companion-Module 8 Student Practice Problems & Learning Activities Flashcards for Ch. 15 (Meets CHO 15.1-15.2) <p>Graded Assignments:</p> <ul style="list-style-type: none"> Discussion Question #2: Promoting the Proper Use of Patient-Controlled Analgesia <ul style="list-style-type: none"> Complete initial post by Wednesday @ midnight, CST Complete peer responses by Sunday @ midnight, CST (Meets CHO 15.4, 15.5) <p>**Continued next page**</p>	<p>02/28/18 by 11:59 PM, CST</p> <p>03/04/18 by 11:59 PM, CST</p>

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
			<ul style="list-style-type: none"> Quiz for Ch. 15 (Meets CHO 15.1-15.5) 	
<p><u>Week 10</u> 03/05/18- 03/11/18</p>	<ul style="list-style-type: none"> IV flow rates using units 	<p>Chapter 16</p> <ul style="list-style-type: none"> 16.1 Solve the IV flow rate of medications in units per hour or international units per hour 16.2 Solve the units per hour of medications from the IV flow rate 16.3 Solve the IV flow rate of medications in units per kilogram per hour (weight-based heparin) (Meets CO 6 & 9) 	<p><u>Reading:</u></p> <ul style="list-style-type: none"> Chapter 16 <p><u>Assignments:</u></p> <p><u>Preparation:</u></p> <ul style="list-style-type: none"> Complete Pretests prior to reading for Chapter 16 <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> Complete Worksheets Chapter 16 Complete Post-test 1 & 2 for Chapter 16 Evolve Student Resources: <ul style="list-style-type: none"> Drug Calculations Companion-Module 8 Student Practice Problems & Learning Activities (Meets CHO 16.1-16.3) <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> Quiz for Ch. 16 (Meets CHO 16.1-16.3) 	<p>03/11/18 by 11:59 PM, CST</p>
<p><u>Week 11</u> 03/12/18- 03/18/18</p>	<ul style="list-style-type: none"> Critical Care IV flow rates 	<p>Chapter 17</p> <ul style="list-style-type: none"> 17.1 Solve the IV flow rate of medications in milligrams per minute (mg/min) 17.2 Solve the IV flow rate of medication in micrograms per minute (mcg/min) 17.3 Solve the IV flow rate of medications in micrograms per kilogram per minute (mcg/kg/min) 17.4 Solve the milligrams per minute of 	<p><u>Reading:</u></p> <ul style="list-style-type: none"> Chapter 17 <p><u>Assignments:</u></p> <p><u>Preparation:</u></p> <ul style="list-style-type: none"> Complete Pretests prior to reading for Chapter 17 <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> Complete Worksheets for Ch. 17 <p>**continued next page**</p>	

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<p><u>Week 11 (cont.)</u> 03/12/18-03/18/18</p>		<p>medications from the IV flow rate</p> <ul style="list-style-type: none"> • 17.5 Solve the micrograms per minute of medications from the IV flow rate • 17.6 Solve the micrograms per kilogram per minute of medications from the IV flow rate <p>(Meets CO 9 & 11)</p>	<ul style="list-style-type: none"> • Complete Post-test 1 & 2 for Chapter 17 • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 9 ○ Student Practice Problems & Learning Activities ○ Flashcards for Ch. 17 <p>(Meets CHO 17.1-17.6)</p> <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> • Quiz for Ch. 17 <p>(Meets CHO 17.1-17.6)</p>	<p>03/18/18 by 11:59 PM, CST</p>
<p>SPRING BREAK NO ASSIGNMENTS</p>				
<p><u>Week 12</u> 03/26/18-04/01/18</p>	<ul style="list-style-type: none"> • Pediatric Dosages 	<p>Chapter 18</p> <ul style="list-style-type: none"> • 18.1 Convert the weight of a child from pounds to kilograms • 18.2 Solve pediatric dosage calculations • 18.3 Solve the prescribed single medication dose to determine if it is safe and therapeutic • 18.4 Solve the 24-hour dosage range to determine if the prescribed medication dose is safe and therapeutic • 18.5 Identify whether the actual dosage (in milligrams per kilograms per 24 hours) is safe to administer based on the safe therapeutic range • 18.6 Solve pediatric IV solutions <p>(Meets CO 9 & 10)</p>	<p><u>Reading:</u></p> <ul style="list-style-type: none"> • Chapter 18 <p><u>Assignments:</u></p> <p><u>Preparation:</u></p> <ul style="list-style-type: none"> • Complete Pretests prior to reading for Chapter 18 <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> • Complete Worksheets for Chapter 18 • Complete Post-test 1 & 2 for Chapter 18 • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 7 ○ Student Practice Problems & Learning Activities <p>**continued next page**</p>	

Course Outline Schedule	Topic	Chapter Objectives	Assignment	Due Date
<p><u>Week 12 (cont.)</u> 03/26/18- 04/01/18</p>			<ul style="list-style-type: none"> ○ Flashcards for Ch. 18 (Meets CHO 18.1-18.6) <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> • Quiz for Ch. 18 (Meets CHO 18.1-18.6) 	<p>04/01/18 by 11:59 PM, CST</p>
<p><u>Week 13</u> 04/02/18- 04/08/18</p>	<ul style="list-style-type: none"> • Review • Unit 11 Exam 	<p style="text-align: center;">Unit II Exam Reconstitution, Intravenous and Pediatric Calculations (Meets CO 6-11)</p>	<p><u>Reading:</u></p> <ul style="list-style-type: none"> • No reading assignment <p><u>Assignments:</u></p> <p><u>Preparation:</u></p> <ul style="list-style-type: none"> • Review previous pre-tests, post-tests, and worksheets <p><u>Practice Opportunities:</u></p> <ul style="list-style-type: none"> • Complete Exam II review worksheet • Evolve Student Resources: <ul style="list-style-type: none"> ○ Drug Calculations Companion-Module 10 Comprehensive Post Test <p><u>Graded Assignments:</u></p> <ul style="list-style-type: none"> • Exam II (Meets CHO 15.1-18.6) 	<p>04/08/18 by 11:59 PM, CST</p>
<p><u>Week 14 & 15</u> 04/09/18- 04/15/18</p>	<p>Course Evaluation</p>		<p>Complete course evaluation</p>	<p>04/15/18 by 11:59 PM, CST</p>

Schedule is subject to change at instructor's discretion.