

The University of Texas at El Paso School of Nursing
N3180 – Dosage Calculation for Nursing
Fall 2018

COURSE DESCRIPTION/COURSE OVERVIEW: This course introduces nursing students to acquire knowledge and develop proficiency for accurately calculating medication dosages for various method of administration to patients across the lifespan. Emphasis is placed on critical thinking of drug classifications and nursing implications related to safe administration of medication in realistic dosage calculation scenarios.

COURSE PRE-REQUISITES: Admission into Phase 3 courses.

CREDIT ALLOCATION: 1 credit hour

FACULTY INFORMATION:

- Shalla Copeland, PhD (c), MSN, RN
- School of Nursing Building Office: 322
- Phone: (915) 747-7255
- Email: smcopeland@utep.edu. When the course starts - email through the Blackboard course email
- Office Hours: Tuesdays 1500-1600, Wednesdays 1200-1500, and Thursdays 1500-1600 and also by individual appointment
- Contact me via email at anytime, but please allow for at least a 24-48 hour response time.

REQUIRED RESOURCE:

ATI Pharmacology Made Easy and Dosage Calculation – this is a free resource.

RECOMMENDED RESOURCE:

Sienkiewicz, S. & Palmunen, J. (2017). *Clinical nursing calculations*. Burlington, MA: Jones & Bartlett. ISBN: 978-1-284-05752-2

COURSE OBJECTIVES:

Upon completion of this course, the learner should be able to:

1. Demonstrate competency in basic arithmetic function.
2. Identify units of measure in the household and metric systems.
3. Utilize the information on medication labels to calculate prescribed dosages.
4. Demonstrate knowledge of accurate medication calculation using dimensional analysis.
5. Calculate dosages based on body weight of pediatric and adult patients.
6. Discuss nursing implications and concepts of safety, when performing drug calculations for all routes of medication administration.

TEACHING METHODOLOGIES: Please see Blackboard for Course Calendar and Assignments

Teaching will include any of the following:

- Interactive online Blackboard and ATI activities and assignments
- PowerPoint presentations
- Class discussions
- Case studies
- Quizzes and a comprehensive final exam

GRADING POLICY AND STRUCTURE:

Students must pass this course at a minimum of 75%. Per the School of Nursing policy, achieving less than a 75% in this course results in a course failure. **There is no rounding of grades and fractional points will be dropped. Extra credit is not permitted.**

GRADING BREAKDOWN:

| | |
|--------------------------|---------------------|
| Assignment I | 10% |
| Assignment II | 10% |
| Assignment III | 10% |
| Quiz Average | 35% |
| Final Exam | 35% |
| ATI Modules/Case Studies | incomplete/complete |

GRADING SCALE:

| | |
|--------|-----|
| 90-100 | = A |
| 80-89 | = B |
| 75-79 | = C |
| 60-74 | = D |
| <60 | = F |

100%

COURSE POLICIES:

Academic Regulations

- Review in UT El Paso Undergraduate Student Catalog and the **School of Nursing Student Handbook** the following policies: *Religious Observance, Ethical and Responsible Use of Social Media, Policy on Academic Integrity, Progression Policy, and Effective Nursing Practice Policy, Statement on Disability, and Student Injury.*

Attendance

- Students are expected to attend all classes and to arrive on time. Students arriving late are asked to enter quietly and unobtrusively. Students are responsible for content and announcements presented in class whether present or not.

Blackboard

- Students are required to subscribe to and frequently access the course Blackboard site. Blackboard is the main source of communication between faculty and students. Students are encouraged to access this site on a daily basis for e-mail and course announcements. Course syllabus, calendar, topical outline of scheduled lectures, and assigned readings are

posted on this site. Grades will be made available ONLY through this site. Course communication during the semester will occur through the Blackboard course email.

Communication

- Communication is the responsibility of both students and faculty. Faculty will keep students informed of progress and students will inform faculty of any deterrent to their success. Students with questions or concerns should:
 - First go to the appropriate faculty member.*
 - If not resolved, then follow the appropriate chain of command in the sequence as identified below:*
 - Course manager*
 - Director of Undergraduate Education*
 - Assistant Dean for Undergraduate Education*
 - School of Nursing Dean*

Grievances

- Challenges to grades may be pursued only on the basis of malice, bias, arbitrary or capricious grade determination or impermissible discrimination. In no event shall a challenge be pursued only on the basis of the standards employed in setting grades, so long as those standards are employed impartially. Grievances MUST be in WRITING and filed through the faculty member, the SON Assistant Dean for Undergraduate Education and the Dean of the SON. If the student is not satisfied with the outcome after using the chain of command, the student may consult with and/or file a challenge with the Chairperson of the University Student Welfare and Grievance Committee.

Policy on Scholastic Dishonesty

- Students are expected to be above reproach in all scholastic activities. Students who engage in scholastic dishonesty are subject to disciplinary penalties, including the possibility of failure in the course and dismissal from the School of Nursing and/or university. Scholastic dishonesty includes but is not limited to reproducing test or quiz materials from memory, copy/paste or Xerox, cheating, plagiarism, collusion, the submission for credit or any work or materials that are attributable in whole or in part to another person, taking an examination for another person, and any act designed to give unfair advantage to a student or the attempt to commit such acts. Regents' Rules and Regulations, Part One, Chapter VI, Section 3, Subsection 3.2, Subdivision 3.22.
- Since scholastic dishonesty harms the individual, all students, and the integrity of the School of Nursing and the university, policies on scholastic dishonesty will be strictly enforced. See detailed procedure in the Handbook of Operating Procedures (HOP) available in the Office of the Dean of Students.

Policy relating to Disability / Pregnancy/ CASS:

- **Disability:** Nursing is a physically and mentally challenging profession. Nurses are required to think critically and quickly in order to respond to patient care needs. Nurses are also expected to be able to assist patients in transfer, ambulation and in activities of daily living. In order to do this, nurses must be able to lift, bend and be on their feet for extended periods of time. Nursing students are expected to be able to perform these

functions. It is therefore the responsibility of the student to inform the course manager of any limitations they may have in completing course expectations. Nursing students with limitations in any of the above abilities are advised to discuss these matters with The Center for Accommodations and Support Services (CASS) to determine if reasonable accommodations could be provided. Written guidelines r/t accommodations from CASS must be submitted to the course manager PRIOR to the start of the course. If you have a disability and need classroom accommodations, please contact CASS at 747-5148, or by email to cass@utep.edu, or visit their office located in UTEP Union East, Room 106. For additional information, please visit the CASS website at www.sa.utep.edu/cass. *CASS' Staff are the only individuals who can validate and if need be, authorize accommodations for students with disabilities.*

- **Pregnancy:** It is the responsibility of the student to inform the instructor of pregnancy limitations. Written guidelines r/t accommodations from The Center for Accommodations and Support Services (CASS) must be submitted to the course manager PRIOR to the start of the course.

Professional Behavior

- Students are expected to behave professionally *at all times* with faculty and peers in any setting in which the student is a representative of UTEP. Bullying, verbal abuse, insubordination, or personal attacks will not be tolerated in any form. Any behavior deemed inappropriate by faculty will result in faculty conference(s), and completion of a Student Opting for Success (SOS) plan that addresses the student's areas of needed improvement. Possible activities available to assist the student in attaining the SOS objectives include stress and/or anger management counseling sessions. Inappropriate behaviors may result in removal from the class and/or an administrative withdrawal from the course and/or dismissal from the program.
- The following addresses expectation of infection control, safety, and hygiene applying to classroom and clinical practice settings. Students are expected to be mindful of personal hygiene and cleanliness of clothing and personal baggage. Aseptic techniques should be used when coughing, sneezing, and disposing of personal tissues. Students and faculty must be careful to create an image of cleanliness and health, avoiding personal body odors and excessive use of perfumed chemicals. Hair should be clean and neatly kept, skin should be clean and intact. Open wounds with drainage/swelling/ or lacerations should be cleansed/bandaged for the classroom setting; however, a physician note is needed to be allowed into the skills practice lab or into a clinical rotation in the nursing program.

Retention: Students Opting for Success (SOS)

- When a student is not progressing in the course as expected, or is not successful on an examination, they will be required to meet with the instructor to discuss strategies for success as outline on the SOS form. The SOS plan will identify recommendations for improving the student's success potential and will specify time lines for completion of these recommendations. The SOS form (with all recommendations completed and all signatures in place) must be submitted to the course manager by due date. See respective Blackboard home page for SOS form.

UTEP Tobacco Policy

- The University of Texas at El Paso (UTEP) appreciates your cooperation as we are a smoke and tobacco-free campus. The policy is part of the university's promotion of respect toward our environment and community. The use of tobacco products (including but not limited to cigarettes, cigars, pipes, water pipes, bidis, kreteks, electronic cigarettes, smokeless tobacco, snuff, chewing tobacco or all other tobacco products) is prohibited in university buildings, grounds, sidewalks, walkways, and university-owned property and applies to all students, faculty, staff, contractors, and visitors. For more information, visit: www.tobaccofree.utep.edu.

Cell Phones

- Set your phone to mute or silent mode before coming to class.
- Cell phones will not be allowed for any use in class (no phone calls, texts, web browsing). Any student with a visible phone in possession during class times will be asked to leave the class and will receive an unexcused absence for that day with all quizzes and/or assignments for that day recorded as a zero.

Audio Recording

- Audio recording of any class information is at the discretion of the faculty. No videotaping is permitted.

Student Responsibility.

- Students are responsible for all assigned reading and lecture content. Preparation for class and participation in class will optimize the student's ability to succeed in the course. Students should read assigned materials prior to lecture in order to be prepared for class.

Assignments

- Assignments submitted after the assigned due date will be penalized ten points per day, including weekends and/or holidays, after 3 late days – a zero will be given for the assignment.

ATI Dosage Calculation Content

- An ATI Resource – Pharmacology Made Easy and Dosage Calculation Modules have been made available at no cost to each student. Students are responsible for accessing the ATI resource as scheduled within the course calendar. Completion of the ATI Dosage Calculation Modules and Case Studies are required for completion of the course. Any student that fails to complete the modules and/or case studies will receive an incomplete in the course until all course material is completed.

Quizzes

- Quizzes may be given at any point during class or online. **THERE IS NO MAKE-UP FOR A MISSED QUIZ FOR ANY REASON.**
- The quizzes within the ATI Dosage Calculation modules are labeled as "tests". Quiz grades will be entered into Blackboard based on the average of those "tests" as assigned through the course calendar. Quizzes (tests) may be completed early, but no credit will be provided for any quiz that is completed after the due date.

Final Exam

- A comprehensive final exam for dosage calculation will occur at the end of the course and must be passed with a minimum score of a 90 (School of Nursing Policy). If the quiz is not passed, remediation will be required prior to the deadline identified by faculty.
Failure to complete this remediation will result in an "incomplete" for the course.

STUDENT RESOURCES:

UTEP Technology Support Center: The Technology Support Center (TSC) offers UTEP students access to state of the art computing equipment and specialized software for academic needs. The TSC is also home to the PC Clinic, which offers computer software repair services to students at no cost. The center is located in the library, room 300 (747-5257).

MaRCS Center: (Math Resources Center for Students). The MaRCS tutoring center provides walk-in, face-to-face tutoring for all undergraduate mathematics courses. This is a free service for all UTEP students. The tutors are undergraduate and graduate students who have mastered the content areas they help students with. Located in the library, room 218 (747-5366) or at <http://math.utep.edu/marcs/>

Student Health Center: UTEP Student Health Center is here to meet the health care needs of all students so they can focus on their studies. As a student you have paid a medical service fee that allows you to be seen at the clinic as often as needed. Office visits are low cost as well as medications, supplies and any needed lab tests (747-5624).

University Counseling Center: The UTEP University Counseling Center located at 202 Union West can assist you to decide on a career or work through personal concerns. They provide confidential counseling services, assist with stress management, and offer an after-hours crisis support line (747-5302).

Topical Outline

Section 1

Basic math review
Systems of measurement
Medication orders to include abbreviations
Interpretation of medication labels
Elements of safe medication administration

Section 2

Introduction to dimensional analysis
Enteral medication dosage calculations
ATI Dosage Calculation Modules and Case Studies

Section 3

Parenteral medication dosage calculation
Infusion therapy calculations
Hydration and nutrition calculations
ATI Modules and Case Studies

Section 4

Calculation of high alert medications
Weight-based calculations
Titrated intravenous infusion dosage calculations
ATI Modules and Case Studies

See separate course calendar for specific dates for reading assignments and due dates for quizzes, assignments and exams.