

**SUL ROSS STATE  
UNIVERSITY**

**DEPARTMENT OF  
NURSING NUR 3311**

**Dosage Calculation and  
Safe Medication Administration 4.0 Spring 2026**

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**SEMESTER HOURS:** Three (3) Credit

**PREREQUISITES:** Successful Completion of Admission Process

**FACULTY INFORMATION:**

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Office Hours: M-F 8-5

Hours available via e-mail: M-F 8-5

Hours available on campus: M-T 8a-5p

Hours available via phone office/home/cell:

Phone number(s): 432-837-8872

**COURSE DESCRIPTION:**

This course prepares nursing students to accurately calculate medication dosages, interpret medication orders, and apply safe medication administration practices using ATI Dosage Calculation and Safe Medication Administration modules. Students develop proficiency in dimensional analysis, oral and parenteral drug calculations, IV flow rates, pediatric dosing, and high-alert medication safety.

**STUDENT LEARNING OUTCOMES:**

At the end of this course, the student will be able to:

**MEMBER OF THE PROFESSION**

1. Apply mathematical principles to accurately calculate medication dosages.
2. Convert between metric, apothecary, and household measurement systems.

**PROVIDER OF PATIENT-CENTERED CARE**

1. Safely calculate and administer oral, parenteral, and IV medications.
2. Determine safe dose ranges and pediatric weight-based dosages.

**PATIENT SAFETY ADVOCATE**

1. Apply medication safety principles and identify medication errors.

2. Demonstrate competence on the ATI Dosage Calculation & Safe Med Admin exam

#### MEMBER OF THE HEALTH CARE TEAM

1. Utilize appropriate terminology and recording principles when documenting and sharing assessment data with health-team members.
2. Communicate with all members of the health-care team to obtain timely and accurate patient data.

#### MARKETABLE SKILLS FOR THE DEPARTMENT OF NURSING

The following marketable skills and dissemination plan has been submitted to the Texas Higher Education Board after approval from the Assistant Vice President for Institutional Effectiveness at Sul Ross State University:

Students will:

1. develop inquiry skills to evaluate situations (Sense of Inquiry);
2. develop communication skills to evaluate situations (Communication Skills);
3. develop research skills to promote their lifelong learning (Continuous Lifelong Learning); and
4. comport themselves verbally and visually in a professional manner (Professionalism).

Plan for Dissemination:

Students learn the marketable skills by first being exposed to them in all course syllabi. Each of the marketable skills is closely observed and evaluated by clinical faculty and preceptors as students progress through the educational program. Students hone their research and communication skills through assignments and activities in multiple classes.

#### **REQUIRED TEXTS:**

- Access to ATI Dosage Calculation and Safe Medication Administration Modules
- Basic (non-programmable) calculator
- Course worksheets provided by instructor
- Reliable internet access

#### **RECOMMENDED REFERENCES:**

#### **COURSE LEARNING ACTIVITIES, ASSIGNMENTS, GRADING, AND EXPECTATIONS:**

##### **LEARNING ACTIVITIES:**

Students will participate in all learning activities which are designed to meet course objectives. Classroom activities will provide the foundation for subsequent learning experiences. practice and guidance from faculty members.

Students are expected to participate in all course activities. As assessment knowledge and

assessment skills are being developed, students will be expected to take leading roles in simulation scenarios and debriefing opportunities. Student dialogue is expected to reflect knowledge of assigned resources directed toward critical thinking and clinical reasoning.

### **ASSIGNMENTS:**

Students are expected to complete and submit assignments as specified in the course outline. Many opportunities will be planned and implemented to assist students to understand the rationale for and to demonstrate knowledge and skill of preparing and accurately calculating medication dosages, interpret medication orders, and apply safe medication administration practices using ATI Dosage Calculation and Safe Medication Administration modules. This data provides the foundation for planning, implementing, and evaluation of appropriate nursing actions consistent with the role of the professional nurse. In addition to demonstrating the ability to obtain pertinent data for each body system, students will be expected to alter tools and techniques needed to obtain accurate data from all age groups and genders. Incorporation of appropriate terms and descriptions for documentation will be exercised throughout the course.

### **ASSESSMENT OF STUDENT LEARNING:**

Evaluation of student performance is based on evidence related to course-objective achievement. Students are graded on their attendance and participation in class discussion, accurate utilization of assessment tools, patient communication, assessment techniques, documentation, clinical performance, completion of across-the-life-span body system competencies, reflection of a sincere, caring demeanor, and evidence of assignment completion. Criteria for each course activity and assignment, including grading rubrics, are included in the syllabus. Following is a summary of measures to be graded and the percentage allotted for grade achievement:

#### **Summary of Measures for Evaluation:**

<u>Course Requirements</u>	<u>Percentage</u>
1. Exams	30%
2. Final	40%
3. Course modules	15%
4. Module Tests	15%
Total	100%

### Calculation of Final Grade:

The final grade is derived as a summary of the points delineated on specific rubrics for assignments and participation. The final letter grade will follow the program grading scale:

Grading Scale

A = 90-100

B = 80-89

C = 75-79

D = 69-74

F = 69 OR BELOW

### POLICIES FOR EXAMS AND ASSIGNMENTS

All policies listed in the *Nursing Student Handbook* will apply to this course. It is anticipated that all assignments and examinations will be completed as scheduled. If scheduling conflicts and/or personal or family emergencies arise, students must contact the faculty of record by phone as soon as possible. If students have spoken with the faculty of record and an agreement is reached in advance, late make-up exams and make-up assignments can be arranged without a grading penalty.

### COURSE SCHEDULE:

**NUR 3311 Essence of Professional Nursing in Rural/Border Communities** (This schedule is subject to change by faculty as needed.)

Week	Topics & Objectives	ATI Modules	Assessments / Activities
Week 1	Foundations of Safe Medication Administration	Safe Medication Administration	Safe Medication Administration Test
		Medication Administration	Medication Administration Test
Week 2	Oral and Injectable Medications	Oral Medications	Oral Medications Test
		Injectable Medications	Injectable Medications Test
Week 3	Exam 1		Exam 1
Week 4	Powdered and Parenteral (IV) Medications	Powdered Medications	Powdered Medications Test
		Parenteral (IV)	Parenteral (IV)

		Medications	Medications Test
Week 5	Pediatric & Weight-Based Dosages	Pediatric Medications	Pediatric Medications Test
		Dosages by Weight	Dosages by Weight Test
Week 6	Exam 2	Exam 2	Exam 2
Week 7	High-Alert & Complex Calculations	Critical Care Medications	Critical Care Medications
	Comprehensive Review	Comprehensive Review	Comprehensive Review
Week 8	Final Exam	Final	Final Exam

## COURSE EXPECTATIONS:

### **Orientation to Course:**

**Orientation to** all course learning activities will be discussed on the first day. Learning activities to be held in the skills and simulation labs will also require clarification to student expectation and requirements.

### **Faculty and Student Picture and Biography:**

The faculty of record, additional faculty members, and assistants assigned to the course will submit a picture and summary of educational and professional experiences that prepared them to teach in this course. Since some on-line activities may be included in the educational process, pictures and biographies will be posted online.

## **STUDENT/FACULTY EXPECTATIONS IN THE TEACHING/LEARNING PROCESS:**

Learning is a shared endeavor based upon respectful and collaborative relationships between students and faculty. The learning activities designed for this course were developed based upon the following:

1. As adult learners we are partners in learning.
2. Faculty members serve as a mentor, resource, guide, or coach and professional peer.
3. Our work and life experiences differ and serve to enrich our individual and mutual learning.
4. Each member of the class is committed to preparing for and successfully completing class learning activities.
5. Each member of the class will organize time, learning goals, work schedules, and family arrangements to fully participate in the course and assignment activities.
6. Each member of the class is able to use computer technology and access resources via the Internet and other mobile technologies as needed for this and other courses.

## **COMMUNICATIONS:**

- **Announcements** – Check announcements each time you log onto the course.
- **Course email** – Check course email frequently for communications and make sure that your email address is current. Faculty will respond to inquiries and comments within 24 hours Monday-Friday.
- **Use of technology:** If you have any technical questions, problems, or concerns with Blackboard, do not spend more than 15 minutes on any technical problems. Seek help immediately. Contact 24-7 Help Desk at: 1-888-837-2882 and/or [techassist@sulross.edu](mailto:techassist@sulross.edu).
- **Responses to emails and course postings:** Please respond to faculty requests and/or communications within 24 hours. Use course or Sul Ross email and, if not available, mobile phone or texting between the hours of 9 AM and 6PM if possible. Messages received on the weekends or holidays will be answered by the next working day.
- **Assignments:** Assignments will be reviewed and returned with feedback/grade within 7 days of submission.

- **Writing and use of APA:** All written assignments and bulletin board postings will be submitted using the American Psychological Association (APA) Guidelines, as indicated by faculty. <http://owl.english.purdue.edu/owl/resource/560/01>

### **ATTENDANCE AND PARTICIPATION:**

- Your attendance is expected at every class meeting, both face-to-face and online.
- Readings and learning activities relevant to the weekly topic are identified in the course schedule and modules.
- Scholarly and knowledgeable participation requires that you read your assigned readings prior to joining the class discussions.
- An online course requires participation in all areas for accurate evaluation of performance, including responding to faculty requests or communications.
- If you have an emergency and cannot attend a class meeting or complete an assignment by the due date, you must contact your faculty by phone, email, or text as soon as possible and make arrangements to make up the assignments.
- Blackboard course platforms have a tracking feature. This feature quantifies how often and when students are active in the course and also provides information if the student has accessed different pages of the course. The Blackboard tracking function may be utilized to verify student online participation.

### **RULES OF NETIQUETTE:**

The term “netiquette” refers to written and unwritten rules regarding appropriate communication on the Internet. It primarily applies to your interactions on the course Discussion Board, assignments both individual and group, and e-mail communications.

1. Help create a community of scholars by encouraging a cooperative win-win attitude in which all members of the class are willing to work together, each contributing in their own way.
2. Be courteous and respectful to students and faculty in the course.
  - a. There is a difference between making a statement that is a critical appraisal of an idea and criticizing someone for their point of view.
  - b. Be careful with the tone of what you are communicating, i. e., sarcasm and subtle humor; one person’s joke may be another person’s insult.
  - c. Do not use all caps in the message box (it is considered shouting).
  - d. Do not use language that is inappropriate for a classroom setting or prejudicial in regard to gender, race or ethnicity.
3. Be helpful and be sure to do your part in an online class or in group work so that assignments can be completed.
4. Common courtesy and good manners, along with proper use of grammar, sentence structure, and correct spelling, are essential when taking an online class.
  - a. Use a meaningful title in the Subject line. For e-mail, include course number.
  - b. Use the person’s name you are writing to as a greeting in the first line of the message – this helps ensure you are writing to the intended person (group).
  - c. Close the posting by writing your full name at the end of the message.
5. Discussion Boards are public, and the University archives all materials. Do not post anything too personal as all students in the class and your instructor will see what you write.

- a. Keep the messages you post to the Discussion Board relevant to the course and assignment, and provide a rationale including references as appropriate to support your point-of-view.
  - b. Avoid duplication. Read the previous discussions before you comment or ask a question as the information may have already been covered.
  - c. When posting a response, make sure you identify the post to which you are responding.
  - d. If the topic you plan to address is covered in an existing thread, do not start a new thread.
  - e. When responding to a specific comment, quote only the relevant part of the comment and stay focused on the assignment.
  - f. Try not to lurk, meaning you are just reading and not participating.
6. Quality of online communications/postings is important.
- a. It is not acceptable to present work or ideas of others as your own. Use APA format when you quote directly from a source—use quotation marks and provide the original author's name, year, and page or location in the body of the narrative; when you paraphrase a source—using your own words to explain your understanding of another's ideas or work—provide author and year in the body of the narrative. At the end of the posting provide the complete reference using APA format.
  - b. If the posting is going to be long, use paragraphs.
  - c. Do not overuse acronyms like you use in text messaging. Some of the participants may not be familiar with acronyms.
  - d. Just as you would proofread a formal paper, before posting:
    - i. Read what you have written for content;
    - ii. Rethink what you have written for tone;
    - iii. Reread what you have written for organization and coherence; and
    - iv. Revise what you have written for grammar, punctuation and mechanics.
    - v. Once you submit your work, discussion, or e-mail, you cannot change what you have written.
7. Don't send large files, since someone may have a relatively slow internet connection.
8. Be sure to check for viruses when sending files.
9. Be patient if you do not get an immediate response to your postings as others may be on a different schedule. If it is urgent, you can contact other students or faculty by e-mail, phone, or text.

## **MANDATORY UNIVERSITY STATEMENTS:**

**Academic Honesty Policy:** The University expects all students to engage in all academic pursuits in a manner that is beyond reproach and to maintain complete honesty and integrity in the academic experiences both in and out of the classroom. The University may initiate disciplinary proceedings against a student accused of any form of academic dishonesty, including but not limited to, cheating on an examination or other academic work, plagiarism, collusion, and the abuse of resource materials. Academic Dishonesty includes:

1. Copying from another student's test paper, laboratory report, other report, or computer files, data listings, and/or programs, or allowing another student to copy from same.
2. Using, during a test, materials not authorized by the person giving the test.
3. Collaborating, without authorization, with another person during an examination or in preparing academic work.



4. Knowingly, and without authorization, using, buying, selling, stealing, transporting, soliciting, copying, or possessing, in whole or in part, the contents of a non-administered test.
5. Substituting for another student; permitting any other person, or otherwise assisting any other person to substitute for oneself or for another student in the taking of an examination or test or the preparation of academic work to be submitted for academic credit.
6. Bribing another person to obtain a non-administered test or information about a non-administered test.
7. Purchasing or otherwise acquiring and submitting as one's own work any research paper or other writing assignment prepared by an individual or firm. This section does not apply to the typing of a rough and/or final version of an assignment by a professional typist.
8. "Plagiarism" means the appropriation and the unacknowledged incorporation of another's work or idea in one's own written work offered for credit.
9. "Collusion" means the unauthorized collaboration with another person in preparing written work offered for credit.
10. "Abuse of resource materials" means the mutilation, destruction, concealment, theft or alteration of materials provided to assist students in the mastery of course materials.
11. "Academic work" means the preparation of an essay, dissertation, thesis, report, problem, assignment, or other project that the student submits as a course requirement or for a grade.

All academic dishonesty cases may be first considered and reviewed by the faculty member. If the faculty member believes that an academic penalty is necessary, he/she may assign a penalty, but must notify the student of his/her right to appeal to the Department Chair, the Associate Provost/Dean, and eventually to the Provost and Vice President for Academic Affairs before imposition of the penalty. At each step in the process, the student shall be entitled to written notice of the offense and/or the administrative decision, an opportunity to respond, and an impartial disposition as to the merits of his/her case.

In the case of flagrant or repeated violations, the Vice President for Academic Affairs may refer the matter to the Dean of Students for further disciplinary action. No disciplinary action shall become effective against the student until the student has received procedural due process except as provided under Interim Disciplinary Action.

#### **AMERICANS WITH DISABILITIES ACT (ADA) STATEMENT:**

SRSU Disability Services. Sul Ross State University (SRSU) is committed to equal access in compliance with Americans with Disabilities Act of 1973. It is SRSU policy to provide reasonable accommodations to students with documented disabilities. It is the student's responsibility to initiate a request each semester for each class. Alpine Students seeking accessibility/accommodations services must contact Mary Schwartz, LPC, SRSU's Accessibility Services Coordinator at 432-837-8203, or email [mschwartz@sulross.edu](mailto:mschwartz@sulross.edu). Our office is located on the first floor of Ferguson Hall – room 112, and our mailing address is P.O. Box C122, Sul Ross State University, Alpine. Texas, 79832.

#### **ONLINE COURSES:**

Web courses (offered online) are not self-paced and require considerable work in order to meet requirements. Students should be prepared to devote approximately 12 hours per week to accomplish the work required for a 3-hour class (i.e. student should devote approximately the same study time for an online course as would be spent in a regular class with outside work

requirements—a measure generally calculated at 3 hours outside work for each hours in class.)

Students **MUST** have a reliable high-speed internet connection available on a regular basis for course work and other assignments whenever University computer laboratories are not open. Computer labs are open Mon.-Thurs., 8 a.m.-10 p.m., and Fri. 8 a.m-5 p.m. University computer labs are not open on weekends and holidays.

### **DISTANCE EDUCATION STATEMENT:**

Students enrolled in distance-education courses have equal access to the university's academic support services, such as Smart-thinking, library resources, such as online databases, and instructional technology support. For more information about accessing these resources, visit the SRSU website. Students should correspond using Sul Ross email accounts and submit online assignments through Blackboard, which requires secure login information to verify students' identities and to protect students' information. The procedures for filing a student complaint are included in the student handbook. Students enrolled in distance- education courses at Sul Ross are expected to adhere to all policies pertaining to academic honesty and appropriate student conduct, as described in the student handbook. Students in web-based courses must maintain appropriate equipment and software, according to the needs and requirements of the course, as outlined on the SRSU website.

### **GENERAL CAMPUS REGULATIONS AND CONDUCT:**

All students are expected to conduct themselves in a manner consistent with the University's functions as an educational institution. It is also expected that all students who enroll at Sul Ross State University agree to assume the responsibilities of citizenship in the university community. Association in such a university community is purely voluntary, and any student may resign from it at any time when he/she considers the obligation of membership disproportionate to the benefits. All students are subject to University authority, and those students whose conduct is not within the policies of the University rules and regulations are subject to dismissal. Students are responsible for abiding by all published University rules and regulations. Failure to read publications will not excuse the student from the requirements and regulations described therein. The SRSU Student Handbook and other official University publications outline specific regulations and requirements.

## COURSE CONTENT LINKAGE WITH STATE AND NATIONAL GUIDELINES

The Table below demonstrates which elements of TBON DEC's and AACN Essentials are addressed in relation to course objectives.

Objectives	TBON DEC's	AACN Essentials
1. Function within the legal scope of practice for comprehensive patient assessment as designated within state and national guidelines.	I-A, C, 5a & b. III-A & B	II
2. Incorporate current evidence-based practice principles, data from refereed journals and information from nursing disciplines throughout the data base and process of assessment.	I-A; II-B; III A & B	III
3. Develop and implement a comprehensive database for health assessment with adaptation for varied patient populations including change in age, gender, culture, and ethnicity.	I-A 1, 2, 3, 4 a, b, c; II-B 1, 2, 3, 4, 5, 6, 7, 8, 9; III B-1	VI, IX
4. Demonstrate physical examination techniques including observation, auscultation, palpation, and percussion for each body system during a head-to-toe assessment.	II-B & C; III-B 1	IX
5. Utilize effective interview techniques, communication skills, and appropriate terminology when conducting a health history, compiling a heritage history, and performing a physical examination.	II-B 4, 5; II-C 4, 5; II-F 2, 3.	VII
6. Modify the assessment approach for health variables such as growth and development, reproduction, nutritional status, patient-safety principles, health promotion, antecedents/risk factors, diagnostic data, and disease-prevention activities during the assessment process.	II-G 1, 2, 3; III-A 1, 2, 3, 4, 5, 6; III-B 1, 5	V; VI; VII; IX
7. Demonstrate appropriate selection and utilization of assessment tools for each body system.	II-B; IV-F 1, 2	VI, VII, IX
8. Follow safety principles and infection control when obtaining physical data from patients of all ages.	II-D; III-A	II
9. Maintain patient privacy and anonymity throughout the assessment process and recording.	II-E 11	III; VIII
10. Assess learning styles and barriers for learning in all age groups and other variables to facilitate appropriate strategies to teach health promotion, illness prevention, and risk-factor modification within a rural, border environment.	I-B,4b; II-B; III-A & B	VIII
11. Utilize appropriate terminology and recording principles when documenting and sharing assessment data with health-team members.	II-C	VI
12. Communicate with all members of the health-care team to obtain timely and accurate patient assessment data.	IV-A, B, C, D	VI