

AHS 102

Drug Calculation and Administration

Prerequisites: AHS 101 and MAT 101

Corequisites: NSG 110

Quarter Offered: Winter

Class Hours: 2

Lab Hours: 2

Credit Hours: 3

Course Description

Students learn to utilize basic mathematical concepts for basic drug calculations and administration. Topics include systems of measurement, calculating drug problems, using resource materials, basic pharmacology, administering medications in a simulated clinical environment, principles of intravenous therapy techniques, and client education.

Student Learning Outcomes

This course is designed to present to the student the basic mathematical concepts that are required to medicate the adult individual as a whole and deviations from the normal state of health. It also presents fundamentals in drug calculation and administration in the care of the adult and pediatric client so that the student can apply this knowledge in the medication administration of adult and pediatric clients in the clinical setting.

After completing this section, the student will:

- Interpret metric measurements
- Discuss relationship between milligrams, grains, and grams
- Discuss relationship between milliliters, teaspoon, tablespoon, and ounces
- Convert milligrams to grains; grams to grains; teaspoon/tablespoon/ounces to milliliters
- Interpret methods of measurement
- Discuss the common drugs utilizing units
- Compute correct dosages from doctor's orders
- Compute correct dosages using body weight and body surface area
- Calculate intravenous fluid rate
- Calculate total infusion amounts
- Discuss information on assigned medication
- Identify information on prescription
- Interpret drug orders
- Discuss drug origin, name, interaction, and reaction
- Discuss therapeutic classifications and nursing implications
- Discuss patient medication education, as well as laws governing use and misuse of drugs
- Demonstrate correct administration of oral, parenteral, percutaneous, and intravenous medications
- Follow proper protocols for medication safety

Evaluations:

*Students must prepare for and participate in class activities.

*Students must follow current policies regarding written work, grading, and progression distributed to students in the Practical Nursing Addendum to the Student Handbook.

**Students must pass this course with a grade of C or better.

There will be nine (9) exams (70%) and a final exam (30%).

Unit Exams (9) – 70%

1. Chapters 1,2, & 3
2. Chapters 4 & 5
3. Chapters 6,7, & 8
4. Chapters 9, 10, & 11
5. Chapters 12, 13, & 14
6. Chapters 15 & 16
7. Chapters 17 & 18
8. Chapters 19 & 21
9. Chapters 22 & 23

Final Examination: 30%

A final grade of 70% must be attained in order to progress in the Practical Nursing Program.

Athens Technical College uses the following grading system to specify levels of performance in coursework:

A = 90-100%

B = 80-89%

C = 70-79%

D = 60-69%

F = 0-59%

Exam Policy: No makeup exams will be administered without prior notification, valid documentation, and approval from Program Chair. (See Attendance Policy for Lecture)

Students arriving late for an exam will not be given extra time for the exam.

Required Textbooks and Course Materials:

1. Curren, Anna M. (2009). Math for Meds: Dosages and Solutions. 9th Edition. Clifton Park, New York: Thompson Delmar Learning.

Attendance:

Regular class attendance is important and expected. The college considers both tardiness and early departure from class as forms of absenteeism. Students absent from class for any reason are still responsible for all work missed. Instructors have the right to determine whether work missed can be made up and have the liberty to set reasonable expectations for attendance based on frequency of class meetings and on the instructional delivery method, subject, type, and level of the class. Class

attendance policies will be clearly stated for students by their respective instructors on separate documents or appendices to the master syllabus. **(See Attendance Policy for Lecture)**

Work Ethics:

To fulfill the responsibility to teach essential workplace ethics, the college evaluates program students on attendance, character, teamwork, appearance, attitude, productivity, organizational skills, communication, cooperation, and respect. Because the students are preparing for employment, it is essential they become accustomed to standards of behavior in the workplace. At the conclusion of the quarter, faculty members assign separate numerical work ethics grades which appear beside the course letter grades on both transcripts and grade reports. The work ethics grading scale is as follows: 3 (exceeds expectations), 2 (meets expectations), 1 (needs improvement), and 0 (unacceptable).

Academic Honesty:

Academic honesty is expected at all times. Any student found to have engaged in academic misconduct such as cheating, plagiarism, or collusion is subject to disciplinary sanctions as outlined in the Student Code of Conduct details in the *ATC Catalog and Student Handbook*. The term “plagiarism” includes, but is not limited to, the use, by paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgment. The term “collusion” includes, but is not limited to, the unauthorized collaboration with any other person in preparing work offered for academic credit. Students are advised that faculty routinely use **turnitin.com** both to prevent plagiarism and to assist in verifying when/if it has occurred.

Course Withdrawal:

Students may withdraw from a course without academic penalty until the midpoint of the quarter (as stated by the Academic Calendar published in the *ATC Catalog and Student Handbook*). By withdrawing before the midpoint of the quarter, the student is automatically assigned a grade of W, which does not affect quarterly or cumulative grade point average. Grades of W will affect satisfactory academic progress for financial aid purposes. **Students who stop attending class(es) without formally withdrawing risk earning a final grade of F, which will appear on the academic transcript.** Refer to the *ATC Catalog and Student Handbook* for further details.

Academic Support Center:

The Academic Support Centers of Athens Technical College (ATC) provide free tutoring for enrolled students. Both instructors and peer tutors provide tutoring in almost all subjects offered by the college. Information about the Center is accessible via the ATC website at www.athenstech.edu. To find out the specific services available on the Athens, Greene, and Walton Campuses, please call (706) 583-2839. To contact the Academic Support Center on the Elbert County Campus, please call (706) 213-2129.

Americans with Disabilities Acts:

Any student who believes he/she is eligible for accommodations in the classroom and/or during testing due to a documented disability is encouraged to contact the Director of Student Support Services at (706) 355-5081, or the Coordinator of Disability Services at (706) 355-5006, to apply for assistance. It is our goal at Athens Technical College to provide equal access to education for all students.

Cell Phones and Electronic Devices:

Students are strictly prohibited from using cell phones and personal electronic devices within college-owned/operated facilities without the explicit permission of a faculty or staff member.

Food/Drinks in Classroom:

Food and beverages (other than water) are not allowed in classrooms/lab.

Warranty of Graduates:

The Department of Technical and Adult Education warrants every graduate of technical programs in which students may earn technical certificates of credit, diplomas, or associate degrees. The warranty guarantees that graduates demonstrate the knowledge and skills and can perform each competency as identified in the industry-validated standards established for every program of study.

If one of our graduates educated under a standard program or his/her employer finds that the graduate is deficient in one or more competencies as defined in the course/program standards, Athens Technical College will retrain the employee at no instructional cost to the employee or the employer. The guarantee is in effect for two years after graduation.

TEACH Act:

According to the TEACH act of 2002, Athens Technical College is obligated to advise you that instructional material included in this course may be subject to copyright protection. As such, you must not share, duplicate, transmit, or store the material of this course beyond the purpose and time frame explicitly stated in the syllabus of your course. If you are not certain whether a particular piece of material is covered by copyright protection, you should contact your instructor and obtain his/her written clarification. Failing to observe copyright protection is a violation of law.

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Athens Technical College