



Allied Health Math Applications/ALMA 1000 COURSE SYLLABUS Summer Semester 2016

Semester: Summer 2016
Course Title: Allied Health Mathematics Applications
Course Number: ALMA 1000
Credit Hours/ Minutes: 0 / 2250
Class Location: Room # 8147
Class Meets: MW 1:00 PM – 3:30 PM
CRN: 60231

Instructor: Tara Powell
Office Hours: MW 3:40P – 4:30P
Office Location: Room 8170
Email Address: tpowell@southeasterntech.edu
Phone: 478-289-2287
Fax Number:
Tutoring Hours: by appointment only

REQUIRED eTEXT:

- Booth, K., Palmunen, J., Sienkiewicz, S., & Whaley, J. (2012). *Math & Dosage Calculations for Healthcare Professionals. (4th edition)*. New York, NY: McGraw-Hill. ISBN 978-0-07-337469-7
- Connect online access

REQUIRED SUPPLIES & SOFTWARE: pencil with eraser and paper

COURSE DESCRIPTION: ALMA 1000 prepares students in understanding the application of mathematics in their health science program courses. The topics included are basic mathematics, medical terminology, mathematical conversions, weight and measurement applications used in health science programs. Additionally, problem solving strategies, basic principles of medication administration, and research in health science will be incorporated into the course competencies.

MAJOR COURSE COMPETENCIES:

Problem Solving Strategies
Basic Mathematics in Health Science
Medical Terminology Used in Health Science Math Applications
Conversion Applications in Health Science
Weight and Measurement in Health Science
Basic Principles of Medication Administration
Research in Health Sciences

PREREQUISITE(S):

- Certificate Programs with a math component: MATH 1012 with a C or better
- Diploma Programs: MATH 1012 with a C or better
- Degree Programs: Appropriate algebra placement test score
- Pharmacy Technology Diploma Program: MATH 1012 with a B or better

COURSE OUTLINE:

Problem Solving Strategies

Order	Description	Learning Domain	Level of Learning
1	Use problem solving strategies to solve application problems (See Definition Section)	Cognitive	Application

Basic Mathematics in Allied Health

Order	Description	Learning Domain	Level of Learning
1	Perform operations and comparisons with fractions, decimals, and percent.	Cognitive	Application
2	Perform operations with exponents including powers of ten	Cognitive	Application
3	Convert between standard notation and scientific notation	Cognitive	Comprehension
4	Convert between and interpret the medical application of Arabic Numerals and Roman Numerals	Cognitive	Comprehension
5	Perform basic allied health applications using ratios, rates and proportions	Cognitive	Application
6	Develop mental calculation skills through drill & practice, contextualization, etc.	Cognitive	Application

Medical Terminology Used in Allied Health Math Applications

Order	Description	Learning Domain	Level of Learning
1	Demonstrate an understanding of medical terminology used in allied health math	Cognitive	Application
2	Interpret medical abbreviations as related to allied health math	Cognitive	Application

Conversion Applications in Allied Health

Order	Description	Learning Domain	Level of Learning
1	Demonstrate an understanding of the systems of measurement and their equivalencies	Cognitive	Application
2	Convert among and between measurement systems (metric, apothecary, household/American/English) using formulas, mental calculations, proportions, dimensional analysis, and means/extremes	Cognitive	Comprehension

Weight and Measurement Applications in Allied Health

Order	Description	Learning Domain	Level of Learning
1	Interpret medical measurement devices (scales, tape measure, syringes, wound measurement devices, etc.)	Cognitive	Comprehension
2	Demonstrate weight and measurement literacy	Cognitive	Application

Basic Principles of Medication Administration

Order	Description	Learning Domain	Level of Learning
1	Interpret and translate orders for medication	Cognitive	Comprehension
2	Use ratios, rates, and proportions to perform allied health applications and mixture/concentration problems	Cognitive	Application
3	Perform basic dosage calculations.	Cognitive	Application

Research in Allied Health

Order	Description	Learning Domain	Level of Learning
1	Demonstrate an understanding of the importance of the scientific method in research	Cognitive	Application
2	Interpret statistical measures used in the allied health field	Cognitive	Comprehension
3	Review a scientific journal article related to the allied health field	Cognitive	Comprehension

GENERAL EDUCATION CORE COMPETENCIES: STC has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS:

Students should be aware of the policies and procedures in the STC online Catalog. Students are expected to exhibit professional behavior at all times. Each student must show respect and concern for fellow students and for the course instructor. No cell phones or pagers are allowed to be turned on in the classroom unless permitted by the instructor for instructional activities. Personal phone calls must be handled after class. Watches with alarms should not be programmed to sound during class.

The textbook is provided by Southeastern Technical College through the McGraw-Hill online learning management system called CONNECT™. Students are expected to complete all homework and pretests assignments online through CONNECT™. Weekly assignments are listed on the attached lesson schedule and are posted on the CONNECT™ website. Students should complete or attempt CONNECT™ assignments before coming to class so participation in classroom activities/applications labs will reinforce key concepts covered in each chapter. CONNECT™ assignments can be repeated as many times as the student needs for practice, however, the day of each chapter test homework/pretest grades will be recorded.

CONNECT™ assignments consist of chapter homework and chapter pretest that will be averaged together to calculate the homework grade for each chapter. Classroom activities and applications are calculated by student attendance and participation for the week's activity. If a student is not in attendance for class on a scheduled classroom activity/lab day they will not receive credit (1 point) for that day's classroom activity/lab.

Testing Policy: No talking is allowed once an examination or evaluation begins. Students found with their cell phone or any other personal communication device during a test will be considered cheating and given a zero for the test. Calculators will be provided during testing. Students are not allowed to utilize their cell phone as a calculator during tests.

In the event a student does not demonstrate stellar performance on their first attempt of a Chapter test, a retest will be offered. The retest must be taken immediately after the class review of the first test. This will encourage mastery of the Chapter material and allow the student a second chance at demonstrating their knowledge and skills as well as promote student learning of the Chapter content before new material is introduced. The highest score of the two tests will be utilized as the students Chapter test score.

ATTENDANCE GUIDELINES: Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and also interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of F and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Students will not be withdrawn by an instructor for attendance; however, all instructors will keep records of graded assignments and student participation in course activities. The completion dates of these activities will be used to determine a student's last date of attendance in the event a student withdraws,

stops attending, or receives an F in a course.

SPECIAL NEEDS: *Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact Jan Brantley, Room 1208 Swainsboro Campus, 478-289-2274, or Helen Thomas, Room 108 Vidalia Campus, 912-538-3126, to coordinate reasonable accommodations.*

SPECIFIC ABSENCES: Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

PREGNANCY: Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please advise me and make appropriate arrangements with the Special Needs Office. Swainsboro Campus: Jan Brantley, Room 1208, (478) 289-2274 -- Vidalia Campus: Helen Thomas, Room 108, (912) 538-3126.

WITHDRAWAL PROCEDURE: Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% portion of the semester (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" is assigned when the student completes the withdrawal form from the course.

Students who are dropped from courses due to attendance (see your course syllabus for attendance policy) after drop/add until the 65% point of the semester will receive a "W" for the course. Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of 'F' being assigned.

After the 65% portion of the semester, the student will receive a grade for the course. (Please note: A zero will be given for all missed assignments.)

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. All grades, including grades of 'W', will count in attempted hour calculations for the purpose of Financial Aid.

Remember - Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above.

MAKEUP GUIDELINES (Tests, quizzes, homework, class activity/participation, etc.):

If a student misses a classroom activity/participation a grade of zero will be assigned for that day's classroom activity/participation grade.

Only one test may be missed during the semester and any subsequent tests missed will result in a zero. Unless otherwise scheduled with the instructor, it is expected that a student's first missed test will be taken the next scheduled class day, outside of regular class time. Failure to follow this procedure will result in a grade of zero.

ACADEMIC DISHONESTY POLICY: The STC Academic Dishonesty Policy states *All forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline.* The policy can also be found in the *STC Catalog and Student Handbook.*

Procedure for Academic Misconduct

The procedure for dealing with academic misconduct and dishonesty is as follows:

--First Offense--

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in

course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

--Second Offense--

Student is given a grade of "WF" for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

--Third Offense--

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION: Southeastern Technical College does not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, disabled veteran, veteran of Vietnam Era or citizenship status, (except in those special circumstances permitted or mandated by law). This school is in compliance with Title VI of the Civil Rights Act of 1964, which prohibits discrimination on the basis of race, color, or national origin; with the provisions of Title IX of the Educational Amendments of 1972, which prohibits discrimination on the basis of gender; with the provisions of Section 504 of the Rehabilitation Act of 1973, which prohibits discrimination on the basis of handicap; and with the American with Disabilities Act (ADA).

GRIEVANCE PROCEDURES: Grievance procedures can be found in the Catalog and Handbook located on STC's website.

ACCESS TO TECHNOLOGY: Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the STC website at www.southeasterntech.edu.

TCSG GUARANTEE/WARRANTY STATEMENT: *The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.*

Grading System

Letter Grade	Percentage	Grade Points/credit	Rating
A	90-100	4.0	Excellent
B	80-89	3.0	Good
C	70-79	2.0	Satisfactory
D	60-69	1.0	Poor
F	0-59	0	Failing

Course Grading Policy

Course Grades will be based on the following:

Chapter Tests	50%	50 points possible
Classroom Activity/Participation	15%	15 points
Homework & Pretests (Connect assignments online)	10%	10 points
Final Exam (ALMA 1000 Post-Test)	25%	25 points
Course Grade	100%	100

* Pharmacy Technology program students must earn a minimum grade of B in this course.

**ALMA 1000 Allied Health Math Applications
Lesson Schedule
Summer 2016**

DATE	Chapter/ Lesson	Content Assignment/Exams/Evaluations	Course Competency/Gen. Ed Comp.
Week 1 May 18	House Keeping	Syllabus, Policy & Procedures Connect instructions ALMA 1000 Pre-Test Classroom review of Whole numbers (Handout)	
May 23	Whole Numbers Chapter 1 & 2	Classroom review of Chapter 1- Fractions & Chapter 2 - Decimals Complete Connect <u>Homework</u> Chapter 1 & 2 – Fractions & Decimals Complete Connect <u>Pretest</u> Chapter 1 & 2	Basic Mathematics in Health Science, Conversion Applications in Health Science /1,2,3
Week 2 May 25	Chapter 3 & 4	Test – Whole numbers, Fractions, Decimals Review test Classroom review of Chapter 3 - Percent, Ratios & Proportion Complete Connect <u>Homework</u> Chapter 3 – Percent, Ratios & Proportion Complete Connect <u>Pretest</u> for Chapter 3	Basic Mathematics in Health Science, Conversion Applications in Health Science /1,2,3
June 1		Classroom review of Chapter 4 Metric System. Complete Connect <u>Homework</u> Chapter 4 – Complete Connect <u>Pretest</u> for Chapter 4	Basic Mathematics in Health Science/1,2,3
Week 3 June 6	Chapter	TEST –Percent, Ratios & Proportion, Metric System Review test Classroom review of Chapter 5 -Other systems of Measurement Complete Connect <u>Homework</u> Chapter 5 Complete Connect <u>Pretest</u> for Chapter 5	Basic Mathematics in Health Science/1,2,3
June 8		Classroom review of Chapter 6 - Using Conversion Factors Complete Connect <u>Homework</u> Chapter 6 Complete Connect <u>Pretest</u> for Chapter 6	Basic Mathematics in Health Science/1,2,3 Weight and Measurement in Health Sciences/1,2,3
Week 4 June 13	Chapter	TEST–Other systems of Measurement & Using Conversion Factors Review test Classroom review of Chapter 7 - Time & Temperature Complete Connect <u>Homework</u> Chapter 7 Complete Connect <u>Pretest</u> for Chapter 7	Basic Mathematics in Health Sciences Problem Solving/1,2,3 Weight and Measurement in Health Sciences/1,2,3 Conversion Applications in Health Science Medical Terminology Used in Health Science Math Applications/1,2,3
June 15	Chapter	Classroom review of Chapter 8- Equipment for Dosage Measurement Complete Connect <u>Homework</u> Chapter 8 Complete Connect <u>Pretest</u> for Chapter 8	Basic Mathematics in Health Sciences Problem Solving Weight and Measurement in Health Sciences/1,2,3

Week 5 June 20 Midterm	Chapter	TEST – Time & Temperature, Equipment for Dosage Measurement Review test Classroom review of Chapter 9 Interpreting medication orders Complete Connect <u>Homework</u> Chapter 9 Complete Connect <u>Pretest</u> for Chapter 9	Basic Mathematics in Health Sciences Problem Solving Conversion Applications in Health Science Medical Terminology Used in Health Science Math Applications/1,2,3
June 22	Chapter	Classroom review of Chapter 10 – Interpreting labels & Package Inserts. Complete Connect <u>Homework</u> Chapter 10 Complete Connect <u>Pretest</u> for Chapter 10	Basic Mathematics in Health Sciences Problem Solving Weight and Measurement in Health Sciences Conversion Applications in Health Science Medical Terminology Used in Health Science Math Applications/1,2,3
WEEK 6 June 27	Chapter	TEST –Interpreting Medication Orders & Interpreting Labels & Package Inserts Review test Classroom review of Chapter 12 - Methods of Dosage Calculations Complete Connect <u>Homework</u> Chapter 12- Methods of Dosage Calculations Complete Connect <u>Pretest</u> for Chapter 12	Basic Mathematics in Health Sciences Problem Solving Weight and Measurement in Health Sciences Conversion Applications in Health Science Medical Terminology Used in Health Science Math Applications/1,2,3
June 29 (65% point)	Chapter	Classroom review of Chapter 12 – Worksheets for practice and Connect Homework/Pretest catchup day	Conversion Applications in Health Science Problem Solving Medical Terminology Used in Health Science Math Applications/1,2,3
July 4 – July 7		Summer Break – No Classes	
WEEK 7 July 11	Chapter	TEST - Methods of Dosage Calculations Review test Classroom review of Chapter 13 – Oral Dosage Calculations Complete Connect <u>Homework</u> Chapter 13 Complete Connect <u>Pretest</u> for Chapter 13	Conversion Applications in Health Science Problem Solving Medical Terminology Used in Health Science Math Applications/1,2,3
July 13	Chapter	Classroom review of Chapter 13 – Oral Dosage Calculations Worksheets	Health Science Math Applications Weight and Measurement in Health Sciences Problem Solving Conversion Applications in Health Science/1,2,3
WEEK 8 July 18	Chapter	TEST - Oral Dosages Review test Classroom review of Chapter 14 Complete Connect <u>Homework</u> Chapter 14 Parenteral Dosages and Other Medication	Health Science Math Applications Weight and Measurement in Health Sciences Problem Solving Conversion Applications in

		Administration Forms Complete Connect <u>Pretest</u> for Chapter 14	Health Science/1,2,3
July 20	Chapter	Classroom review of Chapter 14 – Parenteral Dosage Calculations Worksheets	
WEEK 9 July 25		TEST – Parenteral Dosage Calculations Review test Classroom review of Intravenous Calculations (Handout)	Medical Terminology Used in Health Science Math Applications Health Science Math Applications Weight and Measurement in Health Sciences Problem Solving Conversion Applications in Health Science/1,2,3
July 27		TEST - Intravenous Calculations Classroom review for FINAL Exam (Handout)	
FINAL Aug. 1		FINAL EXAM	