



**ALMA 1000 – Allied Health Math Applications  
COURSE SYLLABUS  
Spring Semester 2020**

**COURSE INFORMATION**

Credit Hours/Minutes: 0 Credit Hours/2250 Minutes:

Campus/Class Location: Swainsboro Campus, Gillis Building, Room 8164

Class Meets: Tuesday and Thursdays 2:45pm to 4:00pm

Course Reference Number (CRN): 40214

**INSTRUCTOR CONTACT INFORMATION**

Adjunct Instructor Name: James Jones

Email Address: [James Jones \(jfjones@southeasterntech.edu\)](mailto:jfjones@southeasterntech.edu)

Office Location: Health Science Annex West Room 241

Phone: 912-538-3115

Office Hours: Please schedule an appointment

Full-Time Instructor Name: Tiffany Thompson, BSN, RN

Office Location: Building 8, Office 8164

Office Hours: Monday & Wednesday 3:30pm to 5:30pm

Email Address: [Tiffany Thompson \(tthompson@southeasterntech.edu\)](mailto:tthompson@southeasterntech.edu)

Phone: 912-538-3252

Fax Number: 478-289-2249

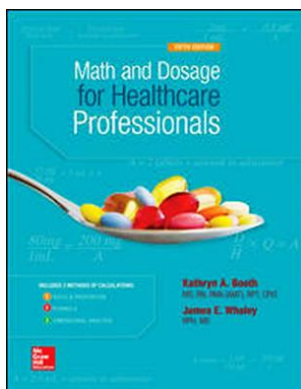
Tutoring Hours: Please schedule an appointment during office hours.

**SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK**

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook \(http://www.southeasterntech.edu/student-affairs/catalog-handbook.php\)](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php).

**REQUIRED ETEXT – PROVIDED BY STC**

- Booth, K., & Whaley, J. (2016). *Math and Dosage Calculations for Healthcare Professionals*. (5<sup>th</sup> edition). New York, NY: McGraw-Hill Education. ISBN 978-0-07-351380-5



- McGraw-Hill CONNECT online access

## REQUIRED SUPPLIES & SOFTWARE

Paper, Pens/Pencils, Folder, and Computer Access

## 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

1. Problem Solving Strategies
2. Basic Mathematics in Health Science
3. Medical Terminology Used in Health Science Math Applications
4. Conversion Applications in Health Science
5. Weight and Measurement in Health Science
6. Basic Principles of Medication Administration
7. Research in Allied Health

## 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

## 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
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Order	Description	Learning Domain	Level of Learning
1	Perform operations and comparisons with fractions, decimals, and percent.	Cognitive	Application
2	Convert between and interpret the medical application of Arabic Numerals and Roman Numerals	Cognitive	Comprehension
3	Perform basic allied health applications using ratios, rates and proportions	Cognitive	Application
4	Develop mental calculations 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

## GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College 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 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 outside of 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 pre-lecture assignments online through CONNECT™. Weekly assignments are listed on the attached lesson schedule and are posted on the CONNECT™ website. Students are expected to complete the pre-lecture assignments **before** coming to the lecture covering those chapters so participation in classroom activities/applications labs will reinforce key concepts covered in each chapter. All CONNECT™ assignments may be repeated, as many times as the student needs for practice, however, the pre-lecture grades will be recorded the day of each lecture. Homework for each chapter will be recorded the day of the coordinated exam.

CONNECT™ assignments consist of chapter homework and chapter pre-lecture that will be averaged together to calculate the CONNECT™ assignments grade for each chapter.

## 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, when allowed, will be provided during testing. Students are not allowed to utilize their cell phone as a calculator during tests.

## MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC...)

In the event of an **excused absence** on an exam day, the student will be allowed to make-up **one** exam (excluding the final exam) which will be given at the discretion of the instructor. A grade of "0" will be given to all subsequent exams missed. The make-up exam may or may not be the same as the original exam. It may also be a different test format. Failure to show up for a make-up exam results in a grade of zero.

An excused absence is jury duty, military duty, court duty, or required job training. Other excused absences may also include illness, hospitalization or a death in the student's immediate family. Official, written documentation such as a subpoena or a doctor's excuse must be provided by the student prior to taking the make-up exam. The instructor reserves the right to refuse for the student to take the make-up exam based on the merit of the documentation.

Any exceptions to the makeup guidelines for this class will require instructor approval and would only be allowed for exceptional circumstances.

## **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 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" (Failing 0-59) 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.

## **STUDENTS WITH DISABILITIES**

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Vidalia Campus: [Helen Thomas](mailto:hthomas@southeasterntech.edu) [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165

Swainsboro Campus: [Macy Gay](mailto:mgay@southeasterntech.edu) [mgay@southeasterntech.edu](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

## **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 make arrangements with the appropriate campus coordinator.

Vidalia Campus: [Helen Thomas](mailto:hthomas@southeasterntech.edu) ([hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu)), 912-538-3126, Building A, Room 165

Swainsboro Campus: [Macy Gay](mailto:mgay@southeasterntech.edu) [mgay@southeasterntech.edu](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery MAY NOT be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up.

## **WITHDRAWAL PROCEDURE**

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (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" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Important – Student-initiated withdrawals are not allowed after the 65% point. After the 65% point of the term in which student is enrolled, the student has earned the right to a letter grade and will receive a grade for the course. Please note: Abandoning a course(s) instead of following official withdrawal procedures may result in a grade of "F" (Failing 0-59) being assigned.

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

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. A grade 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.

## **ACADEMIC DISHONESTY POLICY**

The Southeastern Technical College Academic Dishonesty Policy states that 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 Southeastern Technical College Catalog and Student Handbook.

## **PROCEDURE FOR ACADEMIC MISCONDUCT**

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

### **1. 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.

### **2. Second Offense**

Student is given a grade of "WF" (Withdrawn Failing) 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.

### **3. 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 third 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

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

<b>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</b>	<b>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</b>
Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 165 Phone: 912-538-3126 Email: <a href="mailto:hthomas@southeasterntech.edu">Helen Thomas</a> <a href="mailto:hthomas@southeasterntech.edu">hthomas@southeasterntech.edu</a>	Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1 <sup>st</sup> Street, Vidalia Office 138B Phone: 912-538-3230 Email: <a href="mailto:ljonas@southeasterntech.edu">Lanie Jonas</a> <a href="mailto:ljonas@southeasterntech.edu">ljonas@southeasterntech.edu</a>

## ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

## GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College'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 [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

## TECHNICAL COLLEGE SYSTEM OF GEORGIA (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 POLICY

Assessment/Assignment	Percentage
Chapter Test Average	55%
Homework & Pre-lecture Assignments	25%
Final Exam (ALMA 1000 Post-Test)	20%

## GRADING SCALE

Letter Grade	Range
A	90-100
B	80-89
C	70-79
D	60-69
F	0-59



**ALMA 1000 – Allied Health Math Applications**  
**Spring Semester 2020 Lesson Plan**

SUBJECT TO CHANGE AT INSTRUCTOR'S DISCRETION

Date	Chapter/Lesson	Content/Assignments/Exams	Competency Area
1-7-20 Tues		Introduction To Course / Syllabus / CONNECT Pre-Lecture Homework Chapter 1-2	2 A-C
1-9-20 Thurs	Chapter 1-2	Lecture Chapter 1 – Fractions Chapter 2 - Decimals Homework: Chapter 1-2 Pre-Lecture Homework Chapter 3	2 A-C
1-14-20 Tues	Chapters 3	Lecture Chapter 3 – Percent, Ratio & Proportions Homework: Chapter 3	2 A-C
1-16-20 Thurs	Chapters 1-3	<b>TEST: Chapters 1-3</b> Review Test Pre-Lecture Homework Chapter 4	2; 7 A-C
1-21-20 Tues	Chapter 4	Lecture Chapter 4: Metric System Homework Chapter 4	2; 5 A-C
1-23-20 Thurs	Chapter 4	<b>TEST: Chapter 4</b> Review Test Pre-lecture Homework Chapter 5	1; 4; 5 A-C
1-28-20 Tues	Chapter 5	Lecture Chapter 5: Other Systems of Measurement Homework Chapter 5	2; 5 A-C
1-30-20 Thurs	Chapter 5	Lab Activity: Chapter 5	

Date	Chapter/Lesson	Content/Assignments/Exams	Competency Area
2-4-20 Tues	Chapter 5	<p style="text-align: center;"><b>TEST: Chapter 5</b></p> <p style="text-align: center;">Review Test</p> <p style="text-align: center;">Pre-Lecture Homework Chapter 6-7</p>	1; 2 A-C
2-6-20 Thurs	Chapter 6-7	<p style="text-align: center;">Lecture</p> <p style="text-align: center;">Chapter 6: Converting Units Chapter 7: Temperature &amp; Time</p> <p style="text-align: center;">Homework Chapters 6-7</p>	2; 4 A-C
2-11-20 Tues	Chapter 6-7	<p style="text-align: center;"><b>TEST: Chapters 6-7</b></p> <p style="text-align: center;">Review Test</p> <p style="text-align: center;">Pre-Lecture Homework Chapter 8</p>	1; 2; 4; 5; 6 A-C
2-13-20 Thurs	Chapter 8	<p style="text-align: center;">Lecture</p> <p style="text-align: center;">Chapter 8: Equipment for Dosage Measurement</p> <p style="text-align: center;">Homework Chapter 8</p>	2 A-C
2-18-20 Tues	Chapter 8	<p style="text-align: center;">Lab Activity: Chapter 8</p>	2 A-C
2-20-20 Thurs	Chapter 8	<p style="text-align: center;"><b>TEST: Chapter 8</b></p> <p style="text-align: center;">Review Test</p> <p style="text-align: center;">Pre-Lecture Homework Chapter 9</p>	1; 5 A-C
2-25-20 Tues	Chapters 9	<p style="text-align: center;">Lecture</p> <p style="text-align: center;">Chapter 9: Interpreting Medication Orders</p> <p style="text-align: center;">Homework Chapter 9</p>	1; 3 A-C
2-27-20 Thurs	Chapter 9	<p style="text-align: center;"><b>TEST: Chapter 9</b></p> <p style="text-align: center;">Review Test</p> <p style="text-align: center;">Pre-Lecture Homework Chapter 10</p>	1; 5 A-C
3-3-20 Tues	Chapter 10	<p style="text-align: center;">Lecture</p> <p style="text-align: center;">Chapter 10: Interpreting Medication Labels and Package Inserts</p> <p style="text-align: center;">Pre-Lecture Homework Chapter 11</p>	1; 3 A-C

Date	Chapter/Lesson	Content/Assignments/Exams	Competency Area
3-5-20 Thurs	No Students	Staff Development Day Student Study Day	
3-10-20 Tues	Chapter 10	Lecture  Chapter 11: Safe Medication Administration  Homework Chapter 11	1; 4; 5; 6 A-C
3-12-20 Thurs	Chapter 11  <b>65% MARK March 12<sup>th</sup></b>	<b>TEST: Chapter 10-11</b> Review Test  Pre-Lecture Homework Chapter 12	6 A-C
3-17-20 Tues	Chapter 11	Lecture  Chapter 12: Methods of Dosage Calculations  Homework Chapter 12	1; 4; 5; 6 A-C
3-19-20 Thurs	Chapter 12	<b>TEST: Chapter 12</b> Review Test  Pre-Lecture Homework Chapter 13	2 A-C
3-24-20 Tues	Chapter 12	Lecture Chapter 13: Oral Dosages  Pre-Lecture Homework Chapter 14	1; 3; 4; 5; 6 A-C
3-26-20 Thurs	Chapter 13-14	Lecture  Chapter 14: Parenteral Dosages	1 ; 3 ; 4 ; 5 ; 6 A—C
3-31-20 Tues	Chapters 13— 14	Lab Activity: Chapter 13-14  Homework Chapters `3 & 14	2 A-C
4-2-20 Thurs	Chapter 13-14	<b>Test: Chapter 13 &amp; 14</b> Review Test  Pre-Lecture Homework IV Calculations	1; 2 A-C

Date	Chapter/Lesson	Content/Assignments/Exams	Competency Area
4-14-20 Tues	Chapter 13-14	Lecture Basic IV Calculations  Print out IV Calculations Handouts	1; 3; 4; 5; 6 A-C
4-16-20 Thurs	Chapter 15	Lecture Basic IV Calculations  Homework IV Calculations	1; 2; 6 A-C
4-21-20 Tues	Chapter 15	<b>TEST: IV Calculations</b> Review Test	1; 3; 4; 5; 6 A-C
4-23-20 Thurs	Course Review	<b>Make-Up TESTS</b>  <b>Review Final Exam</b>	1-6 A-C
4-28-20 Tues	<b>FINAL EXAM</b>	<b>FINAL EXAM</b>	1-7 A-C

**COMPETENCY AREAS: (WILL VARY FOR EACH COURSE/TAKEN FROM STATE STANDARDS)**

1. Problem Solving Strategies
2. Basic Mathematics in Health Science
3. Medical Terminology Used in Health Science Math Applications
4. Conversion Applications in Health Science
5. Weight and Measurement in Health Science
6. Basic Principles of Medication Administration
7. Research in Health Sciences

**GENERAL CORE EDUCATIONAL COMPETENCIES:**

- A. The ability to utilize standard written English.
- B. The ability to solve practical mathematical problems.
- C. The ability to read, analyze, and interpret information.