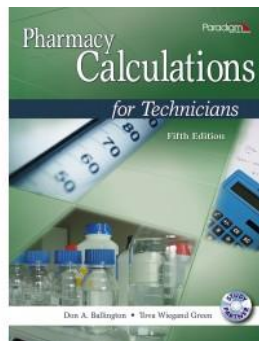


**PHAR 1000**  
**Pharmaceutical Calculations**  
**COURSE SYLLABUS**  
**Fall Semester 2016**

**Semester:** Fall 2016  
**Course Title:** Pharmaceutical Calculations  
**Course Number:** PHAR 1000  
**Credit Hours/ Minutes:** 4/3000  
**Class Location:** Room #737 — Gillis Building  
**Class Meets:** Mon./Wed. 9:00A—10:45A  
**CRN:** 20232

**Instructor:** Matt Brown, CPhT  
**Office Hours:** M/W: 1:00—5:00; T/R: 12:30—1:30; or By Appt.  
**Office Location:** Room #722 — Gillis Building  
**Email Address:** mbrown@southeasterntech.edu  
**Phone:** 912-538-3192  
**Fax Number:** 912-538-3106  
**Tutoring Hours:** By Appointment

**REQUIRED TEXT:** *Pharmacy Calculations for Technicians*, 5<sup>th</sup> Edition, By Ballington and Green, Paradigm Publishing



**REQUIRED SUPPLIES & SOFTWARE:** Paper, Pens/Pencils, Folder, Computer Access, and a Basic Calculator

**COURSE DESCRIPTION:** This course develops knowledge and skills in pharmaceutical calculations procedures. Topics include: systems of measurement, medication dispensing calculations, pharmacy mathematical procedures, and calculation tools and techniques.

**MAJOR COURSE COMPETENCIES:**

1. Systems of Measurement
2. Medication Dispensing Calculations
3. Pharmacy Mathematical Procedures
4. Calculation Tools

**PREREQUISITE(S):** One Required

MATH 1012 - Foundations of Mathematics ( 201003L )

MATH 1111 - College Algebra ( 201003L )

**COREQUISITE(S):** None

**COURSE OUTLINE:****Systems of Measurement**

Order	Description	Learning Domain	Level of Learning
1	Recognize and interpret metric measurements.	Cognitive	Analysis
2	Recognize and interpret the Apothecary measurements.	Cognitive	Analysis
3	Recognize and interpret household measurements.	Cognitive	Analysis
4	Convert a doctor's order containing units.	Cognitive	Comprehension

**Medication Dispensing Calculations**

Order	Description	Learning Domain	Level of Learning
1	Demonstrate correct administration of oral medications.	Psychomotor	Guided Response
2	Demonstrate correct administrations of parenteral medications.	Psychomotor	Guided Response
3	Regulate IV fluid rate.	Psychomotor	Guided Response
4	Demonstrate correct administration of other routes such as topical and inhalation.	Psychomotor	Guided Response
5	Use the "6 Rights" to administer all medications: 1. Right patients 2. Right drug 3. Right dosage 4. Right time 5. Right route 6. Right documentation.	Cognitive	Application

**Pharmacy Mathematical Procedures**

Order	Description	Learning Domain	Level of Learning
1	Compute correct dosages from doctor orders.	Cognitive	Application
2	State the correct dosages using Young's, Fried's, and/or Clark's Rule.	Cognitive	Knowledge
3	Calculate I.V. fluid rate.	Cognitive	Application
4	Dilute fluids to proper strength using pure drug or stronger solution to weaker solution.	Cognitive	Knowledge

**Calculation Tools and Techniques**

Order	Description	Learning Domain	Level of Learning
1	Demonstrate the ability to look up drugs.	Cognitive	Application
2	Identify drug origins.	Cognitive	Knowledge
3	Identify drug calculation.	Cognitive	Knowledge
4	Describe the laws governing the use and misuse of drugs.	Cognitive	Knowledge
5	Define the terms associated with drug administration.	Cognitive	Knowledge
6	Interpret drug orders.	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.

All students pursuing a degree, a diploma, or a Technical Certificate of Credit with a General Education component will be required to pass the General Education Competency Exams prior to graduation.

**STUDENT REQUIREMENTS:** Students are expected to complete all assigned material by the given due date. Students will also be required to complete hands-on demonstrations needed to function properly in the pharmacy field. Students are responsible for all policies and procedures listed within the student catalog / program handbook. Quizzes are subject to be given at any time over any assigned material. All quizzes given will be averaged together and that average will count as one exam grade.

**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 Helen Thomas, 912-538-3126, [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu), 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 Helen Thomas, (912) 538-3126, [hthomas@southeasterntech.edu](mailto:hthomas@southeasterntech.edu).

**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.)

**\*\*\*Instructor reserves the right to change the syllabus and/or lesson plan as necessary\*\*\***

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, projects, etc...):** Exams missed for any reason will be made up at the end of the semester on a date to be scheduled by the instructor. Any quizzes missed due to a student absence generally will not be allowed to be made up. If a lab assignment is missed, the student is completely responsible for arranging make-up lab time at the instructor's convenience.

The instructor may allow students to make up any assignments that were missed due to absence if the instructor is notified in advance of the absence, or if any unforeseen circumstances arise that cause the student to be absent from class. These situations will be dealt with on a case by case basis. The student is responsible for notifying the instructor of any absence, as well as supplying any available documentation concerning the absence in order for the instructor to consider allowing the assignments to be made up.

**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](http://www.southeasterntech.edu).

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<b>GRADING POLICY</b>	
Exam Average	50%
Assignments	25%
<u>Final Exam</u>	<u>25%</u>
Total Average	= 100%

<b>GRADING SCALE</b>
A: 90-100
B: 80-89
C: 70-79
D: 60-69
F: 0-59

**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.*

**PHAR 1000  
Pharmaceutical Calculations  
FALL SEMESTER 2016 LESSON PLAN**

Date	Chapters / Lesson	Content	Assignments & Exams Due	Comp Area
<b>Week #1</b>				
8/15		Intro to course / syllabus / books	Read and Review: Chapter 1	
8/17	Chapter 1	Understanding Subdivisions of Numbers, Number Systems, Estimating, and Accuracy	Chapter 1: PowerPoint Chapter 1: Practice Test	1 – 4 A – C
<b>Week #2</b>				
8/22	Chapter 1	Understanding Subdivisions of Numbers, Number Systems, Estimating, and Accuracy	Chapter 1: Practice Test Due Chapter 1: Chapter Review  Read and Review: Chapter 2	1 – 4 A – C
8/24	Chapter 2	Using Ratios, Percents, and Proportions	Chapter 2: PowerPoint Chapter 2: Practice Test	1 – 4 A – C
<b>Week #3</b>				
8/29	Chapter 2	Using Ratios, Percents, and Proportions	Chapter 2: Practice Test Due Chapter 2: Chapter Review	1 – 4 A – C
8/31	Chapter 1—2	Exam: Chapters 1—2	Exam: Chapters 1—2  Read and Review: Chapter 3	1 – 4 A – C
<b>Week #4</b>				
9/5	Holiday			
9/7	Chapter 3  Lab #3	Developing Literacy Skills  <i>Pharmacy Labs for Technicians Text:</i> Lab #4: Validating DEA Numbers	Chapter 3: PowerPoint Chapter 3: Practice Test  Lab #3: PowerPoint Lab #3  Chapter 3: Practice Test Due Chapter 3: Chapter Review	1 – 4 A – C

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<b>Week #5</b>				
9/12	Chapter 3	Exam: Chapter 3	Exam: Chapter 3 Read and Review: Chapter 4	1 – 4 A – C
9/14	Chapter 4	Applying Metric Measurements and Calculating Doses	Chapter 4: PowerPoint Chapter 4: Practice Test	1 – 4 A – C
<b>Week #6</b>				
9/19	Chapter 4	Applying Metric Measurements and Calculating Doses	Chapter 4: Practice Test Due Chapter 4: Chapter Review	1 – 4 A – C
9/21	Chapter 4	Exam: Chapter 4	Exam: Chapter 4 Read and Review: Chapter 5	1 – 4 A – C
<b>Week #7</b>				
9/26	Chapter 5	Using Household Measure in Pharmacy Calculations	Chapter 5: PowerPoint Chapter 5: Practice Test	1 – 4 A – C
9/28	Chapter 5	Using Household Measure in Pharmacy Calculations	Chapter 5: Practice Test Due Chapter 5: Chapter Review	1 – 4 A – C
<b>Week #8</b>				
10/3	Chapter 5	Exam: Chapter 5	Exam: Chapter 5 Read and Review: Chapter 6	1 – 4 A – C
10/5	Chapter 6	Preparing Injectable Medications	Chapter 6: PowerPoint	1 – 4 A – C
<b>Week #9</b>				
10/10	Chapter 6	Preparing Injectable Medications	Chapter 6: PowerPoint Chapter 6: Practice Test	1 – 4 A – C
10/12	Chapter 6	Preparing Injectable Medications	Chapter 6: Practice Test Due Chapter 6: Chapter Review	1 – 4 A – C
<b>Week #10</b>				
10/17	Chapter 6	Exam: Chapter 6	Exam: Chapter 6 Read and Review: Chapter 7	1 – 4 A – C
10/19	Chapter 7	Preparing Parenteral Solutions	Chapter 7: PowerPoint	1 – 4 A – C
<b>Week #11</b>				
10/24	Chapter 7	Preparing Parenteral Solutions	Chapter 7: PowerPoint Chapter 7: Practice Test	1 – 4 A – C
10/26	Chapter 7	Preparing Parenteral Solutions	Chapter 7: Practice Test Due Chapter 7: Chapter Review	1 – 4 A – C
<b>Week #12</b>				
10/31	Chapter 7	Exam: Chapter 7	Exam: Chapter 7 Read and Review: Chapter 8	1 – 4 A – C

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11/2	Chapter 8	Using Special Calculations in Compounding	Chapter 8: PowerPoint Chapter 8: Practice Test	1 – 4 A – C
<b>Week #13</b>				
11/7	Chapter 8	Using Special Calculations in Compounding	Chapter 8: Practice Test Due Chapter 8: Chapter Review	1 – 4 A – C
11/9	Chapter 8	Exam: Chapter 8	Exam: Chapter 8 Read and Review: Chapter 9	1 – 4 A – C
<b>Week #14</b>				
11/14	Chapter 9	Using Business Math in the Pharmacy	Chapter 9: PowerPoint Chapter 9: Practice Test	1 – 4 A – C
11/16	Chapter 9	Using Business Math in the Pharmacy	Chapter 9: Practice Test Due Chapter 9: Chapter Review	1 – 4 A – C
<b>Week #15</b>				
11/21	Chapter 9	Exam: Chapter 9	Exam: Chapter 9	1 – 4 A – C
11/23	Holiday			
<b>Week #16</b>				
11/28	Chapter 1—9	Calculations Review	Review for Final	1 – 4 A – C
11/30	Final	Comprehensive Final Exam	Final Exam	1 – 4 A – C

**\* Competency Areas:**

1. Systems of Measurement
2. Medication Dispensing Calculations
3. Pharmacy Mathematical Procedures
4. Calculation Tools

**\*\*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.



## Southeastern Technical College Pharmacy Technology Diploma Program

I \_\_\_\_\_ have read and understand the syllabus for PHAR 1000. I have also been given the opportunity to ask questions to clarify any requirements listed on the syllabi. By signing this agreement I am acknowledging that I fully understand my requirements and grading criteria that I am responsible for. I agree to follow the guidelines and rules listed on the syllabi.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Student Signature

\_\_\_\_\_  
Date

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