



Pharmaceutical Mathematics I (PHRA 1209)

Credit: 2 semester credit hours (2 hours lecture)

Prerequisite: Complete the TSI Assessment Tests with 350/Mathematics, 351/Reading, and 363/4/Writing

Course Description

Pharmaceutical mathematics including reading, interpreting, and solving calculation problems encountered in the preparation and distribution of drugs.

Required Textbook and Materials

1. Pharmacy Calculations, 5th Edition
Author(s): Mary F. Powers, Janet B. Wakelin
ISBN-13: 978-1-61731-420-9
2. Pencil(s) with erasers
3. Red Pen(s)
4. Calculator

Course Objectives

Upon completion of this course, the student will be able to:

1. Solve basic math problems and demonstrate conversion between various systems of measurement including temperature, household, metric, apothecary, and avoirdupois.
2. Develop pharmacy literacy.
3. Calculate using ratio and proportions.
4. Perform adult and pediatric dosage calculations

Course Outline

- A. Decimal Notation
 1. Notation, order, rounding
 2. Addition and subtraction
 3. Multiplication and division
 4. Conversion (decimal to fraction, fraction to decimal)
 5. Application
- B. Fraction Notation
 1. Notation and simplification
 2. Multiplication and division
 3. Addition and subtraction
 4. Mixed
 5. Applications
- C. Roman Numerals
 1. Values
 2. Conversions (Roman to Arabic, Arabic to Roman)

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Course Syllabus

- D. The Metric System
 - 1. Metric notation
 - 2. Household units
 - 3. Apothecary
 - 4. Avoirdupois
 - 5. Temperature
 - 6. Conversions
- E. Developing Literacy
 - 1. Prescriptions and components
 - 2. Prescriber and DEA verification
- F. Ration and Proportion
 - 1. Cross multiplication
 - 2. Restatement
 - 3. Conversions
 - 4. Application
- G. Dosage Calculations
 - 1. Active Ingredient
 - 2. Pediatric weight
 - 3. Pediatric dosing
 - 4. SIG refresher

Grade Scale

90 – 100	A
80 – 89	B
70 – 79	C
60 – 69	D
0 – 59	F

Course Evaluation

Final grades will be calculated according to the following criteria:

- 1. Exams 30%
- 2. Final Exam 20%
- 3. Quizzes/Homework 40%
- 4. Attendance 10%

Course Requirements

- 1. Exams
- 2. Final Exam
- 3. Quizzes/Homework
- 4. Classroom Participation

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Course Syllabus

Technical Requirements (for courses using Blackboard)

The latest technical requirements, including hardware, compatible browsers, operating systems, software, Java, etc. can be found online at:

[https://help.blackboard.com/en-](https://help.blackboard.com/en-us/Learn/9.1)

[us/Learn/9.1](https://help.blackboard.com/en-us/Learn/9.1) [2014_04/Student/015_Browser_Support/015_Browser_Support_Policy](#) A

functional broadband internet connection, such as DSL, cable, or WiFi is necessary to maximize the use of the online technology and resources.

Disabilities Statement

The Americans with Disabilities Act of 1992 and Section 504 of the Rehabilitation Act of 1973 are federal anti-discrimination statutes that provide comprehensive civil rights for persons with disabilities. Among other things, these statutes require that all students with documented disabilities be guaranteed a learning environment that provides for reasonable accommodations for their disabilities. If you believe you have a disability requiring an accommodation, please contact the Special Populations Coordinator at (409) 880-1737 or visit the office in Student Services, Cecil Beeson Building. You may also visit the online resource at <http://www.lit.edu/depts/stuserv/special/defaults.aspx>

Student Code of Conduct Statement

It is the responsibility of all registered Lamar Institute of Technology students to access, read, understand and abide by all published policies, regulations, and procedures listed in the *LIT Catalog and Student Handbook*. The *LIT Catalog and Student Handbook* may be accessed at www.lit.edu or obtained in print upon request at the Student Services Office. Please note that the online version of the *LIT Catalog and Student Handbook* supersedes all other versions of the same document.