

Hagerstown Community College

MASTER SYLLABUS

COURSE: PHR 102 – Pharmaceutical Calculation

DATE: Fall, 2017

INSTRUCTOR:

COURSE DESCRIPTION: This course introduces common calculations that are used in pharmacy practice to accurately perform dosage calculations for solid and liquid medications and IV solutions in order to assure patient's safety. The topics covered in the course include unit conversions, ratio and proportion, percent solutions, dosing and business calculations. Total of 45 hours of lecture.

TEXTBOOK: Powers, M.F. & Wakelin, J. B. (2016). Pharmacy Calculations. 5th ed. Morton Publishing Company. ISBN # 978-1617314209.

STUDENT LEARNING OUTCOMES: Upon successful completion of this course, students will be able to:

1. Define units of measure used in pharmacy practice;
2. Verify measurements, preparations, and/or packing of medications;
3. Perform mathematical calculations essential to the duties of a certified pharmacy technician in a variety of contemporary settings;
4. Accurately determine the correct amount of ingredients required for a compounded product;
5. Solve mathematical problems using Roman numerals, Arabic numerals, fractions, apothecary symbols, and decimals;
6. Solve mathematical problems involving conversion of weights and measures and direct ratio and proportion, using the proper techniques;
7. Solve problems involving specific gravity, percent strength, weight-in-volume, weight-in-weight, and volume-in-volume conversions;
8. Perform the mathematical steps required to solve problems involving ration strength calculations for pharmaceutical preparations;
9. Given mathematical problems involving dilution and concentration, perform the mathematical steps to solve for the correct answer;
10. Use the allegation and/or algebraic method to solve problems involving dilution and concentrations;
11. Apply critical thinking skills, creativity, and innovations to solve problems; and
12. Accomplish objectives mandated by the American Society of Health Systems Pharmacists (ASHP) for accredited pharmacy technician programs.

MINIMUM CLOCK HOURS REQUIRED FOR THIS COURSE:

To earn one academic credit at HCC, students are required to complete a minimum of 37.5 clock hours (45 fifty-minute “academic” hours) of coursework per semester. Those hours of coursework may be completed through a combination of hours within the classroom and hours outside the classroom. Certain courses may require more than the 37.5 minimum hours of coursework per credit. For most classes, students should expect to do at least 2 hours of coursework outside of class for each hour of in-class coursework.

	DIRECT Faculty Instruction In-class 45 hours required	Student Work Out of Classroom 90 hours required
In-class "lecture"	40 hours	
Reading chapters		40 hours
Quizzes & Activities	Included in lecture time	30 hours
4 lecture exams & 1 cumulative final exam	5 hours	20 hours
Total Hours	45 hours	90 hours

SERVICES FOR STUDENTS WITH DISABILITIES: Students may receive reasonable accommodations if they have a diagnosed disability and present appropriate documentation. Students seeking accommodations are required to contact the Disability Support Services (DSS) office as early as possible. Students may contact a DSS staff member for an appointment at dss@hagerstowncc.edu or at 240-500-2530.