PHT 54B: DOSAGE CALCULATIONS B

Foothill College Course Outline of Record

Heading	Value
Effective Term:	Summer 2021
Units:	3
Hours:	3 lecture per week (36 total per quarter)
Prerequisite:	PHT 54A.
Degree & Credit Status:	Degree-Applicable Credit Course
Foothill GE:	Non-GE
Transferable:	CSU
Grade Type:	Letter Grade Only
Repeatability:	Not Repeatable

Student Learning Outcomes

- Calculate the correct oral and parenteral safe dosages of drugs using information derived from prescriptions, drug labels, package inserts and medical orders using proper medical and pharmaceutical notation.
- Accurately calculate and utilize the required ingredients for compounding pharmaceutical products from the various physician orders.

Description

Calculation of the correct oral and parenteral dosages of drugs using information from prescriptions or medications orders. Accurate determination of the correct amount of ingredients for the compounding of pharmaceutical products from a prescription or medications order. Intended for students in the Pharmacy Technician Program; enrollment is limited to students accepted in the program.

Course Objectives

The student will be able to:
A. Calculate the oral dosages of drugs, both solid and liquid forms, using ratio-proportion and formula.
B. Calculate the parenteral dosages of drugs using ratio-proportion and appropriate formulas.
C. Calculate concentrations and dilutions using V/V, W/W, W/V.
D. Calculate dosages using milliequivalents.
E. Define and calculate the percentage strength of a solution using various methods of alligations.
F. Calculate intravenous solution flow rate, solution volume and infusion times for electronic and manual infusion systems.

Course Content

A. Oral dosage of drugs
1. Conversion of units of measurement to the same system and same size units
2. Reasonable amounts
3. Formula D x Q = drug dosage
4. Ratio-proportion drug dosage
5. 10% maximum, variance
6. Tablets, capsules, and liquids
B. Parenteral dosage of drugs
1. Conversion of units of measurement to the same system and same size units
2. Reasonable amounts
3. Formula D x Q = drug dosage
4. Ratio-proportion drug dosage
5. Reconstitution directions
6. Insulin measurements and syringes
7. Types and sizes of syringes
8. Dosage expressed as ratio or percent
C. Concentrations and dilutions
1. V/V
2. W/W
3. W/V
D. Milliequivalents
1. Calculating miliequivalents
2. Calculations using miliequivalents
E. Alligations
F. IV calculations
1. Components
2. Milliliters per hour
3. Drop factor/calibration
4. IV flow rates in gtt/min
5. Flow rate for off-schedule intravenous infusion
6. Small volume IVPB and large volume IVPB

Lab Content

Not applicable.

Special Facilities and/or Equipment

A. 4 function (simple) calculators.
B. Software programs.

Method(s) of Evaluation

Methods of Evaluation may include but are not limited to the following:

Objective exams
Cooperative learning assignments
Computational work
Frequent written lecture quizzes

Method(s) of Instruction

Methods of Instruction may include but are not limited to the following:

Lecture presentations and classroom discussion
In-class problem solving activities for students followed by instructor-guided interpretation and analysis
In-class discussion of problem sets and evaluation

Representative Text(s) and Other Materials

Ballington, Don, and Skye McKennon. Pharmacy Calculations for Technicians, 6th ed.. 2017.

Ballington, Don, and Robert Anderson. Pharmacy Practice for Technicians, 6th ed.. 2017.

Types and/or Examples of Required Reading, Writing, and Outside of Class Assignments

A. Weekly reading assignments from text and completion of problem sets.
B. Review of handouts, problem sets and relevant reading material.

Discipline(s)

Pharmacy Technology