PHARM 101 Course Outline as of Spring 2010

CATALOG INFORMATION

Dept and Nbr: PHARM 101 Title: THERAPY/PHARM CONCEPTS
Full Title: Applied Therapeutics and Pharmaceutical Concepts for PT
Last Reviewed: 1/27/2014

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	2.00	Lab Scheduled	0	6	Lab Scheduled	0
		Contact DHR	0		Contact DHR	0
		Contact Total	2.00		Contact Total	35.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 105.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade Only
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
Prepares students for success in the application of learned theory. The development of necessary discernment, reason, and proficiencies with regard to pharmaceutical solutions, volumes, formulas, compounds, dosages, and dosing. Application of numeric systems, theorems, principles, postulates, and provisions to enable the student to perform at an advanced level of pharmaceutical care and service.

Prerequisites/Corequisites:
Course Completion or Concurrent Enrollment in CSKLS 100 or PHARM 100; AND Course Completion of PHARM 150

Recommended Preparation:
Eligibity for ENGL 100 or ESL 100 AND Eligibility for CSKLS 372 or higher

Limits on Enrollment:

Schedule of Classes Information:
Description: Prepares students for success in the application of learned theory. The development of necessary discernment, reason, and proficiencies with regard to pharmaceutical solutions, volumes, formulas, compounds, dosages, and dosing. Application of numeric systems, theorems,

principles, postulates, and provisions to enable the student to perform at an advanced level of pharmaceutical care and service. (Grade Only)
Prerequisites/Corequisites: Course Completion or Concurrent Enrollment in CSKLS 100 or PHARM 100; AND Course Completion of PHARM 150
Recommended: Eligibity for ENGL 100 or ESL 100 AND Eligibility for CSKLS 372 or higher
Limits on Enrollment:
Transfer Credit:
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**	Effective:	Inactive:
CSU GE:	**Transfer Area**	Effective:	Inactive:
IGETC:	**Transfer Area**	Effective:	Inactive:

CSU Transfer:	Effective:	Inactive:
UC Transfer:	Effective:	Inactive:

CID:

Certificate/Major Applicable:
Both Certificate and Major Applicable

COURSE CONTENT

Outcomes and Objectives:
Upon completion of this course, students will be able to:
1. Interpret terms, definitions, and language associated with pharmacy practice.
2. Differentiate between pharmaceutical analysis and business terms.
3. Demonstrate knowledge of workflow, quadrants, computer station responsibilities, and the evaluation process.
4. Compute the expression of numbers.
5. Use various methods to solve advanced comparisons, graphs, dosing and word scenarios accurately and safely.
6. Demonstrate knowledge of total parenteral nutrition.
7. Interpret prescriptions and medication administration record information employing scientific therapeutics, mathematics, and pharmaceutical methods.
8. Identify inpatient and outpatient medication distribution systems.
9. Differentiate between wholesale cost, billing, and retail pricing including dispensing fees, discounts, recapture and reuse, and credits for returns and recalls.

Topics and Scope:

1. Comprehend pharmaceutical dosing history
   a. research versus teaching
   b. cause and effect
   c. deduction and reduction
   d. logic and doubt
   e. overcoming hypochondria

2. Foundation of scientific therapeutics
   a. definition of error
      1. experimental error
      2. misinterpretations
   b. methods
   c. double negatives
   d. exceptions
   e. skepticism
   f. incongruous remedies
3. Dangers of errors in mathematics
   a. misjudgements and false judgements
   b. absentmindedness
   c. physician notice and misunderstandings
   d. careful use of terms
4. Analogy computations
  a. graph theory and graphomaths
   b. comparisons
      1. positive
      2. negative
   c. paradoxical dosing
   d. international conversions
   e. difficult problems
   f. rational mnemonics
   g. probability
      1. odds
      2. risk
      3. safe risk
      4. too risky
      5. random choice
5. Exponential law of quadrants
   a. computers with humans
   b. workflow
   c. stations
   d. vectors of action
   e. evaluations and ability versus inability
   f. separate and together
   g. professional correspondence
6. Expression of numbers
   a. Benchley's Law of Dichotomy
   b. brief review
      1. Roman numerals
      2. Arabic numerals
      3. sensible numbers
7. Successive approximations
   a. language
    b. permutation of digits
      1. the coconut theory
      2. Cinderella's pumpkin
      3. interior and exterior extents
8. Inpatient medication transfer systems and phase calculations
      a. fill lists
      b. unit dose

c. differentiate intramuscular, subcutaneous, intravenous push, and intravenous piggyback
9. Dimensional hydrodynamics
   a. translation of needles and syringes
      1. draw volumes
      2. parenterals
      3. concentrations
   b. solids, powders
   c. liquids, vials, ampules
   d. intravenous administrations
      1. obtain flow rates
      2. account for powder volumes
      3. importance of expiration dates
10. Total parenteral nutrition
11. Insurance
   a. anagrams of billing
   b. signed numbers
      1. discount card programs
      2. payments for prescriptions
      3. pharmacy billing cycle
      4. Medicaid reimbursement
      5. point of sale collections
      6. recapture
      7. credits
12. Depreciated root values
   a. purchasing
      1. average wholesale price
      2. calculating discounts
      3. credits and returns
   b. cost analysis
   c. overhead costs

Assignment:

1. Approximately 13-20 homework assignments including Medication Administration Record (MAR)
2. Six quizzes, 1 midterm , and 1 final exam
3. Complete 3-4 case studies with written responses
4. Interpretation of a range of various prescriptions

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Case studies, interpretation of prescriptions, Medication Administration Record (MAR)	Writing 5 - 10%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems	Problem solving 10 - 20%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

None	Skill Demonstrations 0 - 0%

Exams: All forms of formal testing, other than skill performance exams.

Objective exams and essays	Exams 75 - 85%

Other: Includes any assessment tools that do not logically fit into the above categories.

Attendance and participation	Other Category 0 - 5%

Representative Textbooks and Materials:
Instructor-prepared material
Patient Care Management Lab: A Workbook for Prescription Practice; Finkel. Lippincott Williams & Wilkins, 2nd edition, 2007.
Essential Math and Calculations for the Pharmacy Technician; Reddy and Khan. CRC, 1st ed., 2003 (classic in field).
Math for the Pharmacy Technician; Egler and Booth. Career Education Press, 1st ed., 2009.
Pharmaceutical Calculation for the Pharmacy Technician; Lacher. Lippincott Williams & Wilkins, 2007.