MA 165 Course Outline as of Fall 2017

CATALOG INFORMATION

Dept and Nbr: MA 165 Title: PHARM AND ADMIN OF MEDS
Full Title: Pharmacology and Administration of Medications
Last Reviewed: 1/27/2020

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	3.00	Lecture Scheduled	2.00	17.5	Lecture Scheduled	35.00
Minimum	3.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	5.00		Contact Total	87.50
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 70.00 Total Student Learning Hours: 157.50

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:
Course covers basic pharmacology, including principles of safe preparation, administration, and documentation/charting of medications and vaccinations by oral, parenteral, and topical/transdermal routes. Students review basic math calculations and conversions for preparation and administration of medication and vaccinations. Medications are identified by their clinical use, mechanism of action, side effects, and adverse reactions. Risk factors for drug and alcohol abuse are presented, along with drug addiction and withdrawal symptoms.

Prerequisites/Corequisites:
Completion of MA 160, MA 162, MA 161, and PSYCH 1A; AND Concurrent Enrollment in MA 163 and MA 163L

Recommended Preparation:
Eligibility for ENGL 1A or equivalent

Limits on Enrollment:

Schedule of Classes Information:
Description: Course covers basic pharmacology, including principles of safe preparation, administration, and documentation/charting of medications and vaccinations by oral, parenteral,

and topical/transdermal routes. Students review basic math calculations and conversions for preparation and administration of medication and vaccinations. Medications are identified by their clinical use, mechanism of action, side effects, and adverse reactions. Risk factors for drug and alcohol abuse are presented, along with drug addiction and withdrawal symptoms. (Grade Only)
Prerequisites/Corequisites: Completion of MA 160, MA 162, MA 161, and PSYCH 1A; AND Concurrent Enrollment in MA 163 and MA 163L
Recommended: Eligibility for ENGL 1A or equivalent
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, the student will be able to:
1. Accurately convert and calculate medication and vaccine dosages: for infants, children, and adults utilizing standardized units of measure
2. Utilize accepted pharmacologic abbreviations
3. Describe drug classifications
4. Identify the appropriate clinical uses of medications
5. Identify medications based on Review of Systems (ROS)
6. List commonly used over-the-counter (OTC) medications
7. Describe drug side effects and adverse reactions to prescribed and OTC medications
8. Identify risk factors and withdrawal symptoms of addictive substances
9. Apply history of drug legislations as it relates to current standards
10. Demonstrate knowledge and scope of practice of the medical assistant as it relates to drug administration
11. Prepare and administer medications utilizing medical aseptic technique
12. Chart/document administration of medications using paper and/or Electronic Medical Records (EMR)

Topics and Scope:

I. Mathematics of Dosage
- A. Roman numerals
- B. Fractions
- C. Decimal fractions
- D. Percentage
- E. Proportion
- F. Fahrenheit and Celsius
- G. Systems of measurement
- H. Dosage for children
- I. Dosage of drugs standardized in units

II. Basic Pharmacology
- A. Principles of drug administration
- B. Common abbreviations related to route of administration and frequency of dosage
- C. Drugs, by clinical use, including antibiotics, sulfonamides, antihistamines, antihypertensive agents, tranquilizers and antidepressants, hormones, diuretics, urinary antiseptics, antineoplastic drugs, immunizing and immunosuppressive agents, geriatric medication
- D. Drugs that affect the respiratory system, blood vessels, the blood, the central nervous system, the autonomic nervous system, and the digestive system
- E. Vitamins and minerals
- F. OTC medications

III. Adverse reactions
- A. Identifying symptoms
- B. Required reporting

IV. Drug and Alcohol Abuse
- A. Signs and symptoms
- B. Treatments
- C. Diversion
- D. Interactions with food and drugs

V. Administration of Medication
- A. Apply history of drug legislation as it relates to current standards
- B. Factors influencing dosage
- C. Parts of a prescription*
- D. Guidelines for preparation and administration of medication*
- E. Systems of measurement conversions*
- F. Preparation and administration of oral medications*
- G. Reconstitution of powdered drugs for parenteral administration*
- H. Withdrawal of medication from an ampule or vial*
- I. Preparation and administration of intradermal and subcutaneous injections*
- J. Location of intramuscular injection sites*
- K. Preparation and administration of intramuscular injections*
- L. Administration of TB tests*
- M. Preparation and administration of topical/transdermal medications*
- N. Spelling review of medications

VI. Scope of Practice

*These items are introduced in lecture, and the related skills are performed in the lab.

Assignment:

Lecture Related Assignments:
1. Reading 1-3 chapters per week
2. Homework problems

a. Math assessment and dosage calculation exercises, 5-25 questions per week
b. Critical thinking exercises from textbook scenarios, 10-25 exercises per week
c. Vocabulary assessment from textbook,10-20 words per week
3. Completion of 2-6 unit exams and one final exam
4. Completion of the safe medication dosage calculation exam with a score of 90% or better by the third attempt

Lab Related Assignments:
1. Practice skill performance related to safe calculation, preparation, administration and documentation/charting of medications and vaccinations that include oral, parenteral, and topical/transdermal routes
2. Demonstrate competency in formal skill check-offs within 3 attempts related to safe calculation, preparation, administration and documentation/charting of medications and vaccinations that include oral, parenteral, and topical/transdermal routes

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.

None, This is a degree applicable course but assessment tools based on writing are not included because skill demonstrations are more appropriate for this course.	Writing 0 - 0%

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

Homework problems, dosage calculations, memorization of standard units of measure through classroom participation, exercises, and case scenarios	Problem solving 10 - 20%

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

Skill performance competencies	Skill Demonstrations 40 - 60%

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

Unit exams and final exam	Exams 30 - 40%

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

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Instructor prepared materials

Clinical Procedures for Medical Assistants. 9th ed. Bonewit-West, Kathy. Elsevier. 2014
Essentials of Pharmacology for Health Professions. 7th ed. Woodrow, Ruth and Colbert, Bruce and Smith, David. Cengage Learning. 2014