

**MA 165 Course Outline as of Fall 2014****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 drug administration and preparation, administration of medications by oral, intradermal, subcutaneous, and intramuscular routes. Students review basic math calculations and conversions for administration of medication. Drugs 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:**

Concurrent Enrollment in MA 163A and MA 163AL

**Recommended Preparation:**

Eligibility for ENGL 1A or equivalent

**Limits on Enrollment:****Schedule of Classes Information:**

Description: Course covers basic pharmacology, including principles of drug administration and preparation, administration of medications by oral, intradermal, subcutaneous, and intramuscular routes. Students review basic math calculations and conversions for administration of

medication. Drugs 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: Concurrent Enrollment in MA 163A and MA 163AL

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:**

<b>AS Degree:</b>	<b>Area</b>	Effective:	Inactive:
<b>CSU GE:</b>	<b>Transfer Area</b>	Effective:	Inactive:

<b>IGETC:</b>	<b>Transfer Area</b>	Effective:	Inactive:
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<b>CSU Transfer:</b>	Effective:	Inactive:
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<b>UC Transfer:</b>	Effective:	Inactive:
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**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 dosages: for infants, children, and adults utilizing standardized units of measure.
2. Identify and utilize accepted pharmacologic abbreviations.
3. Identify and describe drug classifications.
4. Identify the appropriate clinical uses of medications.
5. Identify medications based on Review of Systems (ROS).
6. Identify commonly used over the counter (OTC) medications.
7. Identify 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. Document administration of medications using electronic medical records (EMR)

**Topics and Scope:**

1. 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
2. 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
  3. Symptoms of Adverse Reactions
  4. Drug and Alcohol Abuse
  5. 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. Spelling review of medications
  6. Scope of Practice

**Assignment:**

1. Math assessment and dosage calculation exercises, 5-25 questions per week.
2. Homework exercises related to reading 5-10 questions per week.
3. Charting related to administration of medication assessed in 10 skills check-offs.
4. Practice calculation of dosages and administration of medicines in weekly lab setting under instructor supervision using drills and exercises
5. Skill performance evaluations as each clinical skill is completed using 10 skills check-offs. Successful completion within 3 attempts of 10 skills check-offs to include preparation, administration, and documentation of oral and parenteral medications.
6. Successfully complete 5-7 unit exams and 1 final exam.

**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, drills, 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 evaluations

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

Medical Assisting Made Incredibly Easy: Pharmacology, Holly, J., 2009, Lippincott, Williams and Wilkins

Study Guide for Medical Assisting Made Incredibly Easy: Pharmacology, Gohsman, R., 2009, Lippincott, Williams and Wilkins