

COURSE NAME: Principles of Pharmacology

COURSE NUMBER: MED 250

CREDITS: 3 hours lecture

CATALOG DESCRIPTION This course provides an overview of current and commonly used practices, procedures, medications, and supplements. Topics include legal and ethical implications, terminology, and documentation, practices governing the use, dispensing, administration, and storage of pharmaceuticals. Medication preparation, dosage calculation, and administration skills are developed. Patient education regarding safe administration, side effects, and interactions is emphasized. Presentation is organized according to drug classification and body systems.

PREREQUISITES: MED* 125 , English 101 eligible, Bio* 105 or higher, MAT 104 or Higher

CO-REQUISITES; MED 250L

HCC General Education Requirement Designated Competency Attribute Code(s):

None

Additional CSCU General Education Requirements for CSCU Transfer Degree Programs:

None

Embedded Competency(ies):

None

Discipline-Specific Attribute Code(s):

SCI Science elective

Course objectives:

General Education Goals and Outcomes:

None

Course Specific Objectives:

- To prepare competent entry-level medical assistants in the cognitive (knowledge), psychomotor (skills), and affective (behavior) learning domains.
- The student will develop the working knowledge of pharmacology necessary for a career in an allied health profession.
- The student will understand mechanisms of drug actions, common drug interactions and side effects, and will become familiar with the more commonly prescribed drugs.

- The student will be able to perform basic mathematical calculations of drug dosages.

The competencies of 2 major content areas and the group of competencies listed under the content area called “Other” are included to explicitly state the requirements of accreditation and certification.

With the satisfactory completion of this course, the student will be able to perform Entry Level Competencies as a Medical Assistant. This course includes the following Competencies:

Anatomy & Physiology

I.11C Identify the classifications of medications, including desired effects, side effects and

adverse reactions

I.12C Describe the relationship between anatomy and physiology of all body systems and

medications used for treatment in each

Applied Mathematics

II.1C. Demonstrate knowledge of basic math computations

II.2C Apply mathematical computations to solve equations

II.3C Identify measurement systems

II.4C Define basic units of measurement in metric, apothecary and household systems

II.5C Convert among measurement systems

II.6C Identify both abbreviations and symbols used in calculating medication dosages

Other

- Demonstrate the use of the Physician’s Desk Reference and a nursing drug guide
- Verify order and dosage prior to administration
- Prepare proper dosage and administer oral medication, optic medication, otic medication
- Document all administered medications into simulated patient charts Maintain medication and immunization records
- Identify drug and classification from reading labels and explain the relationship between anatomy and physiology and medication.
- Prepare drug cards for the more commonly prescribed medications including implications, effects, and patient/client education for these medications

Psychomotor and affective competencies covered in this course may be found on a separate sheet at the end of the syllabus.

Taken from the 2008 *Standards and Guidelines for the Medical Assisting Educational Programs*

Types of Assessments meeting Core Competencies

- Demonstration of skills/competencies
- Online interactive adaptive activities using McGraw Hill LearnSmart
- Online electronic medical record and practice management software using Medisoft
- Online Quizzes
- Discussion Board
- Unit tests, Midterm and Final exams

“Students must pass ALL (100%) of the psychomotor and affective domain competencies taught in this course prior to the date of the final exam. These competencies must EACH INDIVIDUALLY be passed with a grade of 80% or better in order to pass the course, complete the program and graduate. If this standard is not met the student will not pass the course and will have to repeat the entire course to graduate.” CAAHEP accreditation requires 100% of all Medical Assisting graduates pass 100% of all competencies.

MEDICAL ASSISTING STUDENTS - 74% is an estimated figure which is considered a minimum level of achievement. Any student who receives a final grade score below 74% WILL NOT PASS the course. Failure to receive a grade of ‘C’ or better will necessitate this course being repeated and passed successfully.

COURSE CONTENT:

Lecture Topics:

- Consumer Safety/Drug Regulation
- Drug Names and References
- Sources and Bodily Effects
- Preparation and Supplies
- Abbreviations/Measurement Systems
- Safe Dosage Calculations
- Responsibilities of Drug Admin
- Poison Control
- Vitamins/Minerals/Herbs
- Skin Medications
- Autonomic Nervous System Drugs

Antineoplastic/Urinary System Drugs
GI & Anti-infective Drugs
Eye Medications
Analgesics/Hypnotics/Sedatives
Psychotropic Meds/Alcohol/Drug Abuse
Musculoskeletal/Anti-inflammatory Drugs
Anti-convulsants
Anti-Parkinsonian/Alzheimer's Agents
Endocrine System Drugs
Reproductive System Drugs
Cardiovascular Drugs
Respiratory/Anti-histamines
Drugs and Older Adults

Grading Policy/Assessment: The semester grade will be assessed by the following means:

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|------------------------------|-----|
| Chapter Quizzes | 10% |
| Debate/Class Discussions | 10% |
| Drug Cards | 10% |
| Lab Skills/Drug Presentation | 10% |
| Unit Exams | 30% |
| Final Exam | 30% |

Grading Policy for all cognitive domain objectives/competencies

The semester grade will be determined as indicated on individual course syllabi. Cognitive domain will be assessed by a variety of assignments, homework, projects, quizzes, and tests. A final average grade of 74 or higher is required for successful completion of the course.

With permission of Jane O'Grady at NWCC.

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