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Semester Effective: Fall 2025

Medical Assisting (MEDA) 1108 Medication Administration for Medical Assisting (2 Units)

Prerequisite: Admission to the Taft College Medical Assisting Program

Co-Requisite: None

Advisory: Eligibility for ENGL 1500 or 1501, completion of BIOL 2250, and a transfer level math course are strongly recommended.

Hours and Unit Calculations:

24 hours lecture. (48 Outside-of-class hours.) 24 hours lab (96 Total Student Learning Hours) 2 Units

Catalog Description: This course provides basic education and training in medications and administration for the individual who is interested in working as a Clinical Medical Assistant in the medical back-office environment. Topics include basic mathematics, terminology, medication orders, medication administration including oral and injection and documentation. The emphasis is on client education and the role of the medical assistant.

Type of Class/Course: Degree Credit

Text:

Booth, Kathryn A., et al. *Medical Assisting: Administrative and Clinical Procedures*. 8th ed., McGraw Hill, 2023.

Bonewit-West, Kathy. *Clinical Procedures for Medical Assistants*. 11th ed., Saunders, 2022.

Marshall, Jacquelyn Rhine, and Sue C. Roe. *Health Science: Concepts and Applications*. 1st ed., Goodheart-Wilcox, 2016.

Course Objectives:

At the end of the course, a successful student will be able to

1. Analyze and apply the six rights of medication administration.
2. Calculate accurate occupational mathematics and metric conversions for proper medication administration.
3. Differentiate the common abbreviations that are accepted in prescription writing.
4. Prepare proper dosages of medication for administration by oral and parenteral routes.
5. Select proper sites for administering parenteral medications.
6. Select the correct Physicians' Desk Reference (PDR), drug handbook, and other drug references to identify a drug's classification, usual dosage, usual side effects, and contraindications.

Student Learning Outcomes:

1. Demonstrate a solid understanding of several types of medications, classifications, uses, dosage forms, and routes of administration.
2. Attain proficiency in dosage calculations for proper medication administration.
3. Interpret medication orders, prescriptions, and labels accurately, ensuring that the right medication, dose, and patient information for both parenteral and non-parenteral medications are verified before administration.
4. Determine proper storage and handling techniques as well as safety techniques and emergency procedures in relation to medication administration.

Course Scope and Content: (Lecture)

Unit I. Medical Math Skills

- A. Basic Algebra
- B. Numerals and Fractions
 1. Arabic and Roman Numerals
 2. Common Fractions
- C. Decimals
 1. Decimal fractions
 2. Fraction to Decimals
- D. Ratios and Proportions
- E. Percentages
- F. The Metric System
 1. Language
 2. Conversion
 3. Guidelines
- G. Calculations of Medication Dosages
 1. Adult dosage
 2. Oral and Parenteral routes
 3. Weight and volumes
 4. Measurements in units
 5. Calculations
 6. Children's dosage
 7. Guidelines

Unit II. Introduction to Pharmacology

- A. Drug Sources, Schedules, and Dosages
- B. FDA Regulations of Drugs
- C. Forms of Drugs and How They Act
- D. The Medication Order
 1. Abbreviations
 2. Vocabulary
- E. Medication Administration Essentials
 1. Guidelines
 2. Storage of Medications
 3. Emergency Medications
 4. Documentation
- F. Administration of Non-Parenteral Medications

1. Oral Medications
2. Ophthalmic Medications
3. Otic Medications
4. Nasal Medications
5. Rectal Medications
- G. Administration of Parenteral Medications
 1. Advantages and Disadvantages of the Parenteral Route
 2. Syringe Parts and Classifications
 3. Preventing Needle Stick Injuries
 4. Measuring Medication in a Syringe
 5. Preparing the Patient for an Injection
 6. Site Selection
 7. Basic Guidelines
 8. Subcutaneous, Intramuscular, and dermal injections

Unit III. Medications, Supplements, and Drug Abuse

- A. Antibiotic Agents
- B. Antifungal, Antiviral, and Immunizing Agents
- C. Vitamins, Minerals, and Herbs
- D. Psychotropic Agents
- E. Substance Abuse

Unit IV. Effects of Medications on the Body

- A. Medications for Musculoskeletal System Disorders
- B. Medications for Gastrointestinal System Disorders
- C. Medications for Cardiovascular System Disorders
- D. Medications for Respiratory System
- E. Medications for Urinary System Disorders
- F. Medications for Endocrine System Disorders
- G. Medications that affect the Nervous System
- H. Medications that affect the Reproductive System

Course Scope and Content: (Laboratory)

Unit I. Administration of Oral Medications

- A. Supplies
- B. Actions of the Drug
- C. Proper Form of Medication
- D. Perform Necessary Calculations to Verify Correct Dosage
- E. Checking the Medical Label
- F. Preparing the Required Medication
- G. Safety Steps
- H. Patient Identification
- I. Assessments
- J. Assisting the Patient
- K. Documentation

Unit II. Administration of Parenteral Medications

- A. Subcutaneous (SC)
- B. Intradermal (ID)

C. Intramuscular (IM)

Unit III. Problem Solving

- A. Problem-Solving Therapy
- B. Problem-Solving Orientation and Style
- C. Self-Defeating vs. Self-Enhancing Statements

Unit IV. Measurements in Metric System

- A. Weight Measurements
- B. Volume Measurements
- C. Length Measurements
- D. Converting Temperature
- E. Converting Military Time
- F. Rounding Rules

Unit V. Basic Math Computations

- A. Addition, Subtraction, Multiplication, and Division
- B. Fractions, Decimals, and Percentages
- C. Ratio, Percentages, and Proportions
- D. Statistics

Learning Activities Required Outside of Class:

- 1. Reading Assignment
- 2. Homework Assignments
- 3. Watch Videos

Methods of Instruction:

- 1. Lecture
- 2. Discussion
- 3. Videos

Methods of Evaluation:

- 1. Exams/Quizzes/Tests
- 2. Projects
- 3. Homework
- 4. Assignments
- 5. Online exercises
- 6. Demonstration of Laboratory Activities

Laboratory Category: Extensive Laboratory

Pre delivery criteria: All the following criteria are met by this lab.

- 1. Curriculum development for each lab.
- 2. Published schedule of individual laboratory activities.
- 3. Published laboratory activity objectives.
- 4. Published methods of evaluation.
- 5. Supervision of equipment maintenance, laboratory setup, and acquisition of lab materials and supplies.

During laboratory activity of the laboratory: All the following criteria are met by this lab.

- 1. Instructor is physically present in lab when students are performing lab activities.

2. Instructor is responsible for active facilitation of laboratory learning.
3. Instructor is responsible for active delivery of curriculum.
4. Instructor is required for safety and mentoring of lab activities.
5. Instructor is responsible for presentation of significant evaluation.

Post laboratory activity of the laboratory: All the following criteria are met by this lab.

1. Instructor is responsible for personal evaluation of significant student outcomes (lab exercises, exams, practicals, notebooks, portfolios, etc.) that become a component of the student grade that covers most lab exercises performed during the course.
2. Instructor is responsible for supervision of laboratory cleanup of equipment and materials

Supplemental Data:

TOP Code:	1208.00 Medical Assisting
SAM Priority Code:	C: Clearly Occupational
Distance Education:	Not Applicable
Funding Agency:	Y: Not Applicable (funds not used)
Program Status:	1: Program Applicable
Noncredit Category:	Y: Not Applicable, Credit Course
Special Class Status:	N: Course is not a special class
Basic Skills Status:	N: Course is not a basic skills course
Prior to College Level:	Y: Not applicable

Cooperative Work Experience:	N: Is not part of a cooperative work experience education program
Eligible for Credit by Exam:	No
Discipline:	Healthcare Ancillaries