MA-2400: ADVANCED PROCEDURES FOR THE MEDICAL ASSISTANT

Cuyahoga Community College

Viewing: MA-2400 : Advanced Procedures for the Medical Assistant

Board of Trustees:
March 2026

Academic Term:
Fall 2026

Subject Code
MA - Medical Assisting

Course Number:
2400

Title:
Advanced Procedures for the Medical Assistant

Catalog Description:
Theory of the more advanced procedures performed in the medical office by medical assistants including specimen collection, physician's office laboratory testing, assisting with minor surgical procedures, caring for patients over the lifespan, and patient education.

Credit Hour(s):
3

Lecture Hour(s):
3

Requisites

Prerequisite and Corequisite
MA-1100 Body Systems for Medical Assistants, MA-1200 Introduction to Medical Assisting, MA-1601 EKG- Electrocardiogram Fundamentals, MA-1430 Basic Medical Assisting, MA-1504 Administrative Procedures for the Medical Office, and concurrent enrollment in MA-240L Advanced Procedures for the Medical Assistant Laboratory; and departmental approval

Outcomes

Course Outcome(s):
Explain the theory of CLIA Waived testing to include hematology, chemistry, urinalysis, immunology, and microbiology tests.

Objective(s):
1. Describe the proper collection method and specimen for CLIA-waived hematology tests to include:
    a. Hematocrit
    b. Hemoglobin
    c. Erythrocyte Sedimentation Rate (ESR)
    d. Prothrombin Time INR
2. Describe the proper collection method and specimen for CLIA-waived chemistry tests to include:
    a. Total Cholesterol
    b. Glucose
        i. fasting
        ii. non-fasting
    c. Hemoglobin A1C (HbA1C)
3. Describe the proper collection method and specimen for CLIA-waived immunology (serology) tests to include:
    a. Urine Pregnancy
    b. Mononucleosis
4. Describe the proper collection method and specimen for CLIA-waived urinalysis tests to include:

   a. Urine Dipstick
   b. Urine Macroscopic
   c. Urine Microscopic
5. Describe the proper collection method and specimen for CLIA-waived microbiology tests to include:
   a. Rapid Strep
   b. COVID-19
   c. Rapid Flu
6. Describe the proper procedure for performing the following CLIA-waived tests:
   a. Hemoglobin
   b. Hematocrit
   c. ESR
   d. Prothrombin Time INR
   e. Total Cholesterol
   f. Glucose, fasting and non-fasting
   g. HbA1C
   h. Urine Pregnancy
   i. Mononucleosis
   j. Complete Urinalysis
   k. Rapid Strep
   l. COVID -19
   m. Rapid Flu
7. Identify normal and abnormal results as reported in charts and graphs.

Course Outcome(s):

Identify the medical assistant's duties in the Physician's Office Laboratory (POL).

Objective(s):

1. Describe the purpose of the POL.
2. Identify important pieces of laboratory equipment to include:
   a. centrifuge
   b. microscope
   c. autoclave
   d. incubator
3. Explain the goal of a quality assurance plan.
4. Perform accurate documentation for specimen collection and laboratory requests.

Course Outcome(s):

Demonstrate foundational knowledge of human nutrition to support patient education, promote health, and address special dietary needs in a professional manner.

Objective(s):

1. Identify dietary nutrients including:
1. Carbohydrates
2. Fat
3. Protein
4. Minerals
5. Electrolytes
6. Vitamins
7. Fiber
8. Water

2. Identify the function of dietary supplements including:
   1. Provide additional nutrients when diet is insufficient
   2. Support overall health and wellness
   3. Help prevent nutrient deficiencies

3. Identify the special dietary needs for:
1. Weight control
2. Diabetes
3. Cardiovascular disease
4. Hypertension
5. Cancer
6. Lactose sensitivity
7. Gluten-free diets
8. Food allergies
9. Eating disorders

4. Identify the components of a food label:
1. Serving size
2. Calories
3. Macronutrients
4. Micronutrients

Course Outcome(s):

Explain the theory of assisting a healthcare provider with minor surgical procedures in the medical office.

Objective(s):

1. Identify the classifications of instruments used in minor surgery.
2. Explain the theory of sterile technique.
3. Identify wound classifications.
4. Describe wound healing phases.

Course Outcome(s):

Demonstrate fundamental knowledge of procedures performed by medical assistants in the medical office within their scope of practice.

Objective(s):

1. List common procedures performed in the medical office based on body systems.
2. Describe the common tests performed in the medical office including the following:
    1. Integumentary System (Skin)
1. Wound cleansing and dressing changes
2. Suture and staple removal
3. Application of topical medications
4. Cryotherapy (liquid nitrogen for skin lesions)
5. Assisting with incision and drainage of abscesses
6. Skin biopsy assistance
    2. Musculoskeletal System
1. Application and removal of splints or casts (assisting provider)
2. Bandaging and supportive wraps
3. Joint injections (provider performs; MA assists)
4. Range-of-motion assessments
    3. Cardiovascular System
1. Electrocardiogram (ECG/EKG)
2. Holter monitor application
3. Blood pressure measurement
4. Assisting with minor vascular procedures (e.g., varicose vein treatment, ABI testing)
    4. Respiratory System
1. Pulse oximetry
2. Nebulizer treatments
3. Spirometry / pulmonary function testing

4. Throat or nasal swab collection
5. Oxygen administration (under provider direction)

5. Digestive System

1. Occult blood stool testing (FOBT/FIT)
2. Breath tests (e.g., H. pylori)
3. Assisting with hemorrhoid treatment procedures
4. Collection of stool specimens

6. Urinary System

1. Urine specimen collection (routine, clean catch, 24-hour)
2. Catheterization (male/female, under provider orders)
3. Bladder scan assistance
4. Urinalysis (dipstick, microscopic prep)

7. Reproductive System

1. Pap smears (provider collects, MA assists)
2. Pregnancy testing (urine/hCG)
3. STD testing specimen collection
4. Assisting with IUD insertion or removal
5. Testicular exam assistance

8. Endocrine System

1. Fingerstick glucose testing
2. Hemoglobin A1c testing (CLIA-waived)
3. Cholesterol screening
4. Patient instruction for insulin administration (reinforcement, not prescribing)

9. Nervous System / Special Senses

1. Vision screening (Snellen chart, Ishihara test)
2. Ear irrigation (cerumen removal)
3. Hearing screening (audiometry)
4. Neurological vital signs (pupil response, reflex checks – assisting provider)

10. General / Multi-System Procedures

1. Immunizations and injections (IM, SC, ID)
2. Venipuncture and capillary puncture
3. Administration of medications under provider order
4. Minor surgical procedures (assisting provider: excision of cysts, mole removal, etc.)
5. Vital signs and patient assessments
6. Emergency response (CPR, AED use until EMS arrives)

Course Outcome(s):

Explain, analyze and evaluate the methods for assisting in the care of the geriatric population.

Objective(s):

1. Analyze the impact of a growing aging population on society.
2. Describe the effects of the sensorimotor changes of aging.
3. Explain the changes caused by aging in each of the body systems.
4. Analyze the major diseases and disorders faced by older patients.
5. Describe various screening tools for dementia, depression, and malnutrition.
6. Analyze the role of the MA in caring for aging patients.

Course Outcome(s):

Explain, analyze and evaluate the methods for assisting in the care of the pediatric population.

Objective(s):

1. Describe childhood growth patterns.
2. Identify different growth and development theories including Erik Erikson.
3. Classify common infectious, congenital, and other diseases of the pediatric population.
4. Summarize the current recommendations for childhood immunizations from the Centers for Disease Control (CDC).

5. Compare and contrast a well-child and a sick-child examination.
6. Describe the needs of the adolescent patient during the examination.
7. Identify appropriate vaccinations based on an immunization schedule.

Methods of Evaluation:

1. Tests
2. Quizzes
3. Written assignments

Course Content Outline:

1. Introduction to the POL
    a. Types of Laboratories
        i. Reference Labs
            1. Cytology
            2. Toxicology
            3. Immunology
            4. Immunohematology
            5. Chemistry
            6. Hematology
            7. Urinalysis
            8. Histology
            9. Microbiology

        ii. POL
            1. Purpose
            2. Point of Care (POC) Testing
            3. Basic Lab Equipment
                a. Autoclave
                b. Centrifuge
                c. Microscope
                    i. Parts of the microscope
    b. Clinical Laboratory Improvement Amendments
        i. Certificate of Waiver
        ii. Moderately Complex Testing
        iii. Highly Complex Testing
    c. Components of Quality Assurance
        i. Proficiency Testing
        ii. Quality Control
        iii. Continuing Education
    d. Laboratory Requisitions
2. Specimen Collection
    a. Blood
        i. Capillary Puncture
            1. Patient Preparation and Identification
            2. Proper Procedure
            3. Adverse Conditions
            4. Infants

        ii. Venipuncture
            1. Vacutainer Assembly
                a. Patient Preparation and Identification
                b. Proper Procedure
            2. Butterfly Assembly
                a. Patient Preparation and Identification
                b. Proper Procedure
            3. Adverse Conditions

        a. Fainting
        b. Bruising
        c. Swelling
    iii. Collection Tubes and Additives
        1. EDTA
        2. Sodium Citrate
        3. Plasma/Serum Separator
        4. Clot Activator
        5. Lithium/Sodium Heparin
        6. Calcium Oxalate
b. Urine
    i. Sample Types
        1. Random Sample
        2. Clean Catch Mid-stream (CCMS)
            a. male anatomy
            b. female anatomy
        3. 24-hour Collection
        4. First Morning Void
    ii. Chain of Custody
    iii. Specimen Preservation and Storage

c. Other Samples
    i. Stool
    ii. Microbiological Samples

3. Laboratory Testing
a. Blood
    i. Common Blood Test Abbreviations
    ii. Normal Ranges
    iii. CLIA Waived Testing
        1. Hemoglobin
        2. Hematocrit
        3. ESR
        4. Glucose
        5. HbA1C
        6. Total Cholesterol
        7. Prothrombin Time INR
        8. Mononucleosis
b. Urinalysis
    i. Physical
        1. Color Turbidity
        2. Volume
        3. Odor
        4. Specific Gravity
    ii. Chemical
        1. Ketones
        2. pH
        3. Blood
        4. Bilirubin
        5. Urobilinogen
        6. Glucose
        7. Protein
        8. Nitrites
        9. Leukocyte Esterase
    iii. Microscopic
        1. a. Cells
            b. Crystals
            c. Casts
            d. Yeast

            e. Bacteria
            f. Parasites
        2. Urine Pregnancy Testing
        3. Urine Toxicology Testing

    c. Other samples
        i. Stool
            1. Fecal Occult Blood (FOB)
            2. Ova and Parasites
        ii. Microbiological Samples
            1. Throat Swabs
            2. Nasal Swabs
            3. Skin Scrapings

4. Role of the Medical Assistant in the POL
    a. Patient Communication and Preparation
    b. Accurate Documentation
    c. Safety Requirements
    d. Sample Collection and Processing
    e. CLIA Waived Testing
    f. Reporting and Documenting Results
5. Pediatrics
    a. Childhood growth patterns
    b. Development theories
    c. Diseases and disorders
    d. Immunizations
    e. Safety guidelines
6. Geriatrics
    a. Analyze the impact of a growing aging population
    b. Changes in the body across the lifespan
    c. Screening tools for dementia, depression, and malnutrition
7. Surgical Medical Assisting
    a. Medical assistant's role in surgical procedures
    b. Types of surgery in the medical office
    c. Surgical instruments used in minor surgery
    d. Asepsis
    e. Patient education
8. Nutrition
    a. Nutrients
    b. Supplements
    c. Special Diets
    d. Food Labels

Religious Accommodation

Before reviewing the course schedule, students should carefully review the following religious accommodation policy and other required instructional policies:

Religious Accommodation:

Students seeking an accommodation for absences permitted under Ohio's Testing Your Faith Act must provide the instructor with written notice of the specific dates for which the student requires an accommodation and must do so not later than fourteen (14) days after the first day of instruction. Please submit requests for accommodations at this link: https://portal2.tri-c.edu/ReligiousAccommodation/ Religious Accommodation Form. Students with questions about their religious accommodations under Ohio's Testing Your Faith Act may contact the College's Office of General Counsel and Legal Services by phone at 216.987.4856 or via email at legal@tri-c.edu.

Other Required Instructional Policies:

https://www.tri-c.edu/student-resources/curriculum/documents/syllabus-part-b.pdf

Weekly Schedule

	Topics
Week 1	Intro to the POL
Week 2	Specimen Collection Review
Week 3	CLIA-Waived Testing I
Week 4	CLIA-Waived Testing II
Week 5	Urinalysis I
Week 6	Urinalysis II
Week 7	Nutrition
Week 8	MidTerm
Week 9	Nutrition and Patient Education
Week 10	Procedures Performed by Medical Assistants I
Week 11	Procedures Performed by Medical Assistants II
Week 12	Care of the Pediatric Patient I
Week 13	Care of the Pediatric Patient II
Week 14	Care of the Geriatric Patient I
Week 15	Care of the Geriatric Patient II
Week 16	Final Exam

The Course Schedule is subject to change due to pedagogical needs, instructor discretion, parts of term, and unexpected events.

Required/Recommended Readings

Booth, K. A., Whicker, L. G., Wyman, V. M., & Thompson, J.. *Medical assisting: Administrative and clinical procedures*.

Resources for the Instructor

Niedzwiecki, B., Pepper, J., & Weaver, P. (2023) *Kinn's the medical assistant: An applied learning approach*, Elsevier.

Bonewit-West, K. (2022) *Clinical procedures for medical assistants*, Elsevier.

Lindh, W. Q., Pooler, M. S., Tamparo, C. D., Dahl, B. M., & Morris, J. (2022) *Delmar's comprehensive medical assisting: Administrative and clinical competencies*, Cengage.

Top of page

Key: 5407