

# Medical Assisting

<b>Primary Career Cluster:</b>	Health Science
<b>Course Contact:</b>	<a href="mailto:CTE.Standards@tn.gov">CTE.Standards@tn.gov</a>
<b>Course Code(s):</b>	C14H10
<b>Prerequisite(s):</b>	<i>Health Science Education</i> (C14H14)
<b>Credit:</b>	1
<b>Grade Level:</b>	10-11
<b>Focused Elective Graduation Requirements:</b>	This course satisfies one of three credits required for an elective focus when taken in conjunction with other Health Science courses.
<b>POS Concentrator:</b>	This course satisfies one out of two required courses to meet the Perkins V concentrator definition, when taken in sequence in the approved program of study.
<b>Programs of Study and Sequence:</b>	This is the second or third course in the <i>Therapeutic Services</i> programs of study.
<b>Aligned Student Organization(s):</b>	HOSA: <a href="http://www.tennesseehosa.org">http://www.tennesseehosa.org</a>
<b>Coordinating Work-Based Learning:</b>	Teachers are encouraged to use embedded WBL activities such as informational interviewing, job shadowing, and career mentoring. For information, visit <a href="https://www.tn.gov/education/career-and-technical-education/work-based-learning.html">https://www.tn.gov/education/career-and-technical-education/work-based-learning.html</a> .
<b>Available Student Industry Credentials:</b>	Credentials are aligned with postsecondary and employment opportunities and with the competencies and skills that students acquire through their selected program of study. For a listing of promoted student industry credentials, visit <a href="https://www.tn.gov/education/career-and-technical-education/student-industry-certification.html">https://www.tn.gov/education/career-and-technical-education/student-industry-certification.html</a>
<b>Teacher Endorsement(s):</b>	577, 720
<b>Required Teacher Certifications/Training:</b>	None
<b>Teacher Resources:</b>	<a href="https://www.tn.gov/education/career-and-technical-education/career-clusters/cte-cluster-health-science.html">https://www.tn.gov/education/career-and-technical-education/career-clusters/cte-cluster-health-science.html</a>  Best for All Central: <a href="https://bestforall.tnedu.gov/">https://bestforall.tnedu.gov/</a>

## Course-at-a-Glance

CTE courses provide students with an opportunity to develop specific academic, technical, and 21<sup>st</sup> century skills necessary to be successful in career and in life. In pursuit of ensuring every student in Tennessee achieves this level of success, we begin with rigorous course standards which feed into intentionally designed programs of study.

Students engage in industry relevant content through general education integration and experiences such as career & technical student organizations (CTSO) and work-based learning (WBL). Through these experiences, students are immersed with industry standard content and technology, solve industry-based problems, meaningfully interact with industry professionals, and use/produce industry specific, informational texts.

## Using a Career and Technical Student Organization (CTSO) in Your Classroom

CTSOs are a great resource to put classroom learning into real-life experiences for your students through classroom, regional, state, and national competitions, and leadership opportunities. Below are CTSO connections for this course, note this is not an exhaustive list.

- Participate in CTSO Fall Leadership Conference to engage with peers by demonstrating logical thought processes and developing industry specific skills that involve teamwork and project management
- Participate in contests that highlight job skill demonstration; interviewing skills; community service activities, extemporaneous speaking, and job interview
- Participate in leadership activities such as Organizational Leadership, Prepared Speaking, HOSA Service Project, Creative Problem Solving, and HOSA Service Project.

For more ideas and information, visit Tennessee HOSA at <http://www.tennesseehosa.org/>

## Using Work-based Learning in Your Classroom

Sustained and coordinated activities that relate to the course content are the key to successful work-based learning. Possible activities for this course include the following. This is not an exhaustive list.

- **Standards 1.1-1.5** | Job shadow in a physician's practice front office
- **Standards 2.1-2.7** | Participate in an employee orientation at a medical facility to focus on safety and disaster preparedness.
- **Standards 3.1-3.4** | Invite a patient advocate to discuss communication barriers, cultural differences, special needs, dealing with patients' defense mechanisms, and end of life care,
- **Standards 4.1-4.9** | Participate in an abbreviated internship to practice approved medical assisting skills.

For more ideas and information, visit <https://www.tn.gov/education/career-and-technical-education/work-based-learning.html>.

## Course Description

*Medical Assisting* is a level 2 or level 3 course designed to prepare students to pursue careers in medical assisting. Upon completion of this course, a proficient student will be able to implement communication and interpersonal skills, provide care safely, prevent emergency situations, prevent infection through infection control, and perform the skills required of a medical assistant. At the conclusion of this course and an appropriate clinical internship, students may sit for the Certified Clinical Medical Assistant (CCMA) exam.

## Program of Study Application

This is the second or third course in the *Therapeutic Services* programs of study. For more information on the benefits and requirements of implementing these programs in full, please visit the Health Science website at <https://www.tn.gov/education/career-and-technical-education/career-clusters/cte-cluster-health-science.html>

## Course Standards

### 1. Front Office

- 1.1 Professionalism and career readiness: Relate the **concepts of professionalism and career readiness** to the delivery of quality patient care. Demonstrate all of the following professional characteristics in a classroom lab setting:
  - a. Honesty and integrity
  - b. Reliability and punctuality
  - c. Appropriate communication skills
  - d. Cooperation and teamwork
  - e. Initiative and adaptability
  
- 1.2 Workplace etiquette and information gathering: Describe **professional workplace etiquette** as it relates to greeting, escorting, responding to, and instructing patients. Explain the **process of collecting new and updated information** from patients. Create and perform role-plays to demonstrate professional workplace etiquette and information gathering concepts.
  
- 1.3 CCMA front office expectations: Investigate the **expectations a medical office has for a CCMA** in the front office related to:
  - a. Reception room environment
  - b. Scheduling guidelines
  - c. Written communication and transmission of information through facsimile/scanner/patient portal/social media
  - d. Medical record preparation and related legal concepts
  - e. Handling vendors/business associates
  - f. Use and maintenance of business equipment
  - g. Medical billing and coding
  - h. Office supply inventory

Research to compare and contrast the differences in expectations among **solo practices, group practices, and employed physician practices**.

1.4 Sources of reimbursement: Explain the multiple **sources of reimbursement in healthcare services** and discuss the relationship of the following to healthcare and patient finances:

- a. Capitation
- b. Medicare
- c. TennCare
- d. Prospective payment systems
- e. Relative Value Resource Based systems (RVRB)
- f. Case mix
- g. MS-DRGs
- h. Healthcare insurance
- i. Accountable care organizations.

1.5 Law and ethics: Analyze specific **laws and ethical issues** that impact professional practice such as confidentiality, informed consent, and patient self-determination. Summarize the **Health Insurance Portability and Accountability Act (HIPAA)**, paying specific attention to aspects related to maintaining confidentiality, patient rights, patient safety, and other ethical/legal directives governing medical treatment.

## 2. Back Office

2.1 Patient care team: Differentiate between the **common members of the patient care team** summarizing the individual roles and the interrelatedness of the team members as it relates to quality patient care. Prepare an informative artifact to explain the concept of team-based care to a patient.

2.2 Safe use of equipment: Examine policies and procedures related to **diagnostic equipment safety, quality control monitoring, and evaluation**. Explain the importance of safety practices and the implementation of quality control processes according to policy.

2.3 Infection control: Infection control concepts and skills: In the classroom lab, demonstrate mastery of **concepts and skills** related to:

- a. Asepsis
- b. Universal Precautions
- c. Sanitation
- d. Disinfection
- e. Surgical scrub
- f. Sterilization

2.4 Patient and employee safety: Summarize the elements of containment regarding **fire safety and chemical hazards, electrical safety, mechanical safety, general lab safety, accidental exposure, and disaster preparedness**. Demonstrate these elements in all classroom lab activities and patient care simulations.

- 2.5 Medication administration: Research the medical assistant's scope of practice regarding **medication administration** in Tennessee and create a comprehensive list of **medication administration routes** the medical assistant may use. Demonstrate a working knowledge of the 50 most commonly prescribed medications through the creation of an artifact, role-play, or written scenarios (see "top 200 drugs" at [www.rxlist.com](http://www.rxlist.com)).
- 2.6 Medical assistant skills: Demonstrate **medical assistant concepts and skills** of the following in a classroom lab setting:
- Patient positioning
  - Transfers and ambulation (including injury prevention and body mechanics concepts)
  - O2 assessment and administration (including fire safety measures)
  - BLS (Basic Life Support)
  - Assisting with common office procedures such as eye and ear irrigation, dressing change, suture/staple removal, etc. (including infection control measures)
  - Vital sign measurement
  - Preparing and administering oral and parenteral medications
- 2.7 Medical records: Examine **common documentation approaches for medical records** such as the SOAP and POMR methods. Explain the **importance of documenting all interventions and patient compliance**. Practice **documentation using correct medical terminology** that contains subjective and objective information including patient complaints. Demonstrate **how to correct errors** in the patient chart.

### 3. The Patient

- 3.1 Human anatomy and pathophysiology: Outline the **gross normal structure and function of all body systems and their interrelationships**. List signs and symptoms of **common diseases and disorders** associated with each system.
- 3.2 Communication and cultural differences: Differentiate between **verbal and nonverbal communication** when interacting with patients. Examine **specific techniques for effective communication** and evaluate how **different cultures** attach different meanings to communication techniques. Evaluate **factors that contribute to effective communication** and explain how these factors contribute to the development of quality patient care. Demonstrate practices to effectively manage the following:
- Common communication barriers
  - Cultural differences
  - Patients with special needs
  - Patients exhibiting various defense mechanisms
  - Patients with terminal illnesses
- 3.3 Physician office emergencies: Outline **potential medical emergencies** within an office setting, especially those related to anaphylaxis, syncope, shock, Myocardial Infarction (MI), diabetes, and Cardiovascular Accident (CVA). Describe **guidelines of care for each of the emergencies** and indicate various staff member responsibilities.

3.4 Patient health screenings education plan: Develop a **patient health education** plan including health screenings, preventive measures, nutritional needs, and community support systems. Adapt content based on **growth and development stages**.

#### 4. **Diagnostic Procedures (NO LIVE STICKS)**

4.1 Phlebotomy skills and results: Explain principles of and successfully perform **skills of a phlebotomist**, incorporating rubrics from National HOSA, textbooks, or clinical standards of practice. Define the following **common laboratory values, both normal and abnormal**, and provide the **rationale for obtaining the test**:

- a. Complete Blood Count
- b. Complete Metabolic Panel
- c. Fasting Lipid Panel
- d. Hgb A1C

4.2 Physician office laboratory and regulation: Analyze the medical assistant's role in the **physician office laboratory (POL)** and link the role with CLIA regulations for the POL. Demonstrate the following:

- a. Identification of the parts and use of the microscope
- b. Proper handling and specimen preservation
- c. Preparation of a specimen
- d. Microscope slide set-up
- e. Proper labeling of specimen
- f. Operation of centrifuge and incubator
- g. Collection of fecal and sputum specimens

4.3 Throat culture: Compare and contrast **bacterial cultures and rapid testing** summarizing the pros and cons of each. Demonstrate the following:

- a. Throat swab for culture
- b. Wound culture
- c. Inoculation of a culture plate

4.4 Urinalysis and health: Evaluate **urinalysis results** both normal and abnormal relating the **most common disorders** with the abnormal results. Include an explanation of **different methods of urine collection** such as clean-catch midstream and catheterization. In the classroom lab demonstrate the following:

- a. Description of physical characteristics of urine (color, odor, appearance)
- b. Use of a reagent strip to identify abnormalities
- c. Ability to set up a wet mount for microscopic analysis
- d. Performance of a urine pregnancy test

4.5 Basic ophthalmic examination: Evaluate principles of and successfully perform skills related to **basic ophthalmic examination** including the concepts surrounding measurement of visual acuity with associated equipment incorporating rubrics from textbooks or clinical standards of practice.

- 4.6 Gross heart anatomy and cardiac conduction: Identify gross **heart anatomy and physiology** and related **cardiac conduction and circulatory pathways**. Assess **lead placements** and correlate their relationship to the conduction system through the use of a diagram or model.
- 4.7 Cardiac cycle and the P,Q,R,S,T complex: Analyze the **P,Q,R,S,T complex** and its correlation to the **cardiac cycle**. Chart a mock representation of these waves on an electrocardiogram. Create algorithms to differentiate between **critical and non-critical cardiac rhythms** on rhythm strips and/or 12 lead EKGs.
- 4.8 12-lead EKGs: Accurately perform the steps of **obtaining a 12-lead EKG** utilizing rubrics from textbooks, National HOSA guidelines, or clinical standards of practice. Include the following areas:
- Skin preparation
  - Proper lead placement
  - EKG machine data input
  - Patient positioning to decrease somatic tremor or wandering baseline
  - Recognizing current interference and artifact
  - Recording the EKG
- 4.9 Cardiac diagnostic procedures: Investigate **cardiac diagnostic procedures** both in-hospital and out-patient and identify the **equipment** required for these services.
- Holter monitor (24-48 hour)
  - Stress test
  - Event monitor (30 days)

**The following artifacts should be included in the student's portfolio:**

- Skills performance rubrics
- Documentation of job shadowing hours
- Examples of written, oral, or digital presentations

## Standards Alignment Notes

\*References to other standards include:

- P21: Partnership for 21st Century Skills [Framework for 21st Century Learning](#)
  - Note: While not all standards are specifically aligned, teachers will find the framework helpful for setting expectations for student behavior in their classroom and practicing specific career readiness skills.