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Medical Assisting Technology
Mississippi Curriculum Framework

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The Office of Curriculum and Instruction (OCI) was founded in 2013 under the Division of Workforce, Career, and Technical Education at the Mississippi Community College Board (MCCB). The office is funded through a partnership with The Mississippi Department of Education (MDE), who serves as Mississippi's fiscal agent for state and federal Career and Technical Education (CTE) Funds. The OCI is tasked with developing statewide CTE curriculum, programming, and professional development designed to meet the local and statewide economic demand.

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Research Abstract

The curriculum framework in this document reflects these changes in the workplace and a number of other factors that impact local career and technical programs. Federal and state legislation calls for articulation between high school and community college programs, integration of academic and technical skills, and the development of sequential courses of study that provide students with the optimum educational path for achieving successful employment. National skills standards, developed by industry groups and sponsored by the U.S. Department of Education and Labor, provide career technical educators with the expectations of employers across the United States. All of these factors are reflected in the framework found in this document.

The last validated and approved revision of this curriculum took place in 2010. In the spring of 2015, the Office of Curriculum and Instruction (OCI) met with different industry/program visits. An industry questionnaire was used to gather feedback concerning the trends and needs, both current and future, of their field. The Office of Curriculum and Instruction also met with advisory committee members who reiterated what industry had stated. Program faculty, administrators, and industry members were consulted regarding industry workforce needs and trends.

The major change within the revision process this time was the adoption of the Commission on Accreditation of Allied Health Education Programs (CAAHEP) standards. The 2015 standards have been adopted by the American Association of Medical Assistants (AAMA), the Medical Assisting Education Review Board (MAERB), and the CAAHEP.

Research History

2010 - Research & Curriculum Unit, Mississippi State University
2015 - Office of Curriculum & Instruction, Mississippi Community College Board

Online and Blended Learning Opportunities

Course content includes lecture and laboratory semester credit hours. Faculty members are encouraged to present lecture related content to students in an online or blended learning environment. Training related to online and blended learning will be available to faculty members through the MS Community College Board.

ADOPTION OF NATIONAL CERTIFICATION STANDARDS

The Commission on Accreditation of Allied Health Education Programs (CAAHEP) is a programmatic postsecondary accrediting agency recognized by the Council for Higher Education Accreditation (CHEA) and carries out its accrediting activities in cooperation with 23 review committees (Committees on Accreditation). CAAHEP currently accredits over 2100 entry level education programs in 28 health science professions.
CAAHEP, a 501(c)(3) tax exempt organization, was formed in 1994. Its predecessor organization was the Committee on Allied Health Education and Accreditation (CAHEA). CAHEA was part of the American Medical Association (AMA).

CAAHEP is comprised of both a Commission and a Board of Directors. The Commission is composed of representatives appointed to represent the organizations that belong to CAAHEP as well as certain other "communities of interest." These Commissioners are responsible for approving the bylaws, mission, and vision statements of CAAHEP, as well as determining which health sciences professions are to be recognized by CAAHEP.

The CAAHEP Board of Directors is composed of 16 members, who are elected by and from among the Commissioners. The Board is the accrediting body of CAAHEP that awards or denies accreditation after review of accreditation recommendations made by the Committees on Accreditation. It is also the primary governing body that oversees the business of CAAHEP and implements the mission and vision as adopted by the Commission.

The 2015 CAAHEP Standards and Guidelines for Medical Assisting have been approved. After a two-year process of review and feedback, revision and feedback, more review and feedback, public forums and feedback, the 2015 *CAAHEP Standards and Guidelines for the Accreditation of Educational Programs in Medical Assisting*, including Appendix B, the Medical Assisting Education Review Board (MAERB) Core Curriculum, have been approved by CAAHEP at their March 20, 2015 meeting. They are now posted on the MAERB website, on the documents tab, and at the CAAHEP website. These *Standards and Guidelines* go into effect immediately (Fall 2015), and visits under the new *Standards and Guidelines* will begin in 2017. More information on the CAAHEP standards can be found at: http://www.caahep.org/documents/file/For-Program-Directors/MedicalAssistingStandards2015.pdf

The Medical Assisting Education Review Board

The Medical Assisting Education Review Board (MAERB) is a Committee on Accreditation (CoA) of the Commission on Accreditation of Allied Health Education Programs (CAAHEP). MAERB is an autonomous unit within the American Association of Medical Assistants Endowment (AAMAE). The American Association of Medical Assistants (AAMA) is a sponsoring organization of MAERB. MAERB makes accreditation recommendations for the status of accreditation of medical assisting programs.

Within those accreditation processes, the MAERB fulfills these functions:

- Ongoing review of program compliance and achievement of outcome thresholds
- Regularly reviewing Standards for medical assisting education accreditation
- Development and revision of the core Curriculum for Medical Assistants
- Conducting accreditation workshops for medical assisting educators
- Conducting workshops for MAERB/CAAHEP surveyors to promote consistent review of programs
- Providing medical assisting educators with current information about CAAHEP and MAERB policies and practices for accreditation

The MAERB members are educators from both public and private institutions, administrators from institutions with accredited medical assisting programs, practicing medical assistants, members of the public, and physicians.

More information on the MAERB ca be found at: http://maerb.org

INDUSTRY JOB PROJECTION DATA

The field of medical assisting technology is growing rapidly. This field provides not only opportunities in direct medical assisting technology work but also room for multiple skill certifications. There is a 35.85% increase in occupational demand at the regional level and a 37.29% increase at the state level. Median annual income for a certified medical assistant is $24,086.40 at the state and regional level. A summary of occupational data from the State Workforce Investment Board Data Center is displayed below: (http://swib.ms.gov/DataCenter/)

Table 1: Education Level

Program Occupations	Education Level
Medical Assistants	Moderate-term on-the-job training

Table 2: Occupational Overview

	Region	State	United States
2010 Occupational Jobs	1406	2239	514970
2020 Occupational Jobs	1910	3074	691494
Total Change	504	835	176524
Total % Change	35.85%	37.29%	34.28%
2010 Median Hourly Earnings	$11.58	$11.58	$13.87
2010 Median Annual Earnings	$24,086.40	$24,086.40	$28,849.60
Annual Openings	50	83	17652

Table 3: Occupational Breakdown

Description	2010 Jobs	2020 Jobs	Annual Openings	2010 Hourly Earnings	2010 Annual Earnings 2,080 Work Hours
Medical Assistants	1406	1910	50	$11.58	$24,086.40

Table 4: Occupational Change

Description	Regional Change	Regional % Change	State % Change	National % Change
Medical Assistants	504	35.85%	37.29%	34.28%

ARTICULATION

Articulation credit from Secondary Allied Health to Postsecondary Medical Assisting Technology will be awarded when applicable. Articulation credit from Secondary Business and Computer Technology to Postsecondary Medical Assisting Technology will be awarded. Courses to be articulated include CPT 1113 – Fundamentals of Microcomputer Applications and CPT 1324 – Survey of Microcomputer Applications.

SEC Program	PS Program	PS Courses
Business Fundamentals (CIP 52.0101)	PS Medical Assisting Technology (CIP 51.0801)	CPT 1113 – Fundamentals of Microcomputer Applications CPT 1323 – Survey of Microcomputer Applications

TECHNICAL SKILLS ASSESSMENT

Colleges should report the following for students who complete the program with a certificate option or an Associate of Applied Science Degrees for technical skills attainment:

The *American Association of Medical Assistants* (*AAMA) Certified Medical Assistant Certification/Recertification Examination* will be used to assess students upon completion of the one or two year program. The cost for the AAMA exam is $125.00 if they are a student (price subject to change).

OR

The *American Medical Technologist (AMT) for Registered Medical Assistant Certification/Recertification Examination* will be used to assess students upon completion of the one or two year program. The cost for the AMT exam is $100.00 (price subject to change).

OR

The *National Healthcareer Association (NHA) for Certified Clinical Medical Assistant Certification/Recertification Examination* will be used to assess students upon completion of the one or two year program. The cost for the NHA exam is $149 (price subject to change).

OR

The *National Center for Competency Testing (NCCT) for the National Certified Medical Assistant Certification/Recertification Examination* will be used to assess students upon completion of the one or two year program. The cost for the NCCT exam is $90 if they are a student (price subject to change).

PROGRAM DESCRIPTION

Medical assistants are multi-skilled allied health professionals specifically educated to work in ambulatory settings performing administrative and clinical duties. The practice of medical assisting directly influences the public's well-being, and requires mastery of a complex body of knowledge and specialized skills requiring both formal education and practical experiences that serve as standards for entry into the profession. The business administrative duties include scheduling and receiving patients; obtaining patients' data; maintaining medical records; handling telephone calls, correspondence, reports, and manuscripts; assuming responsibility for office care; and handling insurance matters, office accounts, fees, and collections. The clinical duties vary according to state law and may include preparing patients for examination, obtaining vital signs, taking medical histories, assisting with examinations and treatments, performing routine office laboratory procedures and electrocardiograms, preparing and administering medications and immunizations, sterilizing instruments and equipment for office procedures, and instructing patients in preparation for radiologic and laboratory examinations, and providing patient education. Both administrative and clinical duties involve purchasing and maintaining supplies and equipment. A medical assistant may also be responsible for personnel and office management. Successful completion of this program entitles graduates to sit for the national credentialing examination, determined by the program's accrediting body to include: The American Association of Medical Assistants (AAMA) for the Certified Medical Assistant CMA(AAMA) Examination/Recertification; the American Medical Technologist (AMT) for the Registered Medical Assistant (RMA) Examination/Recertification; the National Healthcareer Association (NHA) for the Certified Clinical Medical Assistant (CCMA) Examination/Recertification, or the National Center for Competency Testing (NCCT) for the National Certified Medical Assistant (NCMA) Examination/Recertification. These examinations will be used to assess students upon completion of the one or two year program. This curriculum has adopted the CAAHEP Standards and Guidelines for the Accreditation of Educational Programs in Medical Assisting.

SUGGESTED COURSE SEQUENCE

Required Courses

			SCH Breakdown				Contact Hour Breakdown			Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Clinical/ Internship	Total Contact Hours	Lecture	Lab	Clinical/ Internship	Certification Name
MET 1113	Medical Terminology	3	2	2		60	30	30		American Association of Medical Assistants Examination ***OR*** American Medical Technologist Examination ***OR*** National Healthcareer Association Examination **OR** National Center for Competency Testing Examination
MET 1313	Clinical Procedures I	3	2	2		60	30	30		
MET 1513	Pharmacology for Medical Assistants	3	3			45	45			
MET 1214	Medical Business Practices	4	3	2		75	45	30		
MET 1323	Clinical Procedures II	3	2	2		60	30	30		
MET 1413	Medical Law and Ethics	3	3			45	45			
MET 2334	Medical Laboratory for Medical Assistants	4	3	2		75	45	30		
MET 2234	Medical Insurance	4	3	2		75	45	30		
MET 2716	Practicum	6	1		15	240	15		225	
MET 2613	Clinical Review	3	3			45	45			
CPT 1113 ***OR*** CPT 1324 ***OR*** CSC 1123 ***OR*** BOT 1133 ***OR*** BAD 2533	Fundamentals of Microcomputer Applications ***OR*** Survey of Microcomputer Applications ***OR*** Computer Applications I ***OR*** Microcomputer Applications ***OR*** Computer Applications in Business & Industry	3/4	2 3	2 2		60 75	30 45	30 30		
	Approved Program Technical Electives per Local Community College	5/6								
	Total	45								

Approved Program Electives

			SCH Breakdown			Credit Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Credit Hours	Lecture	Lab	Certification Name
BOT 2813	Business Communications	3	2	2	60	30	30	
MET 2224	Computer Concepts for Medical Assistants	4	2	4	90	30	60	
MET 1911	Medical Assisting Technology Seminar I	1	15		15	15		
MET 1921	Medical Assisting Technology Seminar II	1	15		15	15		
MET 1931	Medical Assisting Technology Seminar III	1	15		15	15		
	TOTAL							

General Education Core Courses

To receive the Associate of Applied Science Degree, a student must complete all of the required coursework found in the Career Certificate option, Technical Certificate option and a minimum of 15 semester hours of General Education Core. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester or provided primarily within the last semester. Each community college will specify the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college. The Southern Association of Colleges and Schools (SACS) Commission on Colleges Standard 2.7.3 from the Principles of Accreditation: Foundations for Quality Enhancement[1] describes the general education core.

Section 2.7.3 In each undergraduate degree program, the institution requires the successful completion of a general education component at the collegiate level that (1) is substantial component of each undergraduate degree, (2) ensures breadth of knowledge, and (3) is based on a coherent rationale. For degree completion in associate programs, the component constitutes a minimum of 15 semester hours or the equivalent. These credit hours are to be drawn from and include at least one course from the following areas: humanities/fine arts, social/behavioral sciences, and natural science/mathematics. The courses do not narrowly focus on those skills, techniques, and procedures specific to a particular occupation or profession.

[1] Southern Association of Colleges and Schools Commission on Colleges. (2012). *The principles of accreditation: Foundations for quality enhancement*. Retrieved from http://www.sacscoc.org/pdf/2012PrinciplesOfAcreditation.pdf

Academic Courses for Medical Assisting Technology

			SCH Breakdown			Credit Hour Breakdown		Certification Information
Course Number	Course Name	Semester Credit Hours	Lecture	Lab	Total Credit Hours	Lecture	Lab	Certification Name
	Humanities/Fine Arts	3						
	Social/Behavioral Sciences	3						
BIO 1514 ***OR*** BIO 2514	Anatomy & Physiology I	4						
BIO 1524 ***OR*** BIO 2524	Anatomy & Physiology II	4						
	Other academic courses per local community college requirements for AAS degree.	3						
	TOTAL	**15**						

MEDICAL ASSISTING TECHNOLOGY COURSES

Course Number and Name: **MET 1113** **Medical Terminology**

Description: This course is a study of medical language relating to the various body systems including diseases, physical conditions, procedures, clinical specialties, and abbreviations. Emphasis is placed on correct spelling and pronunciation and the use of computer assisted software.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Recognize and discuss word components, terms, procedures, abbreviations, and symbols related to the various body systems.
    a. Identify combining forms, suffixes, and prefixes related to the various body systems.
    b. Identify and discuss disease terms related to the various body systems.
    c. Identify diagnostic imaging, clinical, surgical, and laboratory procedures related to the various body systems.
    d. Identify abbreviations and symbols related to the various body systems.
    e. Define, spell, pronounce, and use medical terms.

2. Demonstrate ability to communicate information using medical terms in a clear, concise manner.
    a. Read and comprehend medical terminology as viewed in medical charts.
    b. Discuss medical terminology used in medical charts.

CAAHEP Standards
Content Area I: Anatomy & Physiology
Cognitive (Knowledge) I.C Anatomy & Physiology

1. Describe structural organization of the human body
2. Identify body systems
3. Describe:
    a. body planes
    b. directional terms
    c. quadrants
    d. body cavities
4. List major organs in each body system
5. Identify the anatomical location of major organs in each body system
6. Compare structure and function of the human body across the life span
7. Describe the normal function of each body system
8. Identify common pathology related to each body system including:
    a. signs
    b. symptoms
    c. etiology
9. Analyze pathology for each body system including:
    a. diagnostic measures
    b. treatment modalities

Content Area V: Concepts of Effective Communication

Cognitive (Knowledge) V.C Concepts of Effective Communication

10. Identify medical terms labeling the word parts
11. Define medical terms and abbreviations related to all body systems

Course Number and Name: **MET 1214** **Medical Business Practices**

Description: This course presents the administrative medical assistant procedures with office management written and oral communications. Emphasis is placed on clerical functions, billing, collecting, bookkeeping, and creating and maintaining medical records. The goal is to provide the student with practice situations through demonstration and simulated office settings utilizing electronic health-care record software.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	3	2	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Display professionalism.
    a. Project a professional manner and image.
    b. Demonstrate initiative and responsibility.
    c. Manage time effectively.
    d. Prioritize and perform multiple tasks.
    e. Adapt to change.
    f. Promote national credentialing

2. Demonstrate professional communications.
    a. Adapt communication to individuals' abilities to understand.
    b. Demonstrate professional telephone techniques.
    c. Respond to and initiate written communications.
    d. Recognize and respond to verbal and nonverbal communications.
    e. Discuss the role of assertiveness in effective professional communication.
    f. Use medical terminology appropriately.
    g. Receive, organize, prioritize, and transmit information.

3. Perform clerical functions.
    a. Schedule and manage appointments.
    b. Schedule inpatient/outpatient admissions and procedures.
    c. Prepare, organize, and file patients' medical records.

4. Perform operational functions of the office environment.
    a. Perform an inventory of supplies and equipment.
    b. Perform routine maintenance of administrative equipment.
    c. Utilize computer software to maintain office systems.

5. Perform bookkeeping procedures.
    a. Prepare a bank deposit.
    b. Perform accounts receivable procedures.
        (1) Post entries on a daysheet.
        (2) Perform billing and collection procedures.
        (3) Post adjustments and refunds.
    c. Utilize computerized office billing systems.

CAAHEP Standards

Content Area V: Concepts of Effective Communication

Cognitive (Knowledge) V.C Concepts of Effective Communication

1. Identify styles and types of verbal communication
2. Identify types of nonverbal communication
3. Recognize barriers to communication
4. Identify techniques for overcoming communication barriers
5. Recognize the elements of oral communication using a sender-receiver process
6. Define coaching a patient as it relates to:
    a. health maintenance
    b. disease prevention
    c. compliance with treatment plan
    d. community resources
    e. adaptations relevant to individual patient needs
7. Recognize elements of fundamental writing skills
8. Discuss applications of electronic technology in professional communication
9. Relate the following behaviors to professional communication:
    a. assertive
    b. aggressive
    c. passive
10. Define patient navigator
11. Describe the role of the medical assistant as a patient navigator
12. Differentiate between adaptive and non-adaptive coping mechanisms.

Psychomotor (Skills) V.P. Concepts of Effective Communication

13. Use medical terminology correctly and pronounced accurately to communicate information to providers and patients
14. Coach patients regarding:
    a. office policies
    b. health maintenance
15. Coach patients appropriately considering:
    a. cultural diversity
    b. developmental life stage
    c. communication barriers
16. Demonstrate professional telephone techniques
17. Document telephone messages accurately
18. Compose professional correspondence utilizing electronic technology
19. Develop a current list of community resources related to patients' healthcare needs
20. Facilitate referrals to community resources in the role of a patient navigator
21. Report relevant information concisely and accurately

Content Area VI: Administrative Functions

Cognitive (Knowledge) VI.C Administrative Functions

22. Identify different types of appointment scheduling methods
23. Identify advantages and disadvantages of the following appointment systems
    a. manual
    b. electronic
24. Identify critical information required for scheduling patient procedures
25. Define types of information contained in the patient's medical record
26. Identify methods of organizing the patient's medical record based on:
    a. problem-oriented medical record (POMR)
    b. source-oriented medical record (SOMR)
27. Identify equipment and supplies needed for medical records in order to:

    a. Create
    b. Maintain
    c. Store
28. Describe filing indexing rules
29. Differentiate between electronic medical records (EMR) and a practice management system
30. Explain the purpose of routine maintenance of administrative and clinical equipment
31. List steps involved in completing an inventory

Psychomotor (Skills) VI.P Psychomotor Functions

32. Manage appointment schedule using established priorities
33. Schedule a patient procedure
34. Create a patient's medical record
35. Organize a patient's medical record
36. File patient medical records
37. Utilize an EMR
38. Input patient data utilizing a practice management system
39. Perform routine maintenance of administrative or clinical equipment
40. Perform an inventory with documentation

Affective (Behavior) VI.A Administrative Functions

41. Display sensitivity when managing appointments

Content Area VII: Basic Practice Finances

Cognitive (Knowledge) VII.C Basic Practice Finances

42. Define the following bookkeeping terms:
    a. charges
    b. payments
    c. accounts receivable
    d. accounts payable
    e. adjustments
43. Describe banking procedures as related to the ambulatory care setting
44. Identify precautions for accepting the following types of payments:
    a. cash
    b. check
    c. credit card
    d. debit card
45. Describe types of adjustments made to patient accounts including:
    a. non-sufficient funds (NSF) check
    b. collection agency transaction
    c. credit balance
    d. third party
46. Identify types of information contained in the patient's billing record
47. Explain patient financial obligations for services rendered

Psychomotor (Skills) VII.P Basic Practice Finances

48. Perform accounts receivable procedures to patient accounts including posting:
    a. charges
    b. payments
    c. adjustments
49. Prepare a bank deposit
50. Obtain accurate patient billing information
51. Inform a patient of financial obligations for services rendered
52. Demonstrate professionalism when discussing patient's billing record

53. Display sensitivity when requesting payment for services rendered
54. Explain the importance of data back-up
55. Explain meaningful use as it applies to EMR

Course Number and Name: **MET 1313** **Clinical Procedures I**

Description: The purpose of this course is to introduce the student to basic clinical skills, Occupational Safety and Health Administration (OSHA) standards, infection control, vital signs, patient preparation, and assisting with examinations, emphasizing the importance of being proficient in all of these areas. This course also provides students with opportunities to practice and demonstrate proficiency in simulated settings and check-offs.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Act in a professional manner.
    a. Project a professional manner and image.
    b. Adhere to ethical principles.
    c. Demonstrate initiative and responsibility.
    d. Work as a team member.
    e. Manage time effectively.
    f. Prioritize and perform multiple tasks.
    g. Adapt to change.

2. Assess communication skills.
    a. Treat all patients with compassion and empathy.
    b. Recognize and respect individual cultural diversity.
    c. Adapt communications to individual's ability to understand.
    d. Recognize and respond to verbal and nonverbal communications.
    f. Use medical terminology appropriately.
    g. Receive, organize, prioritize, and transmit information.

3. Apply legal concepts.
    a. Maintain confidentiality.
    b. Practice within the scope of education, training, and personal capabilities.
    c. Document accurately.

4. Perform clinical duties.
    a. Apply principles of aseptic technique and infection control.
    b. Employ OSHA guidelines as stated in the Federal Register.
    c. Obtain patient history, vital signs and measurements.
    d. Adhere to established patient screening procedures.
    e. Recognize and respond to medical emergencies.
    f. Prepare, maintain, and clean examination and treatment area.
    g. Identify and state the purpose of each instrument used in selected clinical procedures.
    h. Recognize the need for proper care, storage, and maintenance of instruments.
    i. Prepare patients for examinations, procedures, and treatments.
    j. Assist with routine and specialty examinations, procedures, and treatments.
    k. Instruct patients in the collection of fecal specimens.
    l. Screen and follow up test results.
    m. Comply with quality assurance practices.
    n. Provide instruction for health maintenance and disease prevention.

CAAHEP Standards

Content Area I: Anatomy & Physiology

Psychomotor (Skills) I.P Anatomy & Physiology

1. Measure and record:
    a. blood pressure
    b. temperature
    c. pulse
    d. respirations
    e. height
    f. weight
    g. length (infant)
    h. head circumference (infant)
    i. pulse oximetry
2. Perform patient screening using established protocols

Affective (Behavior) I.A Anatomy & Physiology

3. Incorporate critical thinking skills when performing patient assessment
4. Incorporate critical thinking skills when performing patient care

Content Area II: Applied Mathematics

Psychomotor (Skills) II.P Applied Mathematics

5. Document on a growth chart

Content Area IV: Nutrition

Affective (Behavior) IV.A Nutrition

6. Show awareness of a patient's concerns related to the procedure being performed

Content Area III: Infection Control

Cognitive (Knowledge) III.C Infection Control

7. List major types of infectious agents
8. Describe the infection cycle including:
    a. the infectious agent
    b. reservoir
    c. susceptible host
    d. means of transmission
    e. portals of entry
    f. portals of exit
9. Define the following as practiced within an ambulatory care setting:
    a. medical asepsis
    b. surgical asepsis
10. Identify methods of controlling the growth of microorganisms
11. Define the principles of standard precautions
12. Define personal protective equipment (PPE) for:
    a. all body fluids, secretions and excretions
    b. blood
    c. non-intact skin
    d. mucous membranes
13. Identify Center for Disease Control (CDC) regulations that impact healthcare practices

Psychomotor (Skills) III.P Infection Control

14. Participate in bloodborne pathogen training
15. Select appropriate barrier/personal protective equipment (PPE)

16. Perform handwashing

Content Area V: Concepts of Effective Communication

Psychomotor (Skills) V.P. Concepts of Effective Control

17. Use feedback techniques to obtain patient information including:
    a. reflection
    b. restatement
    c. clarification
18. Respond to nonverbal communication
19. Coach patients appropriately considering:
    a. cultural diversity
    b. developmental life stage
    c. communication barriers

Affective (Behavior) V.A. Concepts of Effective Communication

20. Demonstrate:
    a. empathy
    b. active listening
    c. nonverbal communication
21. Demonstrate the principles of self-boundaries
22. Demonstrate respect for individual diversity including:
    a. gender
    b. race
    c. religion
    d. age
    e. economic status
    f. appearance
23. Explain to a patient the rationale for performance of a procedure

Cognitive (Knowledge) V.C Concepts of Effective Communication

24. Differentiate between subjective and objective information

Content Area X: Legal Implications

Psychomotor (Skills) S.P Legal Implications

25. Document patient care accurately in the medical record

Affective (Behaviors) X.A Legal Implications

26. Demonstrate sensitivity to patient rights
27. Protect the integrity of the medical record

Content Area XII: Protective Practices

Cognitive (Knowledge) XII.C Protective Practices

28. Discuss fire safety issues in an ambulatory healthcare environment
29. Use medical terminology correctly and pronounced accurately to communicate information to providers and patients

Course Number and Name: **MET 1323** **Clinical Procedures II**

Description: This course is a continuation of Clinical Procedures I and will further the student's knowledge of the more complex activities encountered in the physician's office. The clinical duties include maintaining surgical asepsis, instructing patients in preparation for radiologic studies, performing ECGs, preparing and administering medications as directed by the physician, and providing mobility assistance.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	2	2	60

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Apply fundamental principles of aseptic technique in minor surgical procedures.
    a. List the equipment and supplies basic to all minor surgical procedures.
    b. Demonstrate equipment sterilization procedures.
    c. Prepare minor office surgery tray.
    d. Perform skin prep of surgery site.

2. Provide instructions to patients to prepare for diagnostic imaging studies.
    a. Prepare patients for procedures.
    b. Instruct patients in preparation for radiological studies.

3. Perform selected tests that assist with diagnosis and treatment.
    a. Perform respiratory testing.
    b. Describe the electrical conduction system of the heart.
    c. Perform an electrocardiogram (ECG).
    d. Define ECG artifacts, and list their causes on an ECG.
    e. Differentiate among the patch, scratch, and intradermal skin tests.
    f. Describe how to determine the results for each of the allergy testing methods.
    g. Describe how to determine the results for TB testing using Mantoux and Tine Test methods.
    h. Assist with routine and specialty examinations, procedures, and treatments.
    i. Demonstrate specimen collection according to appropriate lab guidelines.
    j. Instruct patients in the collection of fecal specimens.
    k. Screen and follow up test results.
    l. Comply with quality assurance practices.

4. Prepare and administer medications and immunizations as directed by physician.
    a. Name the tissue layers and sites of injection for intradermal, intramuscular, z-track, and subcutaneous injections.
    b. Select the proper size needle and syringe for a specific injection.
    c. Perform the proper technique for administering intradermal, intra-muscular, z-track, and subcutaneous injections.
    d. Demonstrate the proper disposal of a used needle and syringe.

5. Demonstrate knowledge of selected mobility assistance skills and use of equipment.
    a. Recognize and practice principles of body mechanics.
    b. Recognize and practice principles of transfers.
    c. Recognize and practice principles of ambulation activities.

    d. Discuss the use and care of patient equipment.

6. Practice appropriate legal concepts.
    a. Respond to issues of confidentiality.
    b. Perform within legal and ethical boundaries.
    c. Maintain an awareness of federal and state health-care legislation and legal guidelines.

CAAHEP Standards

Content Area I: Anatomy & Physiology

Psychomotor (Skills) I.P anatomy & Physiology

1. Perform electrocardiography
2. Perform pulmonary function testing
3. Verify the rules of medication administration:
    a. right patient
    b. right medication
    c. right dose
    d. right route
    e. right time
    f. right documentation
4. Select proper sites for administering parenteral medication
5. Administer oral medications
6. Administer parenteral (excluding IV) medications
7. Instruct and prepare a patient for a procedure or a treatment
8. Assist provider with a patient exam
9. Produce up-to-date documentation of provider/professional level CPR
10. Perform first aid procedures for:
    a. bleeding
    b. diabetic coma or insulin shock
    c. fractures
    d. seizures
    e. shock
    f. syncope

Cognitive (Knowledge) I.C Anatomy & Physiology

11. List principles and steps of professional/provider CPR
12. Describe basic principles of first aid as they pertain to the ambulatory healthcare setting

Content Area III: Infection Control

Psychomotor (Skills) III.P Infection Control

13. Prepare items for autoclaving
14. Perform sterilization procedures
15. Prepare a sterile field
16. Perform within a sterile field
17. Perform wound care
18. Perform dressing change
19. Demonstrate proper disposal of bio-hazardous material
    a. sharps
    b. regulated wastes

Content Area V: Concepts of Effective Communication

Psychomotor (Skills) V.P. Concepts of Effective Communication

20. Use medical terminology correctly and pronounced accurately to communicate information to providers and patients
21. Coach patients regarding:
    a. office policies
    b. health maintenance
    c. disease prevention
    d. treatment plan

Affective (Behavior) V.A. Concepts of Effective Communication

22. Demonstrate respect for individual diversity including:
    a. gender
    b. race
    c. religion
    d. age
    e. economic status
    f. appearance

Content Area X: Legal Implications

Psychomotor X.P Legal Implications

23. Document patient care accurately in the medical record

Content Area I: Anatomy & Physiology

Affective (Behavior) I.P Anatomy & Physiology

24. Incorporate critical thinking skills when performing patient assessment
25. Incorporate critical thinking skills when performing patient care

Content Area XII: Protective Practices

Affective (Behavior) XII.A Protective Practices

26. Recognize the physical and emotional effects on persons involved in an emergency situation
27. Demonstrate self-awareness in responding to an emergency situation

Cognitive (Knowledge) XII.C Protective Practices

28. Describe fundamental principles for evacuation of a healthcare setting
29. Describe the purpose of Safety Data Sheets (SDS) in a healthcare setting
30. Discuss protocols for disposal of biological chemical materials
31. Identify critical elements of an emergency plan for response to a natural disaster or other emergencies.
32. Identify principles of:
    a. body mechanics
    b. ergonomics

Psychomotor (Skills) XII.P Protective Practices

33. Participate in a mock exposure event with documentation of specific steps
34. Use proper body mechanics

Course Number and Name: **MET 1413** **Medical Law and Ethics**

Description: This course covers medical law, ethics, and bioethics; the legal relationship of the physician and patient; the legal responsibilities of the healthcare team including the patient; and the importance of professional liability.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3		45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Define and discuss basic legal concepts.
    a. Distinguish between civil and criminal law.
    b. Differentiate between a felony and a misdemeanor.
    c. Distinguish between negligence and malpractice.
    d. List the elements of civil malpractice litigation.
    e. Identify the phases followed in trying medical malpractice cases.
    f. Identify the stages of appeal.
    g. Identify the economic impact of malpractice litigation on the cost of medicine.
    h. Define subpoena duces tecum.
    i. Define tort.
    j. Distinguish among law, morals, ethics, and etiquette.

2. Perform within legal and ethical boundaries.
    a. Identify ways that employment in a medical office carries legal obligations for the patient, employer, employee, and state.
    b. Recognize the Code of Ethics of the health-care professions.

3. Practice within the scope of education, training, and personal capabilities.
    a. Explain standard of care.
    b. Describe the professional conduct for medical office personnel to prevent medical malpractice lawsuits.

4. Identify and respond to issues of confidentiality.
    a. Explore the issue of confidentiality as it applies to the medial assistant.
    b. Apply the legal doctrine of privileged communication to the contents of a medical record.
    c. Summarize the Patient's Bill of Rights.
    d. Explain the correct procedure for reporting communicable diseases in a manner that maintains confidentiality.

5. Document accurately.
    a. Explain the importance of medical record credibility.
    b. Demonstrate the acceptable method for making corrections to a medical record.
    c. Determine needs for documentation and reporting.
    d. List different types of medical records.

6. Use appropriate guidelines when releasing records or information.
    a. Describe the legal, moral, and ethical aspects of informed consent.
    b. Identify the owner of a medical record.
    c. Apply HIPAA rules in regard to privacy/release of information.

7. Follow employer's established policies dealing with the health-care contract.
    a. List three elements for a contract to be valid.
    b. Differentiate between an implied and expressed contract for medical treatment.
    c. Incorporate the Patient's Bill of Rights into personal practice and medical office policies and procedures.
    d. Discuss the procedure for terminating a physician-patient contract.

8. Follow federal, state, and local legal guidelines in the practice setting.

9. Implement and maintain awareness of federal and state health-care legislation and regulations.
    a. Identify questions surrounding bioethics and its impact on future generations.
    b. Identify ethical questions surrounding life, death, and the impact on future generations.
    c. Identify legal responsibilities for minors, incompetents, and special needs patients.

CAAHEP Standards

Content Area V: concepts of Effective Communication

Cognitive (Knowledge) V.C Concepts of Effective Communication

1. Define the principles of self-boundaries
2. Discuss the theories of:
    a. Maslow
    b. Erikson
    c. Kubler-Ross
3. Discuss examples of diversity:
    a. cultural
    b. social
    c. ethnic

Content Area X: Legal Implications

Cognitive (Knowledge) X.C Legal Implications

4. Differentiate between scope of practice and standards of care for medical assistants
5. Compare and contrast provider and medical assistant roles in terms of standard of care
6. Describe components of the Health Information Portability & Accountability Act (HIPAA)
7. Summarize the Patient Bill of Rights
8. Discuss licensure and certification as they apply to healthcare providers
9. Compare criminal and civil law as they apply to the practicing medical assistant
10. Define:
    a. negligence
    b. malpractice
    c. statute of limitations
    d. Good Samaritan Act(s)
    e. Uniform Anatomical Gift Act
    f. living will/advanced directives
    g. medical durable power of attorney
    h. Patient Self Determination Act (PSDA)
    i. risk management
11. Describe the following types of insurance:
    a. liability
    b. professional (malpractice)
    c. personal injury
12. List and discuss legal and illegal applicant interview questions
13. Identify:
    a. Health Information Technology for Economic and Clinical Health (HITECH) Act
    b. Genetic Information Nondiscrimination Act of 2008 (GINA)

    c. Americans with Disabilities Act Amendments Act (ADAAA)
14. Describe the process in compliance reporting:
    a. unsafe activities
    b. errors in patient care
    c. conflicts of interest
    d. incident reports
15. Describe compliance with public health statutes:
    a. communicable diseases
    b. abuse, neglect, and exploitation
    c. wounds of violence
16. Define the following medical legal terms:
    a. informed consent
    b. implied consent
    c. expressed consent
    d. patient incompetence
    e. emancipated minor
    f. mature minor
    g. subpoena duces tecum
    h. respondeat superior
    i. res ipsa loquitor
    j. locum tenens
    k. defendant-plaintiff
    l. deposition
    m. arbitration-mediation
    n. Good Samaritan laws

Psychomotor (Skills) X.P Legal Implications

17. Locate a state's legal scope of practice for medical assistants
18. Apply HIPAA rules in regard to:
    a. privacy
    b. release of information
19. Apply the Patient's Bill of Rights as it relates to:
    a. choice of treatment
    b. consent for treatment
    c. refusal of treatment
20. Perform compliance reporting based on public health statutes
21. Report an illegal activity in the healthcare setting following proper protocol
22. Complete an incident report related to an error in patient care

Content Area XI: Ethical Considerations

Cognitive (Knowledge) XI.C Ethical Considerations

23. Define:
    a. ethics
    b. morals
24. Differentiate between personal and professional ethics
25. Identify the effect of personal morals on professional performance

Psychomotor (Skills) XI.P Ethical Considerations

26. Develop a plan for separation of personal and professional ethics
27. Demonstrate appropriate response(s) to ethical issues

Affective (Behavior) XI.A Ethical Considerations

28. Recognize the impact personal ethics and morals have on the delivery of healthcare

Course Number and Name: **MET 1513 Pharmacology for Medical Assistants**

Description: The course reflects basic theory and clinical information related to drugs including classifications, source, dosages and measurements, regulatory requirements, and basic principles of drug administration. At all times, safety is emphasized for the health professional administering the medication and the patients receiving the medication. Accuracy is stressed.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3		45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Calculate medication dosages.
    a. Convert household measures to apothecary and metric system.
    b. Calculate dosages based on body weight and body surface area.
    c. Solve clinical calculations involved in the administration of medication with 100% accuracy.
    d. Use knowledge of appropriate methods of rounding doses when administering medications.

2. Identify the major drug classifications.
    a. List the major drug classifications.
    b. Name at least five drugs in each major classification.
    c. Identify the action, indication, usual dosage, and adverse reactions of commonly used drugs.

3. Identify the five controlled substances schedules.
    a. Define the five controlled substances schedules, and give examples of medications listed in each.
    b. Explain storage, inventory, record keeping, and disposal for controlled substances.
    c. Explain the significance of the Controlled Substances Act of 1970.

4. Apply pharmacology principles to prepare and administer oral and parenteral (excluding intravenous [IV]) medication. ,
    a. State the "Six Rights" of proper drug administration.
    b. State the guidelines for safe drug administration.
    c. Identify the various methods and routes of administration of medication.
    d. State the advantages and disadvantages of each medication route.

5. Discuss medication orders from the physician.
    a. Identify and define the standard abbreviations and symbols used in prescribing and administering medications.
    b. List the nine parts of a prescription.
    c. Discuss the different types of medication orders.

6. Identify special considerations related to administering medications to infants and children. ,
    a. Calculate medication dosages for children.
    b. Discuss preferred routes of administration of medication.
    c. State preferred sites of intramuscular (IM) injections in children.

CAAHEP Standards
Content Area I: Anatomy & Physiology
Cognitive (Knowledge) I.C Anatomy & Physiology

1. Identify the classifications of medications including:
    a. indications for use
    b. desired effects
    c. side effects
    d. adverse reactions

Psychomotor (Skills) I.P Anatomy & Physiology

2. Verify the rules of medication administration:
    a. right patient
    b. right medication
    c. right dose
    d. right route
    e. right time
    f. right documentation

Content Area II: Applied Mathematics

Cognitive (Knowledge) II.C Applied Mathematics

3. Demonstrate knowledge of basic math computations
4. Apply mathematical computations to solve equations
5. Define basic units of measurement in:
    a. the metric system
    b. the household system
6. Convert among measurement systems
7. Identify abbreviations and symbols used in calculating medication dosages

Psychomotor (Skills) II.P Applied Mathematics

8. Calculate proper dosages of medication for administration

Course Number and Name: **MET 1911** **Medical Assisting Technology Seminar I**

Description: This course is designed for students to participate in activities of various professional organizations such as the Medical Assisting Technology Student Organization, HOSA and other student activities. Leadership skills, an understanding of group dynamics, educational enrichment, stimulation of enthusiasm and interest, community service and rapport among health education professionals are outcomes of this course. One hour per week with additional activities to meet organizational goals.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	1		15

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Demonstrate interaction and cooperation in the modern workplace
   a. Demonstrate communication skills by actively participating in program and campus activities.
   b. Evaluate new materials added to the classroom.

2. Implement community participation
   a. Actively participate in a class organized community service project.

Course Number and Name: **MET 1921 Medical Assisting Technology Seminar II**

Description: This course is designed for students to participate in activities of various professional organizations such as the Medical Assisting Technology Student Organization, HOSA and other student activities. Leadership skills, an understanding of group dynamics, educational enrichment, stimulation of enthusiasm and interest, community service and rapport among health education professionals are outcomes of this course. One hour per week with additional activities to meet organizational goals.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	1		15

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Interaction and cooperation in the modern workplace
   a. Demonstrate problem-solving skills by actively participating in program and campus activities.
   b. Locate and utilize local resource sources.

2. Community participation
   a. Actively participate in a class organized community service project.

Course Number and Name: **MET 1931 Medical Assisting Technology Seminar III**

Description: This course is designed for students to participate in activities of various professional organizations such as the Medical Assisting Technology Student Organization, HOSA and other student activities. Leadership skills, an understanding of group dynamics, educational enrichment, stimulation of enthusiasm and interest, community service and rapport among health education professionals are outcomes of this course. One hour per week with additional activities to meet organizational goals.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
1	1		15

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Interaction and cooperation in the modern workplace
   a. Demonstrate problem-solving skills by actively participating in program and campus activities.
   b. Locate and utilize local resource sources.

2. Community participation
   a. Actively participate in a class organized community service project.

Course Number and Name: **MET 2224** **Computer Concepts for Medical Assistants**

Description: This course will introduce students to the capabilities of a medical practice management software program typical of those currently used in doctors' offices. After completion of this course, students will have knowledge about working with patient accounts, insurance claim forms, and handling reports dealing with management of the medical practice.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	2	4	90

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Discuss practice management data.
    a. Describe the flow of information in the medical office.
    b. Discuss the role of computers in today's medical office.
    c. Discuss hardware and software maintenance and technical support.
    d. Discuss the purpose of the medical billing software.

2. Enter patient information and billing data.
    a. Enter patient account information.
    b. Describe the relationships of the guarantor and patient.
    c. Explain the process of posting accounts.
    d. Modify or correct a patient account.
    e. Post payments from accounts.
    f. Make posting adjustments from the procedure entry screen.
    g. Make posting adjustments from the payment entry screen.

3. Generate super bills, billing statements, and insurance claim forms.
    a. Discuss functions of a super bill for various medical specialties.
    b. Post charges from a super bill to a patient's account.
    c. Explain several methods for billing patients on a regular basis.
    d. Print patient statements.
    e. Name and describe three types of insurance plans.
    f. Describe three methods for collecting insurance payments.

4. Age accounts receivable.
    a. Discuss the account aging process.
    b. Explain the purpose and importance of a period, close, and purge.

5. Print patient and practice reports.

CAAHEP Standards
Content Area VI: Administrative Functions
Cognitive (Knowledge) VI.C Administrative Functions

1. Identify different types of appointment scheduling methods
2. Identify advantages and disadvantages of the following appointment systems
    a. manual
    b. electronic
3. Identify critical information required for scheduling patient procedures

4. Define types of information contained in the patient's medical record
5. Differentiate between electronic medical records (EMR) and a practice management system

Psychomotor (Skills) VI.P Psychomotor Functions

6. Manage appointment schedule using established priorities
7. Schedule a patient procedure
8. Create a patient's medical record
9. Organize a patient's medical record
10. Utilize an EMR
11. Input patient data utilizing a practice management system

Content Area VII: Basic Practice Finances

Psychomotor (skills) VII.P Basic Practice Finances

12. Perform accounts receivable procedures to patient accounts including posting:
    a. charges
    b. payments
    c. adjustments

Content Area VI: Administrative Functions

Cognitive (Knowledge) VI.C Administrative Functions

13. Explain the importance of data back-up
14. Explain meaningful use as it applies to EMR

Content Area X: Legal Implications

Psychomotor (Skills) X.P Legal Implications

15. Document patient care accurately in the medical record

Course Number and Name: **MET 2234** **Medical Insurance**

Description: The purpose of this course is to acquaint the student with different types of insurance plans including commercial plans, government plans, disability, worker's compensation, and managed care plans. Practical approach to insurance billing, basic medical and insurance abbreviations, terminology, and ICD-9 and 10-CM and CPT coding will be presented.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	3	2	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Perform procedural and diagnostic coding.
    a. Locate the correct CPT and ICD-9 and 10 CM codes.
    b. Identify the importance and use of modifiers in coding.
    c. State the meaning of basic abbreviations and symbols in the code books.

2. Describe the life cycle of a health insurance claim form.
    a. Abstract from the patient record the information for completing an insurance claim form.
    b. Process the Universal Health Insurance Claim Form.
    c. Monitor third-party reimbursement.
    d. Utilize effective oral or written communication with insurance companies regarding erroneous payments.
    e. Describe electronic claims transmission.

3. Analyze and apply current third-party guidelines.
    a. Define the major classes of health insurance contracts.
    b. Give examples of federal, state, and private insurance plans.
    c. Define common insurance, medical, and diagnostic terms.
    d. Differentiate among usual, customary, and reasonable fees.
    e. Cite the essential features of the commercial plans, government plans, worker's compensation, and disability.

4. Recognize and adhere to managed care policies and procedures.
    a. Define a Prepaid Health Plan (PHP).
    b. Identify the types of prepaid health plans.
    c. Define independent practice associations (IPA).
    d. Define preferred provider organizations (PPO).
    e. Discuss professional review organizations (PROs).
    f. Discuss managed care referrals and precertifications.

CAAHEP Standards

Cognitive (Knowledge) IV.A Nutrition

1. Describe dietary nutrients including:
    a. carbohydrates
    b. fat
    c. protein
    d. minerals

    e. electrolytes
    f. vitamins
    g. fiber
    h. water
2. Define the function of dietary supplements
3. Identify the special dietary needs for:
    a. weight control
    b. diabetes
    c. cardiovascular disease
    d. hypertension
    e. cancer
    f. lactose sensitivity
    g. gluten-free
    h. food allergies

Content Area VIII: Third Party Reimbursement

Cognitive (Knowledge) VIII.C Third Party Reimbursement

1. Identify:
    a. types of third party plans
    b. information required to file a third party claim
    c. the steps for filing a third party claim
2. Outline managed care requirements for patient referral
3. Describe processes for:
    a. verification of eligibility for services
    b. precertification
    c. preauthorization
4. Define a patient-centered medical home (PCMH)
5. Differentiate between fraud and abuse

Psychomotor (Skills) VIII.P Third Party Reimbursement

6. Interpret information on an insurance card
7. Verify eligibility for services including documentation
8. Obtain precertification or preauthorization including documentation
9. Complete an insurance claim form

Affective (Behavior) VIII.A Third Party Reimbursement

10. Interact professionally with third party representatives
11. Display tactful behavior when communicating with medical providers regarding third party requirements
12. Show sensitivity when communicating with patients regarding third party requirements

Content Area IX: Procedural and Diagnostic Coding

Cognitive (Knowledge) IX.C Procedural and Diagnostic Coding

13. Describe how to use the most current procedural coding system
14. Describe how to use the most current diagnostic coding classification system
15. Describe how to use the most current HCPCS level II coding system
16. Discuss the effects of:
    a. upcoding
    b. downcoding
17. Define medical necessity as it applies to procedural and diagnostic coding

Psychomotor (Skills) IX.P Procedural and Diagnostic Coding

18. Perform procedural coding
19. Perform diagnostic coding

20. Utilize medical necessity guidelines

Affective (Behavior) IX.A Procedural and Diagnostic Coding

21. Utilize tactful communication skills with medical providers to ensure accurate code selection

Course Number and Name: **MET 2334** **Medical Laboratory for Medical Assistants**

Description: This course covers techniques of the clinical laboratory including competent use of the microscope and understanding the theory and knowledge of the common laboratory tests performed in the physician's office. Students will develop proficiency in laboratory and quality assurance procedures including collection, preparation and processing of specimens, urinalysis, hematology, and accurate reporting of test results.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
4	3	2	75

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. State the organization and function of the medical laboratory.
    a. List the organization and function of the medical laboratory.
    b. Describe the departments within a medical laboratory.

2. Manage the physician's office laboratory.
    a. Comply with established risk management and safety procedures.
    b. Comply with federal Clinical Laboratory Improvement Amendments (CLIA) regulations.
    c. Explain the proper care, use, function, and storage of the microscope.
    d. Perform an inventory of supplies and equipment.
    e. Operate and perform routine maintenance of clinical equipment.
    f. Practice standard precautions.
    g. Dispose of biohazardous materials according to OSHA guidelines.

3. Collect and process clinical specimens.
    a. Discuss the hazards in a medical laboratory.
    b. Discuss and practice laboratory safety procedures.
    c. Perform capillary and venipuncture.
    d. Obtain specimens for microbiological testing.
    e. Instruct patients in the collection of a clean-catch midstream urine specimen.
    f. Demonstrate wound collection procedure for microbiological testing.

4. Perform selected laboratory tests that assist with diagnosis and treatment.
    a. Perform CLIA waived tests to include urinalysis.
        1) Perform hematology testing.
        2) Perform chemistry testing.
        3) Perform immunology testing.
        4) Perform microbiology testing.
    b. Prepare a microhematocrit sample.
    c. Perform manual and automated hematology procedures.
    d. Describe the interaction of blood vessels, platelets, coagulation factors, and fibrinolytic systems in normal and abnormal homeostasis.
    e. Perform a urine pregnancy test.
    f. Perform a test for infectious mononucleosis.
    g. Perform a rapid strep test.
    h. Describe the formation and composition of urine.
    i. Explain the properties involved in the physical, chemical, and microscopic examination of urine.

j. Perform the testing involved in the physical, chemical, and microscopic examination of urine.
k. Correlate results of urinalysis with clinical conditions.
l. Record laboratory results accurately.
m. Solve laboratory mathematics problems.

5. Screen and follow up patient test results.
    a. Briefly describe the function, composition, normal values, and characteristics of blood.
    b. Discuss common blood disorders.

6. Comply with quality assurance practices.
    a. Define accuracy and precision.
    b. Perform quality control procedures.
    c. Explain the importance of quality control in the physician's office laboratory, plot quality control results, and interpret these results.
    d. Discuss erroneous results due to equipment error.

7. Identify terminology commonly related to nutrition.
    a. Describe the functions and effects of water in the human body.
    b. Recall the classification, functions and types of carbohydrates.
    c. Identify the sources functions and types of lipids in the human body.
    d. Recall the composition, classifications, sources, and functions of proteins.
    e. Identify the different types of water soluble and fat soluble vitamins and their benefits for the human body.
    f. Recall major minerals and trace elements.
    g. Recall the dietary guidelines and the food plate developed by the U.S. Department of Agriculture.
    h. Identify food related diseases with special dietary needs.

CAAHEP Standards

Content Area I: Anatomy & Physiology

Psychomotor (Skills) I.P Anatomy & Physiology

1. Perform venipuncture
2. Perform capillary puncture
3. Perform a quality control measure
4. Obtain specimens and perform:
    a. CLIA waived hematology test
    b. CLIA waived chemistry test
    c. CLIA waived urinalysis
    d. CLIA waived immunology test
    e. CLIA waived microbiology test

Cognitive (Knowledge) I.P anatomy & Physiology

5. Identify CLIA waived tests associated with common diseases
6. Identify quality assurance practices in healthcare

Content Area II: Applied Mathematics

Cognitive (Knowledge) II.C Applied Mathematics

7. Analyze healthcare results as reported in:
    a. graphs
    b. tables

Psychomotor (Skills) II.P Applied Mathematics

8. Differentiate between normal and abnormal test results
9. Maintain lab test results using flow sheets

Affective (Behavior) II.A Applied Mathematics

10. Reassure a patient of the accuracy of the test results

Content Area III: Infection Control

Cognitive (Knowledge) III.C Infection Control

11. List major types of infectious agents
12. Describe the infection cycle including:
    a. the infectious agent
    b. reservoir
    c. susceptible host
    d. means of transmission
    e. portals of entry
    f. portals of exit
13. Define the following as practiced within an ambulatory care setting:
    a. medical asepsis
    b. surgical asepsis
14. Identify methods of controlling the growth of microorganisms
15. Define the principles of standard precautions
16. Define personal protective equipment (PPE) for:
    a. all body fluids, secretions and excretions
    b. blood
    c. non-intact skin
    d. mucous membranes
17. Identify Center for Disease Control (CDC) regulations that impact healthcare practices

Psychomotor (Skills) III.P Infection Control

18. Demonstrate proper disposal of biohazardous material
    a. sharps
    b. regulated wastes

Affective (Behavior) III.A Infection Control

19. Recognize the implications for failure to comply with Center for Disease Control (CDC) regulations in healthcare settings

Psychomotor (Skills) IV.P Nutrition

20. Instruct a patient according to patient's special dietary needs

Affective (Behavior) IV. A. Nutrition

21. Show awareness of patient's concerns regarding a dietary change

Content Area IV: Nutrition

Cognitive (Knowledge) IV.A Nutrition

22. Describe dietary nutrients including:
    a. carbohydrates
    b. fat
    c. protein
    d. minerals
    e. electrolytes
    f. vitamins
    g. fiber

    h. water
23. Define the function of dietary supplements
24. Identify the special dietary needs for:
    a. weight control
    b. diabetes
    c. cardiovascular disease
    d. hypertension
    e. cancer
    f. lactose sensitivity
    g. gluten-free
    h. food allergies

Content Area VI: Administrative Functions

Psychomotor (Skills) VI.P Administrative Functions

25. Perform routine maintenance of administrative or clinical equipment
26. Perform an inventory with documentation

Cognitive (Knowledge) VI.P Administrative Functions

27. Explain the purpose of routine maintenance of administrative and clinical equipment
28. List steps involved in completing an inventory

Content Area XII: Protective Practices

Cognitive (Knowledge) XII.C Protective Practices

29. Identify:
    a. safety signs
    b. symbols
    c. labels
30. Identify safety techniques that can be used in responding to accidental exposure to:
    a. blood
    b. other body fluids
    c. needle sticks
    d. chemicals
31. Discuss fire safety issues in an ambulatory healthcare environment
32. Describe fundamental principles for evacuation of a healthcare setting
33. Describe the purpose of Safety Data Sheets (SDS) in a healthcare setting
34. Discuss protocols for disposal of biological chemical materials
35. Identify principles of:
    a. body mechanics
    b. ergonomics
36. Identify critical elements of an emergency plan for response to a natural disaster or other emergency

Psychomotor (Skills) XII.P Protective Practices

37. Comply with:
    a. safety signs
    b. symbols and labels
38. Demonstrate proper use of:
    a. eyewash equipment
    b. fire extinguishers
    c. sharps disposal containers
39. Use proper body mechanics
40. Participate in a mock exposure event with documentation of specific steps
41. Evaluate the work environment to identify unsafe working conditions Standards

Course Number and Name: **MET 2613** **Clinical Review**

Description: This summary course is designed to review the skills, knowledge, and abilities acquired during the didacticum. This course will serve to assist the student in preparing for the certification exam, with a review of critical clinical skills and professional development issues.

Hour Breakdown:

Semester Credit Hours	Lecture	Lab	Contact Hours
3	3		45

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Apply test taking strategies and study skills.
   a. Demonstrate the ability and apply selected study and test taking strategies.
   b. Demonstrate familiarity with the available national credentialing exam format.
   c. Assess individual knowledge weaknesses, and improve these weaknesses.

2. Prepare for the National Certification Exam.
   a. Discuss national certification and continuing education.
   b. Review specific content areas for the available national credentialing exam format.
   c. Take mock certification exams for practice.

Course Number and Name: **MET 2716 Practicum**

Description: This course includes supervised experience in medical offices to provide the student with a comprehensive application of administrative and clinical skills. This course is designed to give the student an opportunity to discuss, evaluate, and share learning experiences and to strengthen learning situations brought up in the practicum setting.

Hour Breakdown:

Semester Credit Hours	Lecture	Clinical	Contact Hours
6	1	15	240

Prerequisite: Instructor Approved

Student Learning Outcomes:

1. Perform clerical functions.
    a. Schedule and manage appointments.
    b. Schedule inpatient and outpatient admissions and procedures.
    c. Organize a patient's medical record.
    d. File medical records.

2. Perform bookkeeping procedures.
    a. Prepare a bank deposit.
    b. Post entries on a daysheet.
    c. Perform accounts receivable procedures.
    d. Perform billing and collection procedures.

3. Process insurance claims.
    a. Apply managed care policies and procedures.
    b. Apply third-party guidelines.
    c. Perform procedural coding.
    d. Perform diagnostic coding.
    e. Complete insurance claim forms.

4. Apply fundamental clinical procedures.
    a. Utilize aseptic technique and infection control.
    b. Wrap items for autoclaving.
    c. Perform sterilization techniques.
    d. Dispose of biohazardous materials.
    e. Practice standard precautions.

5. Perform specimen collection.
    a. Perform venipuncture.
    b. Perform capillary puncture.
    c. Obtain specimens for microbiological testing.
    d. Instruct patients in the collection of a clean; catch midstream urine specimen.
    e. Instruct patients in the collection of fecal specimens.

6. Perform diagnostic testing.
    a. Perform electrocardiography.
    b. Perform respiratory testing.
    c. Perform CLIA waived tests.

1) Perform urinalysis.
2) Perform hematology testing.
3) Perform chemistry testing.
4) Perform immunology testing.
5) Perform microbiology testing.

7. Provide patient care.
    a. Perform telephone and in-person screening.
    b. Obtain vital signs.
    c. Obtain and record patient history.
    d. Prepare, maintain, and clean examination and treatment areas.
    e. Prepare patient for and assist with routine and specialty examinations.
    f. Prepare patient for and assist with procedures, treatments, and minor office surgeries.
    g. Apply pharmacology principles to prepare and administer oral and parenteral (excluding IV) medications.
    h. Maintain medication and immunization records.
    i. Screen and follow up test results.

8. Employ professional communications.
    a. Respond to and initiate written communications.
    b. Recognize and respond to verbal communications.
    c. Recognize and respond to nonverbal communications.
    d. Demonstrate telephone techniques.

9. Practice legal concepts.
    a. Identify and respond to issues of confidentiality.
    b. Perform within legal and ethical boundaries.
    c. Establish and maintain the medical record.
    d. Document appropriately.
    e. Demonstrate knowledge of federal and state health-care legislation and regulations.

10. Demonstrate patient instruction.
    a. Explain general office policies.
    b. Instruct individuals according to their needs.
    c. Provide instruction for health maintenance and disease prevention.
    d. Identify community resources.

11. Maintain operational functions.
    a. Perform an inventory of supplies and equipment.
    b. Perform routine maintenance of administrative and clinical equipment.
    c. Utilize computer software to maintain office systems.
    d. Use methods of quality control.

CAAHEP Standards
Content Area I: Anatomy & Physiology
Psychomotor (Skills) I.P Anatomy & Physiology

1. Measure and record:
    a. blood pressure
    b. temperature
    c. pulse
    d. respirations
    e. height

    f. weight
    g. length (infant)
    h. head circumference (infant)
    i. pulse oximetry
2. Perform:
    a. electrocardiography
    b. venipuncture
    c. capillary puncture
    d. pulmonary function testing
3. Perform patient screening using established protocols
4. Verify the rules of medication administration:
    a. right patient
    b. right medication
    c. right dose
    d. right route
    e. right time
    f. right documentation
5. Select proper sites for administering parenteral medication
6. Administer oral medications
7. Administer parenteral (excluding IV) medications
8. Instruct and prepare a patient for a procedure or a treatment
9. Assist provider with a patient exam
10. Perform a quality control measure
11. Obtain specimens and perform:
    a. CLIA waived hematology test
    b. CLIA waived chemistry test
    c. CLIA waived urinalysis
    d. CLIA waived immunology test
    e. CLIA waived microbiology test
12. Produce up-to-date documentation of provider/professional level CPR
13. Perform first aid procedures for:
    a. bleeding
    b. diabetic coma or insulin shock
    c. fractures
    d. seizures
    e. shock
    f. syncope

Content Area II: Applied Mathematics

Psychomotor (Skills) II.P Applied Mathematics

14. Calculate proper dosages of medication for administration
15. Differentiate between normal and abnormal test results
16. Maintain lab test results using flow sheets
17. Document on a growth chart

Content Area III: Infection Control

Psychomotor (Skills) III.P Infection Control

18. Participate in bloodborne pathogen training
19. Select appropriate barrier/personal protective equipment (PPE)
20. Perform handwashing
21. Prepare items for autoclaving
22. Perform sterilization procedures
23. Prepare a sterile field

24. Perform within a sterile field
25. Perform wound care
26. Perform dressing change
27. Demonstrate proper disposal of bio-hazardous material
    a. sharps
    b. regulated wastes

Content Area IV: Nutrition

Psychomotor (Skills) IV.P Nutrition

28. Instruct a patient according to patient's special dietary needs

Content Area V: Concepts of Effective Communication

Psychomotor (Skills) V.P. Concepts of Effective Communication

29. Use feedback techniques to obtain patient information including:
    a. reflection
    b. restatement
    c. clarification
30. Respond to nonverbal communication
31. Use medical terminology correctly and pronounced accurately to communicate information to providers and patients
32. Coach patients regarding:
    a. office policies
    b. health maintenance
    c. disease prevention
    d. treatment plan
33. Coach patients appropriately considering:
    a. cultural diversity
    b. developmental life stage
    c. communication barriers
34. Demonstrate professional telephone techniques
35. Document telephone messages accurately
36. Compose professional correspondence utilizing electronic technology
37. Facilitate referrals to community resources in the role of a patient navigator
38. Report relevant information concisely and accurately

Content Area VI: Administrative Functions

Psychomotor (Skills) VI.P Psychomotor Functions

39. Manage appointment schedule using established priorities
40. Schedule a patient procedure
41. Create a patient's medical record
42. Organize a patient's medical record
43. File patient medical records
44. Utilize an EMR
45. Input patient data utilizing a practice management system
46. Perform routine maintenance of administrative or clinical equipment
47. Perform an inventory with documentation

Content Area VII: Basic Practice Finances

Psychomotor (Skills) VII.P Basic Practice Finances

48. Perform accounts receivable procedures to patient accounts including posting:
    a. charges
    b. payments
    c. adjustments

49. Prepare a bank deposit
50. Obtain accurate patient billing information
51. Inform a patient of financial obligations for services rendered

Content Area VIII: Third Party Reimbursement

Psychomotor (Skills) VIII.P Third Party Reimbursement

52. Interpret information on an insurance card
53. Verify eligibility for services including documentation
54. Obtain precertification or preauthorization including documentation
55. Complete an insurance claim form

Content Area IX: Procedural and Diagnostic Coding

Psychomotor (Skills) IX.P Procedural and Diagnostic Coding

56. Perform procedural coding
57. Perform diagnostic coding
58. Utilize medical necessity guidelines

Content Area X: Legal Implications

Psychomotor (Skills) X.P Legal Implications

59. Locate a state's legal scope of practice for medical assistants
60. Apply HIPAA rules in regard to:
    a. privacy
    b. release of information
61. Document patient care accurately in the medical record
62. Apply the Patient's Bill of Rights as it relates to:
    a. choice of treatment
    b. consent for treatment
    c. refusal of treatment
63. Perform compliance reporting based on public health statutes
64. Complete an incident report related to an error in patient care

Content Area XI: Ethical Considerations

Psychomotor (skills) XI.P Ethical Considerations

65. Demonstrate appropriate response(s) to ethical issues

Content Area XII: Protective Practices

Psychomotor (Skills) XII.P Protective Practices

66. Comply with:
    a. safety signs
    b. symbols
    c. labels
67. Demonstrate proper use of:
    a. eyewash equipment
    b. fire extinguishers
    c. sharps disposal containers
68. Use proper body mechanics

RECOMMENDED TOOLS AND EQUIPMENT

CAPITALIZED ITEMS

1. Arm, injectable training (1 per 2 students)
2. Chemistry analyzer, dryslide (1 per program)
3. Chemistry analyzer (wet) with reagent set (1 per program)
4. Centrifuge, table top (5 per program)
5. ECG machine with stand (2 per program)
6. Examination table (2 per program)
7. Eye wash station (1 per program)
8. Hematology analyzer, automated (1 per program)
9. Micro-Hematocrit centrifuge (1 per program)
10. Intramuscular training buttocks (1 per program)
11. Manikin, child size (2 per program)
12. Manikin, CPR adult (2 per program)
13. Manikin, CPR baby (2 per program)
14. Microscope, oil immersion (1 per student)
15. Ophthalmoscope/otoscope combination (1 per program)
16. Refractometer (5 per program)
17. Scale, physician (1 adult and 1 pediatric per program)
18. Semiautomated cell counter (1 per program)
19. Wheelchair, adult (1 per program)
20. Autoclave (1 per program)
21. Spirometer (1 per program)
22. Computer, color with accessories (1 per student)
23. Printer, laser (1 per 2 computers)
24. TV monitor, 25 in. color (1 per program)
25. LCD (1 per program)
26. Slide projector (1 per program)

NON-CAPITALIZED ITEMS

1. Cabinet, file (lateral) (1 per program)
2. Percussion hammer (1 per program)
3. Stethoscope, dual teaching (1 per program)
4. Glucometer (1 per program)
5. Lamp, gooseneck (1 per program)
6. Mayo tray and stand (1 per program)
7. Thermometer, digital (1 per program)
8. Thermometer, electronic (1 per program)
9. Thermometer, temporal (1 per program)
10. Thermometer, tympanic (1 per program)
11. Treatment cabinet (1 per program)
12. Bandages, triangular (10 per program)
13. Bandages, Ace-type (1 set of assorted widths and sizes)
14. Ishihara color blindness chart (1 per program)
15. Slide drying racks (1 per 2 students)
16. Snellen Eye Chart (1 per program)
17. Sphygmomanometer, wall mount (aneroid) (1 per program)
18. Sphygmomanometer, free standing (aneroid) (1 per 2 students)

19. Sphygmomanometer (electronic) (1 per program)
20. Stethoscope (1 per 2 students)

It is recommended that instructors have access to the following items:

1. Television (1 per room)
2. VCR/DVD (1 per room)
3. Video camera standard VHS (1 per lab)
4. ELMO presentation system (1 per program)
5. Projector, overhead (1 per room)
6. Table, mobile for portable overhead projector (desk type) (1 per program)
7. Electrical cart, steel, for AV equipment (1 per program)
8. Interactive whiteboard (1 per program)
9. IPads (1 per instructor)
10. Lumens "Ladybug" Document Camera

CURRICULUM DEFINITIONS AND TERMS

Course Name – A common name that will be used by all community colleges in reporting students

Course Abbreviation – A common abbreviation that will be used by all community and junior colleges in reporting students

Classification – Courses may be classified as the following:

- Career Certificate Required Course – A required course for all students completing a career certificate.
- Technical Certificate Required Course – A required course for all students completing a technical certificate.
- Technical Elective – Elective courses that are available for colleges to offer to students.

Description – A short narrative that includes the major purpose(s) of the course

Prerequisites – A listing of any courses that must be taken prior to or on enrollment in the course

Corequisites – A listing of courses that may be taken while enrolled in the course

Student Learning Outcomes – A listing of the student outcomes (major concepts and performances) that will enable students to demonstrate mastery of these competencies

The following guidelines were used in developing the program(s) in this document and should be considered in compiling and revising course syllabi and daily lesson plans at the local level:

- The content of the courses in this document reflects approximately 75% of the time allocated to each course.

The remaining 25% of each course should be developed at the local district level and may reflect the following:

- Additional competencies and objectives within the course related to topics not found in the state framework, including activities related to specific needs of industries in the community college district
- Activities that develop a higher level of mastery on the existing competencies and suggested objectives
- Activities and instruction related to new technologies and concepts that were not prevalent at the time the current framework was developed or revised
- Activities that include integration of academic and career–technical skills and course work, school-to-work transition activities, and articulation of secondary and postsecondary career–technical programs
- Individualized learning activities, including work-site learning activities, to better prepare individuals in the courses for their chosen occupational areas

Sequencing of the course within a program is left to the discretion of the local college. Naturally, foundation courses related to topics such as safety, tool and equipment usage, and other fundamental skills should be taught first. Other courses related to specific skill areas and related academics, however, may be sequenced to take advantage of seasonal and climatic conditions, resources located outside of the school, and other factors. Programs that offer an Associate of Applied Science Degree must include all of the required Career Certificate courses, Technical Certificate courses **AND** a minimum of 15 semester hours of General Education Core Courses. The courses in the General Education Core may be spaced out over the entire length of the program so that students complete some academic and Career Technical courses each semester. Each community college specifies the actual courses that are required to meet the General Education Core Requirements for the Associate of Applied Science Degree at their college.

In order to provide flexibility within the districts, individual courses within a framework may be customized by doing the following:

- Adding new student learning outcomes to complement the existing competencies and suggested objectives in the program framework.
- Revising or extending the student learning outcomes
- Adjusting the semester credit hours of a course to be up 1 hour or down 1 hour (after informing the Mississippi Community College Board [MCCB] of the change)