



TECHNICAL COLLEGE
OF THE LOWCOUNTRY

Technical College of the Lowcountry
Medical Assisting Program
SPRING, 2021

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COURSE SYLLABUS / Spring 2021
MED 113 BASIC MEDICAL LABORATORY TECHNIQUES

Course Number & Title: MED 113 Medical Laboratory Techniques
Course Length: 14 weeks
LEC. 2 LAB. 3 CR. 3
Section: Spring 2020
Class Meeting Days/Times: Wednesday/ Thursday/ (New River Lab only) and Online
Location: New River Campus Room:5-220 LAB

Prerequisites: AHS 102, BIO 112, MED 103, MED 104, MED 112
Corequisites: CPT 170/101, ENG 101, MED 109, MED 114

Required Texts

Medical Assisting: Administrative and Clinical Procedures with Anatomy and Physiology, 7th ed., Booth, Kathryn A., Whicker, Leesa G., Wyman, Terri D., McGraw-Hill Education, 2020.

Student Workbook for use with Medical Assisting, 7th ed. Booth, Kathryn A., Whicker, Leesa G., Wyman, Terri D., McGraw-Hill Education, 2020

All required online assignments and the SmartBook for this course are available in Connect. To access and purchase Connect, go to (*instructor provided URL*). Purchasing Connect online is the best value for your required course materials – typically half the price of the printed textbook bundle—and is usually cheaper than buying a rental or used book and a Connect access code separately.

In Connect, every question links directly to the SmartBook. This means that when you are struggling with a question you can go directly to the explanation in the SmartBook for help without carrying around a heavy textbook! You can access the SmartBook from any computer, any time. If you change your mind and decide to purchase a print text, you can buy a discounted looseleaf version of your book with the click on a button. Remember, Connect is worth part of your total grade in this course.

Required Equipment

Working Calculator (no phone calculators allowed)
Stethoscope
Blood pressure cuff



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Lab coat and Uniform (including proper footwear)

Gloves

Black and red pens

PPE Requirements

All students will be required to wear PPE as deemed appropriate and necessary per clinical facility for the duration of the clinical experience. Students will also be required to wear PPE while participating in any “on campus” activities such as labs/lectures. Failure to adhere to this mandate will render the student ineligible to participate in clinical rotations or “on campus” activities, and therefore unable to progress in the program.

Course Aims and Objectives

This course provides a study of specimen collection and techniques for related laboratory procedures routinely performed in medical offices and clinics, including hematology and procedures related to body fluids.

Specific Learning Objectives (*denotes crucial objective)

By the end of this course, students will:

- 46.1 Explain the medical assistant’s role in microbiology.*
- 46.2 Summarize how microorganisms cause disease.
- 46.3 Describe how microorganisms are classified and named.
- 46.4 Discuss the role of viruses in human disease.
- 46.5 Review the symptoms of HIV/AIDS and hepatitis.
- 46.6 Discuss the role of bacteria in human disease.
- 46.7 Discuss the role of protozoa in human disease.
- 46.8 Discuss the role of fungi in human disease.
- 46.9 Discuss the role of multicellular parasites in human disease.
- 46.10 Describe the process involved in diagnosing an infection.
- 46.11 Identify general guidelines for obtaining specimens.*
- 46.12 Carry out the procedure for transporting specimens to outside laboratories.*
- 46.13 Compare two techniques used in the direct examination of culture specimens.*
- 46.14 Carry out the procedure for preparing and examining stained specimens.
- 46.15 Carry out the procedure for culturing specimens in the medical office.*
- 46.16 Describe how to perform an antimicrobial sensitivity determination.
- 47.1 Discuss the role of the medical assistant in collecting, processing, and testing urine and stool samples.*
- 47.2 Carry out procedures for following guidelines when collecting urine specimens.*
- 47.3 Describe the process of urinalysis and its purpose.*
- 47.4 Carry out the proper procedure for collecting and processing a stool sample for fecal occult blood testing.*
- 48.1 Discuss the role of the medical assistant when collecting, processing, and testing blood samples.*
- 48.2 Carry out the procedure for collecting a blood specimen.*
- 48.3 Summarize ways to respond to patients’ needs when collecting blood.
- 48.4 Carry out the procedure for performing blood tests.*
- 49.1 Discuss the medical assistant’s role in electrocardiography and pulmonary function testing.



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- 49.2 Explain the basic principles of electrocardiography and how it relates to the conduction system of the heart.
- 49.3 Identify the components of an electrocardiograph and what each does.
- 49.4 Carry out the steps necessary to obtain an ECG.*
- 49.5 Summarize exercise electrocardiography and echocardiography.
- 49.6 Explain the procedure of Holter monitoring.*
- 49.7 Carry out the various types of pulmonary function tests.*
- 49.8 Describe the procedure for performing pulse oximetry testing.*
- 50.1 Explain what X-rays are and how they are used for diagnostic and therapeutic purposes.*
- 50.2 Compare invasive and noninvasive diagnostic procedures.
- 50.3 Carry out the medical assistant's role in X-ray and diagnostic radiology testing.*
- 50.4 Discuss common diagnostic imaging procedures.*
- 50.5 Describe different types of radiation therapy and how they are used.
- 50.6 Explain the risks and safety precautions associated with radiology work.
- 50.7 Relate the advances in medical imaging to EHR.

Professional Objectives

1. Demonstrate self-discipline and a positive attitude by being on time, being prepared for class, and submitting all assignments on time and in a neat and professional manner.
2. Be respectful, and not disruptive, to your peers and instructor.
3. Demonstrate effective oral and written communication skills by participating in class discussions, projects, problem solving, and by following verbal instructions, etc.
4. Demonstrate accuracy by following directions explicitly when completing assignments.
5. Adhere to HIPAA regulations by maintaining patient/student confidentiality.

Grading Procedures

At the end of each course, each student's final grade is determined as follows:

Unit Assignments and Quizzes(5):	25%
Professionalism (see Grading Methodology)	5%
Exams(4) and Projects	30%
Final	5%
Competencies	35%
Total	100%

Grading Policy

Grading scale
93% - 100% A
85% - 92% B
78% - 84% C
70% - 77% D
Below 70% F



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W withdraw
WP withdraw with passing grade
WF withdraw with failing grade
I Incomplete



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Grading Methodology

1. Honorlock Online Proctoring and Technology Requirements

TCL uses an online test proctoring service called Honorlock to monitor some online tests as an alternative to in-person proctoring. Your instructor may elect to have some of your tests proctored using Honorlock. If so, you will need to make sure that you have access to the necessary equipment in order to take your online-proctored tests:

- A computer with access to a high-speed Internet connection
- A webcam and microphone. A functioning webcam and microphone are required to complete proctored online tests.
- Microsoft Office. Microsoft Office can be downloaded free by accessing the Office 365 link in you TCL email account.
- The ability to install the Honorlock extension on Google Chrome

2. All assignments are due on the date scheduled and no late assignments will be accepted. A grade of "0" will be given if projects or assignments are not turned in on time. If you are not going to attend class then you must turn the assignment in to the instructor prior to date due or scan and email it by the day it is due.
3. A grade of '0' will be recorded for missed tests except under extenuating circumstances. In order for a makeup test to be considered, a written excuse must be presented to the instructor (i.e. doctor, ER physician, jury duty, accident report).
4. If a lecture by a guest speaker is missed the student will be required to write a comprehensive term paper on the information covered. The term paper will be due within 1 week of the time missed.
5. If a student is absent on an assigned presentation date, a zero will automatically be given for the presentation grade except under extenuating circumstances which must be approved by the instructor.
6. A minimum score of 80% must be met on all psychomotor and affective domain objectives (skill). Three (3) attempts will be allowed per skill / objective. The student must successfully complete the 3rd objective attempt before the end of the semester.
7. If the objective is to be repeated, the highest possible recorded grade will be an 80%. If the objective is not passed on the third attempt, the grade received is the grade recorded.
8. Repeat attempts of any psychomotor and affective objectives (skills) will be scheduled at the instructor's discretion. The final grade must be 75.000 or more in order to pass the course and progress in the program.
9. Grades are posted on Blackboard within one week of administration of tests and examinations.
10. Students enrolled in classes taught online or have an online component are expected to attend on campus activities, such as testing, labs, and/or presentations as determined by program faculty.
11. Professionalism grades are based on adherence to professional objectives, dress code policies, and academic integrity. Students who show academic or social misconduct based on behaviors outlined in the Professional Objectives and Academic Misconduct sections of this syllabus or have an infraction of Dress Code and Professionalism section outlined in the program handbook can lose up to 5 points per



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incident of a total of 100 class per semester. Professionalism is worth 5% of the total class grade for the semester.

****All students are required to remove ALL watches of any kind during exams and quizzes and place them in the front of the classroom with personal belongings and electronics.***

****During on campus examinations, only answers transferred and completed on Scantron sheets will be graded electronically to count towards the test score.***

Hazardous Weather

In case weather conditions are so severe that operation of the College may clearly pose a hardship on students and staff traveling to the College, notification of closing will be made through the following radio and television stations: WYKZ 98.7, WGCO 98.3, WGZO 103.1, WFXH 106.1, WWVW 106.9, WLOW 107.9, WGZR 104.9, WFXH 1130 AM, WLVH 101.1, WSOK 1230 AM, WAEV 97.3, WTOC TV, WTGS TV, WJWJ TV, and WSAV TV. Students, faculty and staff are highly encouraged to opt in to the Emergency Text Message Alert System.

With TCL's Text Alerts you can receive immediate notification of emergency events via text messaging on your cell phone. All students are strongly encouraged to register their cell phones with this service. Signing up is easy, just fill out the simple form on the TCL website (<https://tcl.regroup.com/signup>).

Academic Misconduct

There is no tolerance at TCL for academic dishonesty and misconduct. The College expects all students to conduct themselves with dignity and to maintain high standards of responsible citizenship.

It is the student's responsibility to address any questions regarding what might constitute academic misconduct to the course instructor for further clarification.

The College adheres to the Student Code for the South Carolina Technical College System. Copies of the Student Code and Grievance Procedure are provided in the TCL Student Handbooks, the Division Office, and the Learning Resources Center.

Health care professionals hold the public trust. Academic misconduct by health science students calls that trust into question and academic integrity is expected.

Academic misconduct may result in withdrawal for related health science courses. Also, depending on the severity of the student's academic misconduct, the student will not only be withdrawn from the program, but will not be allowed for re-entry and/or reapplication to **all** Health Science programs.

It is a fundamental requirement that any work presented by students will be their own. Examples of academic misconduct include (but are not limited to):

1. Copying the work of another student or allowing another student to copy working papers, printed output, electronic files, quizzes, tests, or assignments.
2. Completing the work of another student or allowing another student to complete or contribute to working papers, printed output, electronic files, quizzes, tests, or assignments.



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3. Viewing another student's computer screen during a quiz or examinations.
4. Talking or communicating with another student during a test.
5. Violating procedures prescribed by the instructor to protect the integrity of a quiz, test, or assignment.
6. Plagiarism in any form, including, but not limited to: copying/pasting from a website, textbook, previously submitted student work, or any instructor-prepared class material; obvious violation of any copyright-protected materials.
7. Knowingly aiding a person involved in academic misconduct.
8. Providing false information to staff and/or faculty.
9. Entering an office unaccompanied by faculty or staff.
10. ***Misuse of any electronic devices including "cheating watches". All students are required to remove ALL electronic watches of any kind during exams & quizzes and should be placed with their personal belongings in the back of the classroom.***

****During paper examinations, only answers transferred and completed on Scantron sheets will be graded electronically to count towards the test score.***

Classroom Computer Policy

Only assigned computer activity will be conducted during class time. If a student is observed accessing a computer for any reason other than assigned activities, the instructor can administer a pop quiz to the entire class. Exceptions will be made on an individual basis and must be discussed with the instructor prior to the start of class.

Cell Phone and Electronic Devices Policy

All cell phones and electronic devices will be turned off and stored before class starts. If a student's cell phone rings or if a student is observed texting or engaging in any other cell phone activity during class time, the instructor can deduct attendance time from the student.

Exceptions will be made on an individual basis and must be discussed with the instructor prior to the start of class.

Attendance

1. Students will be expected to accept their responsibility for successful completion of course objectives and to demonstrate sincere interest in professional development by attendance at every scheduled class and lab.

When a student is unable to attend class due to illness, death in the family, etc., that student will be responsible for notifying the instructor (**not sending a message with another student**) prior to the class or lab from which the student will be absent.

Any student absent from class is responsible for:



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- a. Obtaining all handouts
 - b. Acquiring material discussed in the missed class by contacting a classmate before class to assist with notes taken, etc.
 - c. Assignments
 - d. Understanding that pop quizzes cannot be made up.
2. A total of 2 absences from lecture, lab or a combination of these will be permitted without penalty. (See tardy and early departure policy below.) Each absence, tardy or early departure thereafter from either lecture or lab will result in the deduction of 2 points from the student's final grade.
 3. Any student who is late for class should enter quietly as to not disrupt activities already in progress or other students in the learning process. The program faculty expects that students will be on time for each and every class and lab. A student will be counted tardy if they are 1 to 10 minutes late for class (according to clock in room where exam is being held). Tardiness of more than 10 minutes is considered an absence of one class period. Faculty expects students to remain in class for the entire period. An early departure is defined as leaving class before class is dismissed by the instructor. Two instances of tardy, or two of early departure or one tardy and one early departure will equal one absence.
 4. If a student never attends or is absent for more than 10% of a class the student will be withdrawn per the attendance policy in the student handbook. Failure to attend class and/or withdrawal from class can negatively impact your financial assistance.

***Attendance in an online course is defined by; at least once weekly course access and by completion of assignments as required by the instructor. Each student will be expected to access the web class at least once a week and complete weekly assignments on time. Additional access is encouraged and may be necessary for successful completion of classes.**

Withdrawals and Incompletes

- **Reinstatement into programs require the signature of the Division Dean**

In this course, the instructor *will* withdraw a student during the course of the class for non-attendance. It is the responsibility of the student to email the instructor that you will not be attending and withdraw from the class if that becomes necessary. Failure to attend class and/or withdrawal from class may impact your financial assistance.

While withdrawing from a course is sometimes necessary, it is advisable to discuss this with the instructor before withdrawing. Additionally before withdrawing, consider whether this course is a prerequisite for another course; whether the course will be offered again in the future; whether withdrawing will delay plans to transfer graduation; or whether withdrawing will affect eligibility for honors designation, health insurance benefits or other financial arrangements. Students are strongly encouraged to consult with Financial Aid prior to withdrawing from any class, particularly if the student is currently on a warning or probation status.



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When a student determines that he/she will be unable to complete courses in which he/she is currently enrolled, it is the student's responsibility to initiate procedures leading to a formal withdrawal ("W") in order to avoid a failing ("F") grade.

In the event it becomes necessary for a student to withdraw from the course ***OR if a student stops attending class, it is the student's responsibility to initiate and complete the necessary paperwork.*** Withdrawing from class may have consequences associated with financial aid and time to completion. Students are strongly encouraged to consult with Financial Aid prior to withdrawing from any class, particularly if the student is currently on a warning or probation status.

Progression Policy

Progression in the Medical Assisting program is dependent on satisfying course prerequisites, co-requisites and maintaining a grade of "C" or better for all courses in the curriculum. No course in the Medical Assisting curriculum may be taken more than twice.

Student Academic Integrity Policy

Students are expected to maintain absolute integrity and high standards of individual honor in their academic work. Students are expected to do their own work in this course. It is a violation of policy for any student to share work with another. This includes but is not limited to, homework, papers, other written reports, tests and exams. In addition, conduct that violates the standards of academic honesty and integrity and is subject to disciplinary action may include but is not limited to cheating, fabrication and falsification, plagiarism, abuse of academic materials, installation of a computer virus, and complicity in academic dishonesty.

Accommodations for Students with Disabilities

Refer to school policy and Health Division handbook for further clarification. Students who have a documented disability or who may think that they may have learning problem must contact the proper school administration personnel each semester and provide proper documentation. Instructors will provide the necessary accommodations upon the advice of the proper school administration personnel.

Netiquette

If you communicate with your classmates or instructor in writing through the discussion forum, e-mail, message link, or chat sessions. "Online manners" are generally known as "netiquette." As a general rule, you should adhere to the same classroom conduct that you would "off-line" in a face-to-face course.

Some examples of proper netiquette are:

- Avoid writing messages in all capital letters. THIS IS GENERALLY UNDERSTOOD AS SHOUTING.
- Be careful what you put in writing. Even if you are writing a message to one person, assume that anyone could read it. Though you may send a message to a single person, it is very easy to forward your message to many other people.
- Grammar and spelling matter. Online courses demand the same standard of academic communication and use of grammar as face-to-face courses.



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- Never use profanity in any area of an online course. The transcripts of online course message boards, email, discussion forums, and chat sessions may be saved by the instructor and/or school administration.
- When responding to e-mail messages, only use "Reply to All" when you really intend to reply to all.
- Avoid unkindly public criticism of others.
- Use sarcasm cautiously. In the absence of nonverbal cues such as facial expressions and voice inflections, the context for your sarcasm may be lost, and your message may thus be misinterpreted.

Course Coordinator: Jaclyn Valenti, RMA, AS, BA, MEd.
OFFICE LOCATION: Building 4 Room 111
PHONE NUMBER: (843) 525-8228
OFFICE HOURS: As posted, by appointment
Email: JVALENTI@tcl.edu



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PROFESSIONALISM GRADE

I, _____, understand that in [Name or Number of Course], a professionalism grade will be assigned to me. I will start out with 100 points. If I do not meet daily professionalism objectives or breach any of the “Dress Code and Professionalism” policies as stated in the Medical Assisting Program Handbook, a minimum of 5 points can be deducted per day of occurrence.

Student Signature _____ Date _____



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SUGGESTED 16-WEEK ADMINISTRATIVE COURSE OUTLINE

WEEK	TOPIC(S)*	CHAPTER(S)	SUGGESTED COMPETENCIES**
1,2	I.C.9. Analyze pathology for each body system including: a. diagnostic measures b. treatment modalities III.C.1. List major types of infectious agents	46	Procedure 46-1 Obtaining a Throat Culture Specimen Procedure 46-2 Performing a Quick Strep A Test on a Throat Swab Specimen Procedure 46-3 Preparing Microbiologic Specimens for Transport to an Outside Laboratory
3-5	Urinalysis including pregnancy testing Fecal Occult testing	47	Procedure 47-1 Collecting a Clean-Catch Midstream Urine Specimen Procedure 47-2 Collecting a 24-Hour Urine Specimen Procedure 47-3 Establishing Chain of Custody for a Urine Specimen Procedure 47-4 Measuring Specific Gravity with a Refractometer Procedure 47-5 Performing a Reagent Strip Test Procedure 47-6 Pregnancy Testing Using the EIA Method



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			Procedure 47-7 Processing a Urine Specimen for Microscopic Examination of Sediment Procedure 47-8 Fecal Occult Blood Testing Using the Guaiac Testing Method
6-10	Obtaining blood specimens using various methods Analysis of blood test results Mononucleosis Testing	48	Procedure 48-1 Quality Control Procedures for Blood Specimen Collection Procedure 48-2 Performing Venipuncture Using an Evacuation System Procedure 48-3 Performing Capillary Puncture Procedure 48-4 Preparing a Blood Smear Slide Procedure 48-5 Measuring Hematocrit Percentage After Centrifuge Procedure 48-6 Measuring Blood Glucose Using a Handheld Glucometer Procedure 48-7 Rapid Infectious Mononucleosis Test



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11-14	I.C.9. Analyze pathology for each body system including: a. diagnostic measures b. treatment modalities	49	Procedure 49-1 Obtaining an ECG Procedure 49-2 Holter Monitoring Procedure 49-3 Measuring Forced Vital Capacity Using Spirometry Procedure 49-4 Obtaining a Peak Expiratory Flow Rate Procedure 49-5 Obtaining a Pulse Oximetry Reading
15	I.C.9. Analyze pathology for each body system including: a. diagnostic measures b. treatment modalities	50	Procedure 50-1 Assisting with an X-ray Examination Procedure 50-2 Documentation and Filing Techniques for X-rays
16.	Course Review	Final Exam	All required competencies must be completed

* Utilize correlated content activities and questions including Videos, Animations, ACTIVSim, LearnSmart, and EHR SpringCharts.

** Competencies are found at the end of the chapter in the textbook and check-off sheets are found in the workbook.