



TENTATIVE—SUBJECT TO CHANGE

**CLBT 1030 Urinalysis and Body Fluids
COURSE SYLLABUS
Spring Semester 2021 (202114)**

COURSE INFORMATION

Credit Hours/Minutes: 2 credit hours/3000 minutes

Campus/Class Location: Vidalia Campus, Gillis Building, Room 739

Class Meets: MTW, 11:10 AM – 12:30 PM

Course Reference Number (CRN): 40237

INSTRUCTOR CONTACT INFORMATION

Instructor Name: Rebecca James, B.S., MLS(ASCP)^{CM}

Email Address: rjames@southeasterntech.edu

Preferred method of contact: Email, GroupMe, or Microsoft Teams

Campus/Office Location: Vidalia campus, Gillis Building, Office 716

Office Hours: 7:30-8:00 am; 4:00-5:00 pm

Phone: 912-538-3183

Fax Number: 912-538-3106

Tutoring Hours (if applicable): By appointment

SOUTHEASTERN TECHNICAL COLLEGE'S (STC) CATALOG AND HANDBOOK

Students are responsible for all policies and procedures and all other information included in Southeastern Technical College's [Catalog and Handbook](http://www.southeasterntech.edu/student-affairs/catalog-handbook.php) (<http://www.southeasterntech.edu/student-affairs/catalog-handbook.php>).

REQUIRED TEXT

Fundamentals of Urine and Body Fluid Analysis, Nancy A. Brunzel, 4th edition. ISBN: 978-0-323-37479-8

REQUIRED SUPPLIES & SOFTWARE

Pen, pencil, paper, highlighter, Sharpie marker, notebook, computer and internet access, personal lab coat, closed toe shoes, and any other supplies deemed necessary by instructor.

Students should not share login credentials with others and should change passwords periodically to maintain security.

COURSE DESCRIPTION

Provides theory and techniques required to conduct tests on urine and various body fluids. Theory and tests are related to disease states and diagnosis. Topics include: fundamental theory of urinalysis; basic urinalysis tests; correlation of urinalysis to disease states; related lab math; body fluid tests; special urinalysis and

related testing; and safety and quality control.

MAJOR COURSE COMPETENCIES

1. Fundamental theory of Urinalysis
2. Basic Urinalysis tests
3. Correlation of urinalysis to disease states
4. Related Lab Math
5. Body Fluids Tests
6. Special Urinalysis and Related Testing
7. Safety and Quality Control

PREREQUISITE(S)

BIOL 2113, BIOL 2113L, CLBT 1010

COURSE OUTLINE

Fundamental theory of urinalysis

| Order | Description | Learning Domain | Level of Learning |
|-------|--|-----------------|-------------------|
| 1 | Discuss kidney physiology in the formation of urine. | Cognitive | Comprehension |

Basic urinalysis tests

| Order | Description | Learning Domain | Level of Learning |
|-------|---|-----------------|-------------------|
| 1 | Describe the anatomy and physiology of the urinary system. | Cognitive | Comprehension |
| 2 | Describe various methods and applications of urine collection. | Cognitive | Comprehension |
| 3 | Perform clarity, color, and specific gravity. | Psychomotor | Guided Response |
| 4 | Perform routine chemical urinalysis including pH, protein, glucose, ketones, bilirubin, blood, nitrite, urobilinogen, and leukocyte esterase. | Psychomotor | Guided Response |
| 5 | Explain clinical significance of routine biochemical tests. | Cognitive | Comprehension |
| 6 | Discuss principles of routine biochemical tests. | Cognitive | Comprehension |
| 7 | Give normal values for routine biochemical tests. | Cognitive | Application |
| 8 | Perform confirmatory tests as indicated. | Psychomotor | Guided Response |
| 9 | Explain principles of confirmatory tests. | Cognitive | Comprehension |
| 10 | Discuss clinical significance of confirmatory tests. | Cognitive | Comprehension |
| 11 | Perform microscopic urinalysis including significant element identification in urinary sediment. | Cognitive | Synthesis |
| 12 | Explain the significance of the microscopic exam. | Cognitive | Comprehension |
| 13 | Give normal values of the microscopic urinalysis exam. | Cognitive | Application |

Correlation of urinalysis to disease states

| Order | Description | Learning Domain | Level of Learning |
|-------|---|-----------------|-------------------|
| 1 | Correlate selected normal macroscopic and microscopic characteristics of urine examination including crystals, microorganisms, and artifacts. | Cognitive | Analysis |
| 2 | Correlate selected pathological macroscopic and microscopic characteristics of urine examination including crystals, microorganisms, and artifacts. | Cognitive | Analysis |

Related lab math

| Order | Description | Learning Domain | Level of Learning |
|-------|--|-----------------|-------------------|
| 1 | Perform related math calculations for metric system, correction of specific gravity, calculation of dilutions, calculation of body fluid cell counts, calculation of % motile and % abnormal morphology in semen analysis. | Cognitive | Synthesis |

Body fluids tests

| Order | Description | Learning Domain | Level of Learning |
|-------|---|-----------------|-------------------|
| 1 | Perform routine analysis tests on related body fluids. | Psychomotor | Guided Response |
| 2 | Determine the clinical significance of various body fluid analyses including gastrics, seminal fluids, CSF, feces, transudates, and exudates. | Cognitive | Application |

Special urinalysis and related testing

| Order | Description | Learning Domain | Level of Learning |
|-------|---|-----------------|-------------------|
| 1 | Explain the clinical significance of osmolality, renal function tests, quantitative tests, aminoaciduria, porphyrins, melanin, indican, haptoglobin, hemosiderin, myoglobin, and Bence-Jones protein. | Cognitive | Comprehension |

Safety and quality control

| Order | Description | Learning Domain | Level of Learning |
|-------|---|-----------------|-------------------|
| 1 | Set up and perform selected quality control and safety procedures for urinalysis. | Psychomotor | Guided Response |
| 2 | Discuss possible sources of error in biochemical testing. | Cognitive | Comprehension |

GENERAL EDUCATION CORE COMPETENCIES

Southeastern Technical College has identified the following general education core competencies that graduates will attain:

1. The ability to utilize standard written English.
2. The ability to solve practical mathematical problems.
3. The ability to read, analyze, and interpret information.

STUDENT REQUIREMENTS

- Students are expected to complete all exams and daily assignments. Students are required to read the chapter prior to class. A 10 point penalty will be assessed for all late assignments. Tests are timed, one hour per test.

- Chapter test average (no lab grades) of 70% or above must be obtained in order to take the comprehensive final exam. (Grade of 69.9 will **NOT** be rounded up.) An average grade of 70% between unit exams, labs, and the final must be obtained in order to advance in the program. If the student fails to meet the unit exam/final exam expectations, the student will receive a W for academic deficiency.
- Students are required to pass all laboratory skills in **THREE** attempts. A student may not progress until skills are mastered.
- If a student shows up late for class on an exam date or is not prepared to start the test on time, the student may not be allowed to take the exam once the faculty has shut the door. The student will have to make up the test and this will be counted as their opportunity for a make-up exam. Students may be provided time to look at their exam score in class and a general discussion may occur; however, due to time constraints, students are encouraged to schedule an appointment with their instructor to view and get further explanation on the missed concepts.
- No talking is allowed once the exam begins. Once the exam begins, students will not be allowed to exit the classroom until the exam is completed and/or turned into the instructor. Smart watches, cell phones, or any other electronic devices will not allowed during exams. Students found with electronic/communication devices during the exam will be considered cheating; which will result in a zero for the exam.
- No assignment opportunities will be given for extra credit. No scores will be rounded. This rule applies to every grade issued during the semester. All final averages will be recorded as is (ie a 69.9 is a 69.9). No grades will be dropped.
- Points **WILL BE** deducted for spelling due to medical liability in the work place. Laboratory results are legal documents.
- Students are required to wear name badge. Students must wear closed toe shoes, gloves, and lab coat while in the lab.
- Students are responsible for policies, procedures, and all requirements (drug screen, background check, immunizations, Fit test, CPR...) included in the STC E-Catalog/CLT handbook.

COVID-19 MASK REQUIREMENT

Masks or face coverings must be worn at all times while on the campus of Southeastern Technical College. This measure is being implemented to reduce COVID-19 related health risks for everyone engaged in the educational process. Masks or face coverings must be worn over the nose and mouth, in accordance with the Centers for Disease Control and Prevention (CDC). A student's refusal to wear a mask or face covering will be considered a classroom disruption and the student may be asked to leave campus and/or receive further discipline.

COVID-19 SIGNS AND SYMPTOMS

We encourage individuals to monitor for the signs and symptoms of COVID-19 prior to coming on campus.

If you have experienced the symptoms listed below or have a body temperature 100.4°F or higher, we encourage you to self-quarantine at home and contact a primary care physician's office, local urgent care facility, or health department for further direction. Please notify your instructor(s) by email and do not come

on campus for any reason.

| COVID-19 Key Symptoms |
|--|
| Fever or felt feverish |
| Cough: new or worsening, not attributed to another health condition |
| Shortness of breath, not attributed to another health condition |
| New loss of taste or smell |
| Chills; Repeated shaking with chills |
| Sore throat, not attributed to another health condition |
| Muscle pain, not attributed to another health condition or exercise |
| Headache, not attributed to another health condition |
| Diarrhea (unless due to known cause) |
| In the past 14 days, if you: |
| Have had close contact with or are caring for an individual diagnosed with COVID-19 at home (not in healthcare setting), please do not come on campus and contact your instructor (s). |

COVID-19 SELF-REPORTING REQUIREMENT

Students, who test positive for COVID-19 or who have been exposed to a COVID-19 positive person, are required to self-report using the [COVID 19 Health Reporting Form https://bit.ly/2Xq4g0f](https://bit.ly/2Xq4g0f). Report all positive cases of COVID-19 to your instructor and [Stephannie Waters](mailto:swaters@southeasterntech.edu), Exposure Control Coordinator, swaters@southeasterntech.edu, 912-538-3195.

ATTENDANCE GUIDELINES

Requirements for instructional hours within Health Science programs reflect the rules of respective licensure boards and/or accrediting agencies. Therefore, these programs have stringent attendance policies. Each program's attendance policy is published in the program's handbook and/or syllabus which specify the number of allowable absences.

Class attendance is a very important aspect of a student's success. Being absent from class prevents students from receiving the full benefit of a course and interrupts the learning process. Southeastern Technical College considers both tardiness and leaving early as types of absenteeism. Responsibility for class attendance rests with the student. Regular and punctual attendance at all scheduled classes is required for student success. Students will be expected to complete all work required by the instructor as described in the individual course syllabus.

Instructors have the right to give unannounced quizzes/assignments. Students who miss an unannounced quiz or assignment will receive a grade of 0. Students who stop attending class, but do not formally withdraw, may receive a grade of "F" (Failing 0-59) and face financial aid repercussions in upcoming semesters.

Instructors are responsible for determining whether missed work may be made up and the content and dates for makeup work is at the discretion of the instructor.

Attendance is counted from the first scheduled class meeting of each semester. To receive credit for a course a student must attend at least 90% of the scheduled instructional time. All work missed due to tardiness or absences must be made up at the convenience of the instructor. Any student attending less than the required scheduled instructional time (90%) may be dropped from the course as stated below in the Withdrawal

Procedure.

Tardy means arriving after the scheduled time for instruction to begin. Early departure means leaving before the end of the scheduled time. Three (3) tardies or early departures equal one (1) absence for the course.

For this class, which meets 3 days a week for 15 weeks, the maximum number of days a student may miss is 5 days during the semester.

Procedures of the program may be reviewed on an individual basis related to extenuating circumstances related to COVID.

STUDENTS WITH DISABILITIES

Students with disabilities who believe that they may need accommodations in this class based on the impact of a disability are encouraged to contact the appropriate campus coordinator to request services.

Swainsboro Campus: [Macy Gay \(mgay@southeasterntech.edu\)](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

SPECIFIC ABSENCES

Provisions for Instructional Time missed because of documented absences due to jury duty, military duty, court duty, or required job training will be made at the discretion of the instructor.

PREGNANCY

Southeastern Technical College does not discriminate on the basis of pregnancy. However, we can offer accommodations to students who are pregnant that need special consideration to successfully complete the course. If you think you will need accommodations due to pregnancy, please make arrangements with the appropriate campus coordinator.

Swainsboro Campus: [Macy Gay \(mgay@southeasterntech.edu\)](mailto:mgay@southeasterntech.edu), 478-289-2274, Building 1, Room 1210.

Vidalia Campus: [Helen Thomas \(hthomas@southeasterntech.edu\)](mailto:hthomas@southeasterntech.edu), 912-538-3126, Building A, Room 165.

It is strongly encouraged that requests for consideration be made **PRIOR** to delivery and early enough in the pregnancy to ensure that all the required documentation is secured before the absence occurs. Requests made after delivery MAY NOT be accommodated. The coordinator will contact your instructor to discuss accommodations when all required documentation has been received. The instructor will then discuss a plan with you to make up missed assignments.

WITHDRAWAL PROCEDURE

Students wishing to officially withdraw from a course(s) or all courses after the drop/add period and prior to the 65% point of the term in which student is enrolled (date will be posted on the school calendar) must speak with a Career Counselor in Student Affairs and complete a Student Withdrawal Form. A grade of "W" (Withdrawn) is assigned for the course(s) when the student completes the withdrawal form.

Students who are dropped from courses due to attendance after drop/add until the 65% point of the semester will receive a "W" for the course.

Important – Student-initiated withdrawals are not allowed after the 65% point. Only instructors can drop students after the 65% point for violating the attendance procedure of the course. Students who are dropped from courses due to attendance after the 65% point will receive either a "WP" (Withdrawn Passing) or "WF" (Withdrawn Failing) for the semester.

Informing your instructor that you will not return to his/her course, does not satisfy the approved withdrawal procedure outlined above.

There is no refund for partial reduction of hours. Withdrawals may affect students' eligibility for financial aid for the current semester and in the future, so a student must also speak with a representative of the Financial Aid Office to determine any financial penalties that may be assessed due to the withdrawal. A grade of "W" will count in attempted hour calculations for the purpose of Financial Aid.

Remember - Informing your instructor that you will not return to his/her course does not satisfy the approved withdrawal procedure outlined above. You will receive zero's for all assignments until appropriate steps are taken.

MAKEUP GUIDELINES (TESTS, QUIZZES, HOMEWORK, PROJECTS, ETC.)

A student will only be allowed to make-up one unit exam or lab, which will be given at the discretion of the instructor. A physician's excuse/appropriate documentation may be required for the student to be eligible to take a make-up exam. A grade of "0" will be given to all subsequent exams missed, including the final. If a student misses the final exam and has already used their ONE time make-up, the student will NOT be allowed to make-up the final exam; which will result in a zero for the final exam.

Extenuating circumstances are determined at the instructor's discretion. Failure to follow all procedures will result in a grade of zero. Procedures of the program may be reviewed on an individual basis related to extenuating circumstances related to COVID.

ACADEMIC DISHONESTY POLICY

The Southeastern Technical College Academic Dishonesty Policy states that all forms of academic dishonesty, including but not limited to cheating on tests, plagiarism, collusion, and falsification of information, will call for discipline. The policy can also be found in the Southeastern Technical College Catalog and Handbook.

PROCEDURE FOR ACADEMIC MISCONDUCT

The procedure for dealing with academic misconduct and dishonesty is as follows:

1. First Offense

Student will be assigned a grade of "0" for the test or assignment. Instructor keeps a record in course/program files and notes as first offense. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus. The Registrar will input the incident into Banner for tracking purposes.

2. Second Offense

Student is given a grade of "WF" (Withdrawn Failing) for the course in which offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of second offense. The Registrar will input the incident into Banner for tracking purposes.

3. Third Offense

Student is given a grade of "WF" for the course in which the offense occurs. The instructor will notify the student's program advisor, academic dean, and the Registrar at the student's home campus indicating a "WF" has been issued as a result of third offense. The Vice President for Student Affairs, or designee, will notify the student of suspension from college for a specified period of time. The Registrar will input the incident into Banner for tracking purposes.

STATEMENT OF NON-DISCRIMINATION

The Technical College System of Georgia (TCSG) and its constituent Technical Colleges do not discriminate on the basis of race, color, creed, national or ethnic origin, gender, religion, disability, age, political affiliation or

belief, genetic information, disabled veteran, veteran of the Vietnam Era, spouse of military member, or citizenship status (except in those special circumstances permitted or mandated by law). This nondiscrimination policy encompasses the operation of all technical college-administered programs, federally financed programs, educational programs and activities involving admissions, scholarships and loans, student life, and athletics. It also applies to the recruitment and employment of personnel and contracting for goods and services.

All work and campus environments shall be free from unlawful forms of discrimination, harassment and retaliation as outlined under Title IX of the Educational Amendments of 1972, Title VI and Title VII of the Civil Rights Act of 1964, as amended, the Age Discrimination in Employment Act of 1967, as amended, Executive Order 11246, as amended, the Vietnam Era Veterans Readjustment Act of 1974, as amended, Section 504 of the Rehabilitation Act of 1973, as amended, the Americans With Disabilities Act of 1990, as amended, the Equal Pay Act, Lilly Ledbetter Fair Pay Act of 2009, the Georgia Fair Employment Act of 1978, as amended, the Immigration Reform and Control Act of 1986, the Genetic Information Nondiscrimination Act of 2008, the Workforce Investment Act of 1998 and other related mandates under TCSG Policy, federal or state statutes.

The Technical College System and Technical Colleges shall promote the realization of equal opportunity through a positive continuing program of specific practices designed to ensure the full realization of equal opportunity.

The following individuals have been designated to handle inquiries regarding the nondiscrimination policies:

| | |
|---|--|
| <p>American With Disabilities Act (ADA)/Section 504 - Equity- Title IX (Students) – Office of Civil Rights (OCR) Compliance Officer</p> | <p>Title VI - Title IX (Employees) – Equal Employment Opportunity Commission (EEOC) Officer</p> |
| <p>Helen Thomas, Special Needs Specialist Vidalia Campus 3001 East 1st Street, Vidalia Office 165 Phone: 912-538-3126 Email: Helen Thomas hthomas@southeasterntech.edu</p> | <p>Lanie Jonas, Director of Human Resources Vidalia Campus 3001 East 1st Street, Vidalia Office 138B Phone: 912-538-3230 Email: Lanie Jonas ljonas@southeasterntech.edu</p> |

ACCESSIBILITY STATEMENT

Southeastern Technical College is committed to making course content accessible to individuals to comply with the requirements of Section 508 of the Rehabilitation Act of Americans with Disabilities Act (ADA). If you find a problem that prevents access, please contact the course instructor.

GRIEVANCE PROCEDURES

Grievance procedures can be found in the Catalog and Handbook located on Southeastern Technical College’s website.

ACCESS TO TECHNOLOGY

Students can now access Blackboard, Remote Lab Access, Student Email, Library Databases (Galileo), and BannerWeb via the mySTC portal or by clicking the Current Students link on the [Southeastern Technical College \(STC\) Website \(www.southeasterntech.edu\)](http://www.southeasterntech.edu).

TECHNICAL COLLEGE SYSTEM OF GEORGIA (TCSG) GUARANTEE/WARRANTY STATEMENT

The Technical College System of Georgia guarantees employers that graduates of State Technical Colleges shall possess skills and knowledge as prescribed by State Curriculum Standards. Should any graduate employee

within two years of graduation be deemed lacking in said skills, that student shall be retrained in any State Technical College at no charge for instructional costs to either the student or the employer.

GRADING POLICY

| Assessment/Assignment | Percentage |
|------------------------------|-------------------|
| Chapter tests | 60% |
| Labs | 5% |
| Laboratory Final Exam | 10% |
| Comprehensive Final Exam | 25% |

GRADING SCALE

| Letter Grade | Range |
|---------------------|--------------|
| A | 90-100 |
| B | 80-89 |
| C | 70-79 |
| D | 60-69 |
| F | 0-59 |

CLBT 1030 Urinalysis and Body Fluids Spring Semester 2021 Lesson Plan

*Lesson plan subject to change.

| Date/Week | Chapter/Lesson | Content | Assignments & Tests Due Dates | Competency Area |
|--|---|--|--|--------------------|
| Week 1 1/11-1/14 | Introduction Chapter 1 Chapter 18 | Review Syllabi and Course Expectations Chapter 1: Quality Assessment and Safety Chapter 18: Microscopy | Syllabus Chapter 1 PPT Chapter 18 PPT <i>Lab #1: Safety Lab</i> | 2,6 A-C |
| Week 2 1/18-1/21 *MLK Day 18th-OFF | Chapter 2 | Chapter 2: Urine Specimen Types, Collection, and Preservation | Chapter 2 PPT Clinical Lab Review UA handout Medical Lab Lady Youtube video Polanski cards | 1,2,4 A-C |
| Week 3 1/25-1/28 | Chapter 3 | Chapter 3: The Kidney | TEST: 1, 2, 18 Chapter 3 PPT Khan Academy Videos | 1-4 A-C |
| Week 4 2/1-2/4 | Chapter 4 | Chapter 4: Renal function | Chapter 4 PPT GFR Creatinine clearance | 1-4 A-C |
| Week 5 2/8-2/11 | Chapter 5 | Chapter 5: Physical Exam of UA | TEST: 3,4 Chapter 5 PPT <i>Lab #2: Refractometer & Specific gravity</i> <i>Lab #3: Color/Clarity</i> | 1-4 A-C |
| Week 6 2/15-2/18 | Chapter 6 | Chapter 6: Chemical Exam of UA Confirmatory Tests | Normal Values Chapter 6 PPT <i>LAB #4: Macroscopic and Chemical Urinalysis</i> <i>Lab #5: Clinitest</i> <i>Lab #6: Acetest</i> <i>Lab #7: Icotest</i> | 1-4 A-C |

| Date/Week | Chapter/Lesson | Content | Assignments & Tests Due Dates | Competency Area |
|---|------------------------------|--|--|-----------------|
| Week 7 2/22-2/25 | Chapter 7 | Chapter 7: Microscopic Exam of Urine sediment | Chapter 7 PPT <i>Lab #8: Microscopic UA</i> Student sample UA's | 1-4 A-C |
| Week 8 3/1-3/4 | Chapter 7 | Chapter 7: Microscopic exam of Urine sediment, cont. | Hospital samples UA <i>Microscopic Quiz</i> | 2,4,5,6 A-C |
| Week 9 3/8-3/11 | Chapter 8 | Chapter 8: Renal and Metabolic Diseases | TEST: 5,6,7 Chapter 8 PPT | 4,5,7 A-C |
| Week 10 3/15-3/18 | Chapter 9 Chapter 10 | Chapter 9: CSF Analysis Chapter 10: Pleural, Pericardial, & Peritoneal Fluid Analysis | TEST: 8 Chapter 9 & 10 PPT <i>LAB #9 CSF hemocytometer (Chapter 17)</i> | 4,5,7 A-C |
| Week 11 3/22-3/25 | Chapter 11 Chapter 12 | Chapter 11: Synovial Fluid analysis Chapter 12: Seminal Fluid analysis | Semen analysis Chapter 11 & 12 PPT | 4,5,7 A-C |
| Week 12 3/29-4/1 | Chapter 13 Chapter 14 | Chapter 13: Vaginal Secretions Analysis Chapter 14: Amniotic Fluid analysis | TEST: 9, 10, 11 Chapter 13 & 14 PPT <i>LAB #9 KOH & wet prep</i> | 4,5,7 A-C |
| Week 13 4/5-4/8 *SB 4/5 and 4/6- OFF | Chapter 15 | Chapter 15: Fecal Analysis | Chapter 15 PPT <i>Lab #10: Occult blood</i> | 4,5,7 A-C |
| Week 14 4/12-4/15 | Chapter 15 | Chapter 15: Fecal analysis cont. | TEST: 12, 13, 14, 15 | 1-7 A-C |
| Week 15 4/19-4/22 | Review | Review | Review all labs | 1-7 A-C |
| Week 16 4/26-4/29 | Review | Review | Review all labs <i>Mock Final- Counts as a Lab Grade</i> | 1-7 A-C |
| Week 17 5/3 | Final | Finals | Lab Final and Comprehensive Final | 1-7 A-C |

COMPETENCY AREAS:

1. Fundamental theory of Urinalysis
2. Basic Urinalysis tests

3. Correlation of urinalysis to disease states
4. Related Lab Math
5. Body Fluids Tests
6. Special Urinalysis and Related Testing
7. Safety and Quality Control

GENERAL CORE EDUCATIONAL COMPETENCIES:

- a) The ability to utilize standard written English.
- b) The ability to solve practical mathematical problems.
- c) The ability to read, analyze, and interpret information.