

FLORIDA STATE COLLEGE AT JACKSONVILLE

COLLEGE CREDIT COURSE OUTLINE

COURSE NUMBER: MLT 1022C

COURSE TITLE: Introduction to Health Technology

PREREQUISITE(S): None

COREQUISITE(S): None

CREDIT HOURS: 3

CONTACT HOURS/WEEK: 4

CONTACT HOUR BREAKDOWN:

Lecture/Discussion:

Laboratory:

Other _____: 4 (lecture/lab combination)

FACULTY WORKLOAD POINTS: 4

STANDARDIZED CLASS SIZE ALLOCATION: 20

CATALOG COURSE DESCRIPTION:

The course enables students to apply basic mathematical concepts, medical laboratory ethics, and basic medical laboratory techniques. Given instruction in introductory clinical laboratory sciences, students will study and practice specimen collection and handling and laboratory safety procedures.

SUGGESTED TEXT(S): Phlebotomy Workbook, Strasinger and Lorenzo, F.A. Davis, current edition.

IMPLEMENTATION DATE: November 14, 1987

REVIEW DATE: Fall Term, 1996 (971)
Fall Term, 2002 (20031)
Fall Term, 2008 (20091) - Outline Review 2007

COURSE TOPICS	CONTACT HOURS <u>PER TOPIC</u>
I. Introduction to the Health Care Setting	3
A. Introduction to Health Care Facilities	
1. Inpatient Facilities	
2. Outpatient Facilities	
B. Introduction to the Clinical Laboratory	
1. Laboratory Department	
2. Major Types of Laboratory Procedures	
C. Introduction to Laboratory Personnel	
1. Levels of Personnel	
2. Professional and Educational Qualifications of Personnel	
3. Certification and Licensure	
D. Medical Terminology Overview	
E. Laboratory Calculations	
1. Metric System	
2. Scientific Notation	
3. Algebraic Principles	
4. Expressions of Concentration	
II. Anatomy and Physiology of Body System	3
A. Terminology	
B. Definitions and Description of Main Body Systems	
1. Skeletal	
2. Respiratory	
3. Digestive	
4. Urinary	
5. Circulatory	
a. Blood Components	
b. Coagulation	
C. Identification of Specimen Collection Sites	
1. Main Superficial Veins	
2. Capillary Sites	
3. Arterial Sites	
D. Limitations of Specimen Collection	
III. Collection Equipment and Principles	4
A. Venipuncture Equipment	
B. Anticoagulant Principles	
1. Types	
2. Uses	
C. Types of Patient Specimens	
1. Collection Methods	
2. Specimen Handling Requirements	
D. Drug or Chemical Interferences	

COURSE TOPICS (CONTINUED)	<u>CONTACT HOURS PER TOPIC</u>
IV. Blood Collection Procedures	24
A. Patient Status (5)	
1. Physical/Mental Conditions	
2. Identification	
B. Specimen Identification (5)	
C. Complications of Venipuncture and Skin Punctures (5)	
D. Venipuncture Procedure (5)	
E. Skin Puncture Procedure (4)	
V. Infection Control and Safety	6
A. Nosocomial Infections	
B. Precautions	
C. Isolation Techniques	
D. Causes of Infection	
E. Handling Contaminated Specimens and Equipment	
F. Safety Equipment and Regulations on the Clinical Lab	
VI. Specimen Handling	4
A. Principles of Specimen Requisitions and Accessioning	
1. Log Books	
2. Test Requests	
3. Computer Systems	
4. Scheduling Specimen Collection	
B. Specimen Handling Requirements	
1. Time	
2. Temperature	
C. Evaluation of Specimen Quality	
D. Preparation of Specimens for Assays	
E. Quality Assurance in Specimen Collection and Handling	
VII. Laboratory Safety and Quality Control Principles	6
A. Specimen Requirements	
B. Safety Equipment	
C. Emergency Procedures	
VIII. Professional Attributes	6
A. Communication Skills	
B. Patient Interaction	
C. Patient Rights	

COURSE TOPICS (CONTINUED)

CONTACT HOURS
PER TOPIC

D.	Ethical Standards and Behavior	
E.	Medicolegal and Ethics Terminology	
F.	"The Professional"	
IX.	HIV/AIDS (F.S. 483 Requirement)	4
A.	Epidemiology	
B.	Transmission	
C.	Prevention and Risk Reduction	
D.	Behavior Changes	
E.	Policy Development	
F.	Legal and Ethical Issues	

PROGRAM TITLE: Medical Laboratory Technology
 COURSE TITLE: Introduction to Health Technology
 CIP NUMBER: 0317.030900

LIST PERFORMANCE STANDARD ADDRESSED:

NUMBER(S): TITLES(S):

01.0 DEMONSTRATE KNOWLEDGE OF THE HEALTH CARE DELIVERY SYSTEM AND HEALTH OCCUPATIONS -- The student will be able to:

- 01.01 Identify the basic components of the health care delivery system.
- 01.02 Describe the various types of health care providers and the range of services available.
- 01.03 Describe the composition and functions of a health care team.
- 01.04 Identify the general roles and responsibilities of the individual members of the health care team.
- 01.05 Develop a basic understanding of human needs throughout the lifespan.
- 01.06 Explain the importance of maintaining professional competence through continuing education.
- 01.07 Describe trends affecting the delivery system of health care.

02.0 DEMONSTRATE THE ABILITY TO COMMUNICATE AND USE INTERPERSONAL SKILLS EFFECTIVELY -- The student will be able to:

- 02.01 Develop the basic listening skills.
- 02.02 Develop basic observational skills and related documentation strategies written and oral form.
- 02.03 Identify characteristics of successful and unsuccessful communication including barriers.
- 02.04 Respond to verbal and non-verbal cues.
- 02.05 Compose written communication using correct spelling, grammar, and format.
- 02.06 Use appropriate medical terminology and abbreviations.
- 02.07 Recognize the importance of courtesy and respect for patients and other health care workers and maintain good interpersonal relationships.
- 02.08 Recognize the importance of patient/client education regarding health care.
- 02.09 Adapt communication skills to varied levels of understanding and cultural orientation.
- 02.10 Demonstrate telephone usage including taking messages.
- 02.11 Demonstrate ability to give and follow directions.
- 02.12 Distinguish between factual reports and personal opinion.

03.0 DEMONSTRATE LEGAL AND ETHICAL RESPONSIBILITIES -- The student will be able to:

- 03.01 Discuss legal framework of the health care occupation.
- 03.02 Explain the medical liability of health care workers.
- 03.03 Explain the patients' "Bill of Rights."
- 03.04 Describe a Code of Ethics consistent with the health care occupation.
- 03.05 Describe the importance of maintaining confidentiality of information, including computer information.
- 03.06 Recognize the limits of authority and responsibility of health care workers.

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S): TITLES(S):

- 03.07 Recognize and report illegal and unethical practices of health care workers.
- 03.08 Recognize and report abuse and neglect.
- 03.09 Recognize sexual harassment and domestic violence.

04.0 DEMONSTRATE AN UNDERSTANDING OF AND APPLY WELLNESS AND DISEASE CONCEPTS -- The student will be able to:

- 04.01 Develop a basic understanding of the structure and function of the body systems.
- 04.02 Identify personal health practices and environmental factors which affect optimal function of each of the major body systems.
- 04.03 Identify psychological reactions to illness including defense mechanisms.
- 04.04 Recognize the steps in the grief process.
- 04.05 Explain basic concepts of positive self image, wellness and stress.
- 04.06 Develop a wellness and stress control plan that can be used in personal and professional life.
- 04.07 Explain the nutrition pyramid.

05.0 RECOGNIZE AND PRACTICE SAFETY AND SECURITY PROCEDURES--The student will be able to:

- 05.01 Demonstrate the safe use of medical equipment.
- 05.02 Recognize and report safety hazards.
- 05.03 Identify and practice security procedures for medical supplies and equipment.
- 05.04 Demonstrate proper body mechanics.
- 05.05 Demonstrate the procedure for properly identifying patients.
- 05.06 Demonstrate procedures for the safe transport and transfer of patients.
- 05.07 Describe fire safety and evacuation procedures.

06.0 RECOGNIZE AND RESPOND TO EMERGENCY SITUATIONS -- The student will be able to:

- 06.01 Monitor and record vital signs.
- 06.02 Describe legal parameters relating to the administration of emergency care.
- 06.03 Obtain and maintain BLS skills of basic rescuer or higher.
- 06.04 Demonstrate basic understanding of first aid and emergency care.

07.0 RECOGNIZE AND PRACTICE INFECTION CONTROL PROCEDURES -- The student will be able to:

- 07.01 Demonstrate knowledge of medical asepsis and practice procedures such as handwashing and isolation.
- 07.02 Demonstrate knowledge of surgical asepsis as utilized in sterilization.
- 07.03 Describe how to dispose correctly of biohazardous materials, according to appropriate government guidelines such as OSHA.

08.0 DEMONSTRATE COMPUTER LITERACY -- The student will be able to:

- 08.02 Describe the uses of computers in health care.

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S): TITLES(S):

- 10.0 DEMONSTRATE KNOWLEDGE OF BLOOD BORNE DISEASES, INCLUDING AIDS -- The student will be able to:
- 10.01 Distinguish between fact and fallacy about the transmission and treatment of diseases caused by blood borne pathogens including Hepatitis B.
 - 10.02 Identify community resources and services available to the individuals with diseases caused by blood borne pathogens.
 - 10.03 Identify "at risk" behaviors which promote the spread of diseases caused by blood borne pathogens and the public education necessary to combat the spread of these diseases.
 - 10.04 Apply infection control techniques designed to prevent the spread of diseases caused by blood borne pathogens to the care of all patients following Centers for Disease Control (CDC) guidelines.
 - 10.05 Demonstrate knowledge of the legal aspects of AIDS, including testing.
- 11.0 APPLY BASIC MATH AND SCIENCE SKILLS -- The student will be able to:
- 11.01 Draw, read, and report on graphs, charts and tables.
 - 11.02 Measure time, temperature, distance, capacity, and mass/weight.
 - 11.03 Make and use measurements in both traditional and metric unit.
 - 11.04 Make estimates and approximations and judge the reasonableness of the result.
 - 11.05 Convert from regular to 24 hour time.
 - 11.06 Demonstrate ability to evaluate and draw conclusions.
 - 11.07 Organize and communicate the results obtained by observation and experimentation.
 - 11.08 Ask appropriate scientific questions and recognize what is involved in experimental approaches to the solution of such questions.
 - 11.09 Calculate reactions.
- 12.0 DEMONSTRATE ACCEPTED PROFESSIONAL, COMMUNICATION, AND INTERPERSONAL SKILLS -- The student will be able to:
- 12.01 Follow approved procedures for labeling of specimens.
 - 12.02 Demonstrate the appropriate professional behavior of a phlebotomist.
 - 12.03 Explain to the patient the procedure to be used in specimen collection.
 - 12.04 Explain in detail the importance of identifying patients correctly when drawing blood.
- 13.0 DISCUSS PHLEBOTOMY IN RELATION TO THE HEALTH CARE SETTING -- The student will be able to:
- 13.01 List, classify and discuss various departments and services within the health care setting in which the phlebotomist must interact with to obtain laboratory specimens from patients.
 - 13.02 Identify the major departments/sections with the clinical laboratory, the major types of procedures run in each department/section, and their specimen requirements.
 - 13.03 Describe roles of the major classifications of clinical laboratory personnel (i.e., pathologist, chief/administrative technologist, CLS, MT, phlebotomist, etc.).

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S): TITLES(S):

- 14.0 IDENTIFY THE ANATOMIC STRUCTURE AND FUNCTION OF BODY SYSTEMS IN RELATION TO SERVICES PERFORMED BY PHLEBOTOMIST -- The student will be able to:
- 14.01 Describe and define major body systems with emphasis on the circulatory system.
 - 14.02 List and describe the main superficial veins used in performing venipuncture.
 - 14.03 Identify appropriate sites for capillary/venipuncture and name/find the most desirable one(s).
 - 14.04 Describe the function of the following blood components: erythrocytes, thrombocytes, leukocytes, plasma, and serum.
- 15.0 RECOGNIZE AND IDENTIFY COLLECTION REAGENTS SUPPLIES, EQUIPMENT AND INTERFERING CHEMICAL SUBSTANCES -- The student will be able to:
- 15.01 Identify and discuss proper use of appropriate types of equipment needed to collect various clinical laboratory blood specimens by venipuncture.
 - 15.02 Explain the special precautions and types of equipment needed to collect blood from a neonate.
 - 15.03 Identify and discuss proper use of supplies used in collecting microspecimens.
 - 15.04 Identify and discuss the proper use of the various types of anticoagulants, preservatives and gels used in blood collection and the vacuum tube color-codes for these additives.
 - 15.05 Describe the types of patient's specimens that are analyzed in the clinical laboratory and the phlebotomist's role in collecting and/or transporting these specimens to the laboratory.
 - 15.06 Describe substances potentially encountered during phlebotomy which can interfere in analysis of blood constituents.
 - 15.07 Define and utilize correct medical terminology and metric measurement needed for specimen collection.
- 16.0 DEMONSTRATE SKILLS AND KNOWLEDGE NECESSARY TO PERFORM PHLEBOTOMY -- The student will be able to:
- 16.01 Recognize a properly completed requisition and apply established protocol for patient and specimen identification.
 - 16.02 Discuss/perform methods for facilitating capillary/venipuncture collection.
 - 16.03 Demonstrate knowledge of established protocol for patient and specimen identification.
 - 16.04 List appropriate antiseptic agents useful in preparing sites for capillary/venipuncture.
 - 16.05 Discuss/perform appropriate methods for preparing a site for capillary or venipuncture.
 - 16.06 Perform venipuncture by evacuated tube and syringe systems, demonstrating appropriate use of supplies, proper handling of equipment and specimens, and patient care.
 - 16.07 Describe the correct order of draw during capillary and venipuncture.
 - 16.08 Perform capillary puncture using appropriate supplies and techniques for adults, children and neonates.
 - 16.09 Describe the most common complications associated with capillary and venipuncture, their causes, prevention and treatment.
 - 16.10 Describe/perform capillary/venipuncture procedures for disposing of used or contaminated supplies.
 - 16.11 Describe/perform appropriate techniques for making a peripheral blood smear for hematologic evaluation.

LIST PERFORMANCE STANDARD ADDRESSED: (CONTINUED)

NUMBER(S): TITLES(S):

- 17.0 PRACTICE INFECTION CONTROL FOLLOWING UNIVERSAL PRECAUTIONS -- The student will be able to:
- 17.01 Define the term "nosocomial infection."
 - 17.02 Describe/practice procedures for infection prevention.
 - 17.03 Discuss/perform isolation procedures.
 - 17.04 Identify potential routes of infection.
- 18.0 PRACTICE ACCEPTED PROCEDURES OF TRANSPORTING, ACCESSIONING AND PROCESSING SPECIMENS -- The student will be able to:
- 18.01 Describe routine procedures for transporting and processing specimens.
 - 18.02 Describe the significance of time constraints for specimen collection and delivery.
 - 18.03 Demonstrate knowledge of accessioning procedures.
 - 18.04 Prepare aliquot(s) of specimen or component(s) for analysis according to specimen type and analysis to be performed.
 - 18.05 Follow protocol for accepting verbal test orders.
- 19.0 PRACTICE QUALITY ASSURANCE AND SAFETY -- The student will be able to:
- 19.01 Distinguish and perform procedures which ensure reliability of test results when collecting blood specimens.
 - 19.02 Demonstrate knowledge of and practice appropriate patient safety.
 - 19.03 Practice laboratory safety in accordance with established procedures.
 - 19.04 Follow documentation procedures for work related accidents.
- 25.0 DISCUSS ANATOMY AND PHYSIOLOGY OF THE HUMAN BODY AS IT RELATES TO THE FIELD OF MEDICAL LABORATORY TECHNOLOGY—The student will be able to:
- 25.01 Identify the major body systems and their anatomical features.



**Florida State College
At Jacksonville**

Course Learning Outcomes & Assessment

NOTE: Use either the Tab key or mouse click to move from field to field. The box will expand to accommodate your entry.

Section 1 COURSE PREFIX AND NUMBER: MLT 1022C	SEMESTER CREDIT HOURS: 3
COURSE TITLE: Introduction to Health Technology	

Section 2
 TYPE OF COURSE: (Click on the box to check all that apply)

<input type="checkbox"/> AA Elective	<input checked="" type="checkbox"/> AS Required Professional Course	<input type="checkbox"/> College Prep
<input type="checkbox"/> AS Professional Elective	<input checked="" type="checkbox"/> AAS Required Professional Course	<input type="checkbox"/> Technical Certificate
<input type="checkbox"/> Other	<input type="checkbox"/> PSAV	<input type="checkbox"/> Apprenticeship
<input type="checkbox"/> General Education: (For General Education courses, you must also complete Section 3 and Section 7)		

Section 3 (If applicable)
 INDICATE BELOW THE DISCIPLINE AREA FOR GENERAL EDUCATION COURSES:

<input type="checkbox"/> Communications	<input type="checkbox"/> Social & Behavioral Sciences	<input type="checkbox"/> Mathematics
<input type="checkbox"/> Natural Sciences	<input type="checkbox"/> Humanities	

Section 4
 INTELLECTUAL COMPETENCIES:

<input checked="" type="checkbox"/> Reading	<input checked="" type="checkbox"/> Speaking	<input checked="" type="checkbox"/> Critical Analysis	<input checked="" type="checkbox"/> Quantitative Skills	<input type="checkbox"/> Scientific Method of Inquiry
<input checked="" type="checkbox"/> Writing	<input checked="" type="checkbox"/> Listening	<input checked="" type="checkbox"/> Information Literacy	<input checked="" type="checkbox"/> Ethical Judgment	<input checked="" type="checkbox"/> Working Collaboratively

	LEARNING OUTCOMES	METHOD OF ASSESSMENT
•	Demonstrate Knowledge of Center for Disease Control Universal/Standard Precautions during Laboratory Procedures	Instructor observation in lab, Venipuncture checklist, Quizzes and tests,
•	Demonstrate literacy skills outside of classroom	Written notebooks reflecting Reading, Writing and Organizational Skills
•	Explain and apply concepts and procedures of Phlebotomy	Written Exams, Laboratory Practical Exam. Venipuncture Practical Exam.
•	Demonstrate critical thinking during phlebotomy procedures	Instructor observation and evaluation during blood collection procedures
•	Demonstrate mastery of phlebotomy skills	Venipuncture practical
•	Utilize proper safety procedures in the lab	Instructor observation
•	Demonstrate ethical judgment regarding HIPAA rules	Instructor observation and discussion
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Section 6

Name of Person Completing This Form: Rhoda Jost	Date: November 16, 2007
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