MLT 050 - Phlebotomy
Last Revision or Approval Date - 4/16/2009

SECTION A

1. Division: Allied Health/Public Safety
2. Department: Medical Lab Technician
3. Subject Code: MLT
4. Course Number: 050
5. Course Title: Phlebotomy
6. Discipline: Diagnostic Medical Technology - Non-Masters

SECTION B

1. Program Information:
   a. Is course in a current associate degree or certificate?
      □ Yes    □ No
   b. Requesting course to be added to an associate degree or certificate?
      □ Yes    □ No

2. TOPS code information:
   Program title - TOPS Code: Phlebotomy- 120510

3. SAM Code:
   □ A: Apprenticeship
   □ B: Advanced Occupational
   □ C: Clearly Occupational
   □ D: Possibly Occupational
   □ E: Non-Occupational

SECTION C

General Education Information:
1. College Associate Degree GE Applicability:
   Elective

2. CSU GE Applicability (Recommended-requires CSU approval):

3. IGETC Applicability (Recommended-requires CSU/UC approval):

SECTION D

Articulation Information: (Required for Transferable courses only)
1. Requesting this course to be articulated – Mark all that apply:
2. List one community college and its comparable course. If requesting CSU and/or UC transferability also list a CSU/UC campus and comparable lower division course.
   Allan Hancock Community College
   Medical Assisting 304
   Phlebotomy

SECTION E

Resources:
Please consider the identified concerns below:
1. Library: Please identify the implications to the library

This is a basic skills course. No research required. There will be no other books required beyond the required textbook.

2. Computer Support Services: Please identify the implications to Computer Support Services:

Currently we have a computer simulated system for phlebotomy. We are carrying a contract for repair with the company per guidance of the computer tech center.

3. TLC Lab: What are the implications to the TLC lab of this course being offered?

These students may need help with reading and vocabulary. There will be minimal math involved.

SECTION F

1. Maximum Class Size (recommended): 15
2. If recommended class size is not standard, then provide rationale:

This is a lab-oriented class. Students will need to perform a minimum of 50 blood draws. Multiple sites for training will be required with faculty monitoring the students assignments. The state accrediting body, Department of lab field services does not allow more than 15:1 ratio in clinic.

SECTION G

General Course Information

1. Units: 3.5 Variable units n/a
   (*Units of credit are based on: 1 unit of credit per one hour of lecture (plus 2 hours of outside class independent study); 1 unit of credit per three hours of activity or lab.)

2. This Course is:
   Associate Degree Applicable - non-transferable

3. Is this course cross listed with another course? If yes, include course name and title:

Course Format and Duration

4. Maximum Contact Hrs per Term
   Lecture/Discussion: 45
### Lab: 54
### Total Maximum Contact Hrs per Term 99 - 0

#### Methods of Instruction

5. Check all instructional methods used to present course content.

<table>
<thead>
<tr>
<th>Instructional Method</th>
<th></th>
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</thead>
<tbody>
<tr>
<td>Lecture</td>
<td>☑</td>
</tr>
<tr>
<td>Distance Ed (requires supplemental form)</td>
<td></td>
</tr>
<tr>
<td>Lab</td>
<td>☑</td>
</tr>
<tr>
<td>Work Experience</td>
<td></td>
</tr>
<tr>
<td>Activity</td>
<td></td>
</tr>
<tr>
<td>Other: clinical</td>
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</tr>
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#### Course Preparation – (Supplemental forms required)

6a. Prerequisite(s): (Course and/or other preparation/experience that is REQUIRED to be completed previous to enrollment in this course.)

High School Diploma or GED
CPR for Health Care Workers card.
Enrollee must have a physical and immunizations as required by the clinical facilities.
In order to register, a packet must be picked up in the Nursing Office. These forms must be completed and submitted prior to the first class meeting.

6b. Co-requisite(s): (Courses and/or other preparation that is REQUIRED to be taken concurrently with this course.)

N/A

6c. Recommended: (Minimum preparation RECOMMENDED in order to be successful in this course. Also known as “Course Advisory”.)

N/A

#### Catalog Description and Other Catalog Information

7. Repeatability: 1 Time

Please Note: 7. (Repeatability) does not refer to repeating courses because of substandard grades or a lapse of time since the student took the course. A course may be repeated only if the course content differs each time it is offered and the student who repeats it is gaining an expanded educational experience as stipulated in Title V.

- Skills or proficiencies are enhanced by supervised repetition and practice within class periods.
- Active participatory experience in individual study or group assignments is the basic means by which learning objectives are attained.
- Course content differs each time it is offered.

Explanation for above repeatability selection:

Phlebotomy is a practice skill. The more practice obtained the better the practitioner. Some programs are asking for 100 draws. If repetition of the course allows the student to gain the confidence needed to obtain a position then the student should be allowed the opportunity.
**8a. Catalog Description:**
Designed to prepare personnel who collect blood samples for medical laboratory analysis. Technique, equipment, and proper patient preparation will be stressed. Successful completion of the course will result in a Phlebotomy Technician Proficiency Certificate. Includes learning experiences both in on-campus skills laboratories and at affiliated clinical sites. May be repeated if used for legally mandated training.

**8b. Class Schedule Description:** (One or two sentences describing course content for the prospective student. Does not require as much detail as the Catalog description.)
Designed to prepare personnel who collect blood samples for medical laboratory analysis. Technique, equipment, and proper patient preparation will be stressed. Clinical site hours will be determined based upon both the student's availability and the site's availability. Successful completion of the course will result in a Phlebotomy Technician Proficiency Certificate. May be repeated if used for legally mandated training.

**8c. Grading Option:** LR - Letter Grade Only

<table>
<thead>
<tr>
<th>Course Outline Information</th>
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| **9. Student Learning Outcomes:** (List 1-3 overarching goals. Outcomes must be related to Catalog Description, Course Content, and Objectives.)

**The student will be able to:**

**Lecture:**
- Explain techniques to maintain patient safety including patient identification, site identification, and aseptic technique.
- Compare and contrast accepted protocol for specimen processing.

**Lab:**
- Obtain blood from a patient using the accepted methods of venipuncture and finger/heel stick without causing undue discomfort to the patient.
- Perform accepted protocol for specimen processing.

**Objectives:**

**Theory Objectives:**
1. Discuss the history of phlebotomy
2. Discuss the characteristics required of a good phlebotomist.
3. List the professional organizations that recognize phlebotomist and their qualifications for certification.
4. Discuss the requirements to obtain a state certificate in phlebotomy.
5. Locate and complete applications necessary to obtain the California Phlebotomy Certification.
6. Describe the continuing education requirements to renew the California Phlebotomy Certificate.
7. Discuss quality control activities.
8. Relate the elements of the changing work place and patient population to diversity issues.
9. Define and present the components of a successful customer service program.
10. Compare and contrast the health care delivery systems
    a. Compare and contrast the roles of the health care providers in hospitals and clinics and relate the phlebotomist's role to them as a member of the health care team.
    b. Describe the various hospital departments and their major functions in which the phlebotomist may interact in his/her role.
c. Describe how laboratory testing is used to assess body functions and disease.
d. Utilize and define medical terminology commonly used in the laboratory.

11. Demonstrate knowledge of infection control and safety.
a. Discuss safety policies and procedures for maintaining patient and personnel safety.
b. Analyze the modes of transmission of infection and methods for prevention.
c. Identify biohazardous specimens.
d. Describe safety measures that should be followed at all times by a phlebotomist and relate them to collecting a patient's specimen.
e. Relate the use of the standard precautions to the process of drawing blood.
f. Describe proper infection control technique for blood draws on patients with infections and discuss the rationales for the techniques.
g. Define, discuss and describe the role of the phlebotomist in the prevention of nosocomial infection.

12. Using basic understanding of the anatomy and physiology of body systems and anatomic terminology describe the relationship general pathologic conditions associated with the body systems.
a. Describe the basic functions of each of the main body systems.
b. Identify the veins of the arms, hands, legs, and feet on which phlebotomy is performed.
c. Explain the functions of the major constituents of blood and differentiate between serum and plasma.
d. Define hemostasis and compare and contrast the basic processes of coagulation and fibrinolysis.
e. Compare and contrast the properties of arterial blood versus venous blood, and describe the difference in collection methods.

13. Relate the importance of specimen collection to the overall patient care system.
a. Describe the legal and ethical importance of proper patient/sample identification.
b. Describe the phlebotomist's role in collecting blood specimens and transporting the specimens to the laboratory.
c. Identify the general criteria for suitability of a specimen for analysis.
d. Explain the importance of timed specimens, fasting specimens and stat specimens.

14. Compare and contrast collection equipment, various types of additives used, special precautions necessary and substances that can interfere in clinical analysis of blood constituents.
a. Compare and contrast the various types of additives used in blood collection, and explain the reasons for their use.
b. Identify the evacuated tube color codes associated with the additives.
c. Describe substances that can interfere in clinical analysis of blood constituents and ways in which the phlebotomist can help avoid these occurrences.
d. Compare and contrast the types of equipment needed to collect blood by venipuncture and capillary puncture.
e. Identify special precautions necessary during blood collections by venipuncture and capillary puncture.
f. Describe the supplies that should be carried on a phlebotomist's tray and the reason for each.

15. Describe proper techniques to perform venipuncture and capillary puncture.
a. Compare and contrast potential sites for venipuncture and capillary puncture.
b. Compare and contrast the use of sterile and aseptic techniques.
c. Describe and give rationale for the steps in the preparation of a puncture site.
d. Describe the rationale for use of and the effect of tourniquet, hand squeezing and heating pads on capillary puncture and venipuncture.
e. Analyze the use of proper needle insertion and withdrawal techniques including direction, angle, depth and aspiration on an adult and a child.
f. Describe correct procedure for capillary collection methods on infants, children and adults.
g. Describe the circumstances that would lead to re-collection or rejection of a patient sample.
h. Compare and contrast alternate venipuncture collection sites and the limitations and precautions of each.
i. Analyze the frequent causes of phlebotomy complications.
j. Describe signs and symptoms of physical problems that may occur during blood collection.
k. List the steps necessary to perform a venipuncture and/or capillary puncture in chronological order.

16. Describe appropriate specimen requisitioning, specimen transport and specimen processing.
   a. Describe the criteria for identifying an appropriate request for specimen collection.
   b. Relate legal responsibilities of the phlebotomist to the need for physicians requests for all specimen collection.
   c. Compare and contrast methods for transporting blood specimens for routine and special testing within the hospital and reference laboratories.
   d. Relate the potential clerical and technical errors that may occur during specimen processing to the procedures to prevent them.
   e. Relate the general effects of time on test quality and patient care in the process of obtaining and transporting blood specimens. f. Explain the conditions and why they must be met if blood specimens and laboratory tests are to be used as legal evidence.

17. Discuss the need for quality assurance in phlebotomy.
   a. Describe the system for monitoring quality assurance in the collection of blood specimens.
   b. Identify policies and procedures to assure quality in the obtaining of blood specimens.

18. Discuss the basic concepts of communications, personal and patient interaction, stress management, professional behaviour and legal implications in the healthcare/laboratory work environment.
   a. Discuss and explain the importance of maintaining patient confidentiality including HIPPA guidelines.
   b. Describe and demonstrate the proper manner for greeting and interacting with a patient.
   c. Explain the major points in interviewing a patient or a patient’s representative in preparation for obtaining specimens.
   d. Describe instructions and their rationale to be given to patients in preparation for routine blood collection, glucose tolerance tests, bleeding times and other procedures normally performed by the phlebotomist.
   e. Describe and discuss techniques for dealing with family and visitors during the blood specimen collection.
   f. Relate the major points of the Patient's Bill of Rights as it applies to phlebotomists.
   g. Discuss the importance of appearance and grooming for phlebotomists.
   h. Define the different terms used in the medico-legal aspect for phlebotomy and discuss policies and protocol designed to avoid medico-legal problems.
   i. Describe the causes of stress in the work environment and discuss the coping skills used to deal with stress in the work environment.
   j. Explain basic concepts of communication.

Advanced Skills:
1. Analyze advanced infectious disease control and biohazards.
3. Relate anticoagulation therapy to the role of the phlebotomist in obtaining blood specimens.
4. Relate the risk factors and appropriate responses to complications which may arise from phlebotomy.

LABORATORY OBJECTIVES:
1. Identify and properly label biohazardous materials.
2. Utilize Standard Precautions when obtaining a blood specimen.
3. Demonstrate proper infection control technique for blood draws on patients with infections and explain the rationale for the use of the technique.
4. Utilize correct collection equipment, noting appropriate additives, special precautions required, and substances that can interfere in clinical analysis of the blood components being tested.
5. Select the appropriate equipment required to collect blood by venipuncture and capillary puncture explaining rationale for each.
6. On a minimum of 50 patients perform competent and effective venipunctures and/or capillary punctures utilizing proper techniques for both venipuncture and capillary puncture.
   a. Identify potential sites for venipuncture and capillary puncture.
   b. Appropriately prepare sites for venipuncture and capillary puncture.
c. Appropriately utilize tourniquet, hand squeezing and heating pads on venipuncture and capillary puncture.
d. Utilize sterile and/or aseptic techniques based on test and patient condition.
e. Perform proper needle insertions and withdrawal techniques including direction, angle, depth and aspiration on an adult and a child.
g. Perform correct procedure for venipuncture collection methods on infants, children and adults.
7. Identify alternate venipuncture collections sites and compare and contrast precautions for the use of each.
8. Utilize appropriate requisitions, specimen transportation and specimen processing when obtaining specimens.
9. Demonstrate the basic concepts of communication in personal and patient interaction.
10. Demonstrate professional behavior at all times in the clinical area.
11. Maintain patient confidentiality at all times.
12. Greet and interact with patients appropriately.
13. Use appropriate interviewing techniques with patients and/or their representatives.
14. Provide appropriate instructions and explanations to patients and/or representatives prior to obtaining specimens.

10. Course Content Outline: (Provides a comprehensive, sequential outline of the course content, including all major subject matter and the specific body of knowledge covered.)

Lecture:
1. Health care delivery system
   a. Organizational structure.
   b. Role of each member of the health team including phlebotomist.
   c. Relationship of the phlebotomist to health team.
   d. Requirements for certification as a phlebotomist
   e. Quality control
   f. Diversity in the workplace
   g. Basic introduction to body function and disease including anatomical and circulatory systems.
   h. Introduction to medical terminology
      i. Laboratory procedures and terminology.
2. Infection control
   a. Modes of transmission for infectious organisms.
   b. Standard precautions
   c. Isolation procedures
   d. Nosocomial Infections
   e. Safety measure for drawing and transporting specimens.
16. Specimen Collection
   a. Patient/specimen identification
   b. Role and responsibilities of phlebotomist in obtaining and transporting specimens.
   c. Collection tubes
   d. Collection equipment
   e. Types of blood specimens
   f. Requirements and techniques required for each type of blood specimens.
   g. Blood constituents.
   h. Precautions for drawing blood.
17. Process for performing venipuncture and capillary puncture.
   a. Venipuncture and capillary puncture sites.
   b. Sterile and Aseptic Techniques
   c. Site Preparation
   d. Insertion, aspiration, and needle withdrawal.
e. Age specific techniques: Infant, Child, Adult, Elderly  
f. Complications of venipuncture and capillary puncture, causes and methods of prevention.  
5. Requisitioning and transporting of blood specimens.  
a. Legal and ethical issues of requisition and transporting.  
b. Requirements for a requisition.  
c. Transportation of specimens.  
d. Conditions to be met if blood specimens are to be used as legal evidence.  
18. Quality assurance policies and procedures for phlebotomy.  
a. Personal, Patient and Health Team  
b. Patient teaching in relation to blood draw procedures.  
c. Communication with family and visitors during specimen collection.  
d. Patient Bill of Rights.  
e. Professional behavior and appearance.  
g. Stress in the workplace and coping skills.  
Advanced Content:  
1. Advanced infectious disease control and biohazards  
3. Anticoagulation therapy.  
4. Risk factors and appropriate responses for phlebotomy.  

Lab:  
1. Specimen collection  
a. Vena puncture techniques  
b. Safety techniques  
2. Specimen processing  

11. Methods of Evaluating Student Achievement: (All courses must provide for measurement of student performance in terms of stated student performance objects, Area 10, and culminate in a formal recorded grade based on uniform standards.)  
Students will have a midterm and final exam using an objective test including multiple choice, short answer and fill ins. Students will be given short answer essay questions also. Students will perform a pass/fail return demonstration prior to being allowed to go to their clinical laboratory skills practices. Students will demonstrate 50 successful blood draws. They will be graded using a tool based on the critical elements. The students will keep an attendance log and phlebotomy attendance sheet to record the number of procedures observe, attempted and are successful at. The student will need 70% of the total points available in the course to pass. Must do 50 successful punctures in order to pass the course.

12. Typical Assignments: (Credit courses require two hours of independent work outside of class per unit of credit for each lecture hour. List types of assignments, including library assignments.)  
a. Reading Assignments: (Submit at least 2 examples)  
Assignments will be made from the assigned texts.  
Other than textbook:  
OSHA Instructions CPL2-2.44A  
Centers for Disease Control MMWR 365;2S:1S-19S  
These readings can be found on the web and the library already has access to them.

b. Writing, Problem Solving or Performance: (Submit at least 2 examples)
Students will have to chart blood draws and fill out appropriate requisition forms and specimen labeling forms. As stated previously, students will demonstrate blood draws on a variety of patients.

c. Other (Terms projects, research papers, portfolios, etc.)
Skills Portfolio: Will have forms documenting step by step venipuncture and capillary puncture, return demonstration in the skills lab, and punctures performed in the clinical area.

### 13. Required Materials:

a. EXAMPLES of typical college-level textbooks (for degree-applicable courses) or other print materials.

<table>
<thead>
<tr>
<th>Book 1:</th>
<th>McCall, Ruth, Tankersly, Cathee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Author:</td>
<td>McCall, Ruth, Tankersly, Cathee</td>
</tr>
<tr>
<td>Title:</td>
<td>Phlebotomy Essentials</td>
</tr>
<tr>
<td>Publisher:</td>
<td>Lippincott, Williams&amp;Wilkins</td>
</tr>
<tr>
<td>Date of Publication:</td>
<td>January 2008</td>
</tr>
<tr>
<td>Edition:</td>
<td>4</td>
</tr>
</tbody>
</table>

b. Other materials and/or supplies required of students:
Expanded Syllabus with handouts and study guides.

### SECTION H – Required of All Courses.

#### SCANS COMPETENCIES AND FOUNDATION SKILLS
Indicate which components of the SCANS competencies and Foundation Skills are addressed by this course. Check all that apply.

<table>
<thead>
<tr>
<th>1. SCANS Competency</th>
<th>2. Foundation Skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>Basic Skills</td>
</tr>
<tr>
<td>Time</td>
<td>✔️ Reading</td>
</tr>
<tr>
<td>Money</td>
<td>✔️ Writing</td>
</tr>
<tr>
<td>Material &amp; Facilities</td>
<td>✔️ Arithmetic/Math</td>
</tr>
</tbody>
</table>
Form A (Enrollment Limitation)

CONDITION ON ENROLLMENT FOR COURSE:  NURSNG 056

1. What is the condition on enrollment? (add a separate form if more than one condition applies):
   - □ Course:
   - □ Assessment test
   - □ Audition
   - □ Health and Safety requirement
   - □ Team tryout
   - □ Honors
   - □ Cohort
   - □ Other

   Must show High School Diploma or GED

Use this area to provide additional information if necessary:

The high school diploma is a requirement of the accrediting body and the health and safety requirements are required contractually by the facilities where the students gain their clinical experience. They get the packet so they know what they need when they enroll and they need it before they go to clinic and that is why it is required at the beginning of the class.

2. The condition on enrollment is a:  ✔ Prerequisite
3 The condition of enrollment is being:

- Established
- Revised
- Renewed
- Deleted

4 Scrutiny used:

- English or Math course used as a prerequisite for a course in another discipline – Complete #6 Basic Content Review and #9 Data Collection and Analysis
- Linked Courses for a Special Student Cohort – Complete #10A, Limitation on Enrollment
- Honors Course – Complete #10A, Limitation on Enrollment
- Performance Based – Complete #10B, Limitation on Enrollment
- Co-requisite Course – Complete #6 Basic Content Review
- Advisory – Complete #6 Basic Content Review
- Equivalent UC/CSU requirement – Complete #6 Basic Content Review and #6a Equivalent CSU/UC Review
- Sequential Series of Courses – Complete #6 Basic Content Review and #7 Documented Content Review (the document content review must demonstrate an appropriate match between the courses)
- Health and Safety Requirements – Complete #6 Basic Content Review and #8 Health and Safety Justification
- Required Statute or Regulation – Complete #6 Basic Content Review and #8 Required Statute or Regulation
- Assessment Process – Complete #6 Basic Content Review and #9 Data Collection and Analysis

5. LIST FACULTY INVOLVED IN REVIEW PROCESS:

6. BASIC CONTENT REVIEW:

List the Entrance skills (skills, knowledge, and/or abilities) which are deemed necessary at entry or concurrent

Again the high school diploma or GED is a requirement of the accrediting body.

6A Equivalent UC/CSU Course Review – List 3 CSU or UC campuses

<table>
<thead>
<tr>
<th>UC or CSU Campus</th>
<th>Equivalent Course at UC/CSU</th>
<th>Requisite Course at UC/CSU</th>
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</thead>
<tbody>
<tr>
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</table>
2. Please bring copies of the catalog descriptions for courses listed above to the curriculum committee meeting.

7. Documented Content Review:

**Target Course Skills**

List the specific skills or body of knowledge that students achieve with the proposed prerequisite or co-requisite for enrollment.

**Prerequisite Skills**

List the entrance skills or body of knowledge needed for the target course.

Review the data reflected in the matrix and draw conclusions regarding:
1) the relevance of the prerequisite, co-requisite, or advisory skills, and
2) overlaps or gaps in skills or body of knowledge required for the course. List your conclusions below regarding the necessity and appropriateness of the proposed prerequisite, co-requisite or advisory.

8. Health and Safety or Required Statute or Regulation Justification:
The physicals and immunization protect both the students and the patients. The requirement of the CPR card for health care providers provides safety for patients students are caring for. All of these are contractual requirements by our hospital facilities.

9. Data Collection and Analysis (Summarize the results of the research here and provide a location where a complete description of the study may be viewed):

10. Limitation on Enrollment:

   **A. Linked or Honors Courses for Special Student Cohort**
   Describe the Special Student Cohort and identify the courses or sections to be linked:
Do any of these courses satisfy any certificate or associate degree requirements?

☐ Yes
☐ No

If "yes", list the courses and certificate/degree requirement it meets:

If "No", list other course(s) or section(s) of the same course being offered which satisfy the same requirement:

B. Performance Course:

Was a disproportionate impact study conducted for this course?

☐ Yes
☐ No

If “Yes”, describe the results of the study:

If “No”, explain when the study will be conducted. You may consult with Institutional Research for assistance:

Does this course satisfy any certificate or associate degree requirement?

☐ Yes
☐ No

If "yes", list the courses and the certificate and/or associate degree requirements it meets:

If "No", list other course(s) or section(s) of the same course which satisfy the same requirements:

Criteria for performance/audition: