



CURRICULUM COMMITTEE | AGENDA

Wednesday, April 17, 2013 | 3:00 p.m.

Loft Conference Room – Drescher Hall 300-E

Members:

Guido Davis Del Piccolo, <i>Chair</i>	Roberto Gonzalez	Walter Meyer	Deborah Schwyter
Georgia Lorenz, <i>Vice Chair</i>	Jemal Hussein	Estela Narrie	Jeffery Shimizu
Brenda Antrim	Hasun Khan	James Pacchioli	David Shirinyan
Teri Bernstein	Randal Lawson	Elaine Roque	Gary Taka
Ellen Cutler	Emily Lodmer	Josh Sanseri	Toni Trives
Keith Fiddmont	Walt Louie		Julie Yarrish

Interested Parties:

Maria Bonin	Mary Colavito	Mitra Moassessi	Linda Sinclair
Patricia Burson	Kiersten Elliott	Steven Myrow	Eleanor Singleton
Jamie Cavanaugh	Mona Martin	Katharine Muller	Chris Young
Jonathan Cohanne			

Ex-Officio Members:

Janet Harclerode	Parker Jean
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AGENDA

(Items for action are listed alphabetically; items for information are listed numerically)

- I. Call to order
- II. Public Comments*
- III. Approval of Minutes.....3
- IV. Chair’s report
- V. Information Items:
 - 1. IGETC-CSU Decisions – Fall 2012.....6,8
 - 2. CurricUNET Meta
- VI. Action Items:

Consent Agenda (Unit/Hour Changes)

 - a. COSM 29 Salon 2.....13
 - b. COSM 39 Salon 3
 - c. COSM 49 Salon 4
 - d. COSM 59 Salon 5
 - e. COSM 69 Salon 6

**Five minutes is allotted to any member of the public who wishes to address the Curriculum Committee on a specific agenda item, for general public comments, or non-agenda items.*

- f. MLT 2: Hematology, Coagulation, Urine and Body Fluid Analysis.....15
- g. MLT 3: Blood Banking and Immunology
- h. MLT 4: Clinical Chemistry

New Courses:

- a. MLT 5: Clinical Microbiology.....27
- i. MLT 10: Clinical Practicum.....37
- j. PHLBMY I: Phlebotomy for MLT.....34

Distance Education:

- a. MLT 2: Hematology, Coagulation, Urine and Body Fluid Analysis.....42
- b. MLT 3: Blood Banking and Immunology.....42
- c. MLT 4: Clinical Chemistry.....42
- d. MLT 5: Clinical Microbiology.....42
- e. MLT 10: Clinical Practicum.....42
- f. PHLBMY I: Phlebotomy for MLT.....42

Degrees and Certificates:

- a. Medical Lab Technician: Associate in Science Degree & Certificate of Achievement.....48
- b. Dance: Associate in Arts (Update/Unit Change).....49
- c. Mobile Apps Development- Android Department Certificate.....51
- d. Mobile Apps Development- iPhone Department Certificate.....52

New Business:

- e. Proposed Curriculum Committee Reconfiguration.....53

VII. Adjournment

Please advise Guido Davis Del Piccolo (x. 3561), Georgia Lorenz (x. 4277) or Grace Smith (x. 4454) if you are unable to attend this meeting.



CURRICULUM COMMITTEE I MINUTES

Wednesday, April 3, 2013 | 3:00 p.m.

Loft Conference Room – Drescher Hall 300-E

Members Present:

Guido Davis Del Piccolo, <i>Chair</i>	Keith Fiddmont	Walter Meyer	Deborah Schwyter
Georgia Lorenz, <i>Vice Chair</i>	Roberto Gonzalez	Estela Narrie	David Shirinyan
Brenda Antrim	Jemal Hussein	James Pacchioli	Gary Taka
Teri Bernstein		Elaine Roque	Toni Trives
	Walt Louie	Josh Sanseri	Julie Yarrish

Members Absent:

Ellen Cutler	Hasun Khan	Randal Lawson	Emily Lodmer
			Jeffery Shimizu

Others Present:

Garen Baghdasarian	Hency Chu	Jon Kent Ethridge II	Lauren Movius
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M I N U T E S

(Items for action are listed alphabetically; items for information are listed numerically)

I. Call to order:

The meeting was called to order at 3:08 p.m.

II. Public Comments:

None.

III. Approval of Minutes:

The minutes of March 20, 2013 were approved as presented.

IV. Chair's report:

- All the items approved by the Curriculum Committee on March 20, 2013 were approved by the Academic Senate on April 4, 2013.
- The Chair presented to the Committee a preview of the document which shows a proposed revision of Curriculum Committee configuration, including reducing the term from three years to two years. He asked for feedback from the members before or during the meeting of April 17, 2013 when this item will be on the agenda. Librarians suggested holding a permanent non-voting seat on the Committee.

V. Information Items:

Course Updates –

1. HISTORY 1 History Of Western Civilization I
2. HISTORY 2 History Of Western Civilization II
3. HISTORY 11 The United States through Reconstruction
4. HISTORY 12 The United States History
5. HISTORY 33 World Civilizations I
6. HISTORY 34 World Civilizations II

7. MEDIA 10 Media, Gender, and Race

VI. Action Items:

(Items a-j presented by Hency Chu and Garen Baghdasarian)

New Course –

- a. MLT 5: Clinical Microbiology
- b. MLT 6: Phlebotomy for MLT
- c. MLT 7: Clinical Practicum

Distance Education –

- d. MLT 2: Hematology, Coagulation, Urine and Body Fluid Analysis
- e. MLT 3: Blood Banking and Immunology
- f. MLT 4: Clinical Chemistry
- g. MLT 5: Clinical Microbiology
- h. MLT 6: Phlebotomy for MLT
- i. MLT 7: Clinical Practicum

New Program –

- j. Medical Lab Technician AS degree

There was a discussion on the various aspects of the MLT courses presented.

Changes to be made to the existing courses MLT 2, 3, 4 included:

- Unit Change: from 5 to 6 (based on 4.5 Lecture Hours and 4.5 Lab hours)
- Questions were posed regarding the change in science prerequisites for MLT 1.
- The prerequisites for MLT 2, 3, 4, 5, 7 will be all the sciences and MLT 1 (with some added justification)
- There was a discussion on the hybrid delivery of the MLT courses.

Changes to be made to new courses MLT 5, MLT 6 and MLT 7 included:

- MLT 6: Phlebotomy for MLT to be changed to “Phlebotomy I: Phlebotomy for MLT” as this course is not really a part of the MLT sequence and students who have a phlebotomy license would be waived from this course.
- Unit Change: from 5 to 6 (based on 4.5 Lecture Hours and 4.5 Lab hours)
- Changes to be made to the Prerequisite worksheet.

Changes to be made to the MLT Program:

- COM ST 37: Intercultural Communication (3 units) to be added as an option to COM ST 35: Interpersonal Communication under “Prerequisite Courses”
- MLT 6 (to be called PHLBMY 1) to be removed from Program Core Courses and wording to be included which indicates that PHLBMY 1 or phlebotomy license is a prerequisite for MLT 7.
- As a result of the change in unit hours for MLT 2 – 7 and removal of MLT 6 (PHLBMY 1) unit hours will change to 37.

Julie Yarrish made the following motion: **To postpone Items a. to j. until the Curriculum meeting of April 17, 2013 after incorporating all the changes discussed**

Motion Made by: Julie Yarrish
The motion passed unanimously.

Seconded By: Roberto Gonzalez

VII. Adjournment:

The meeting was adjourned at 4:49 p.m.

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW

How To Read a Decisions Report

March, 2013

The following pages list the courses your institution submitted last fall through OSCAR and ASSIST, for approval in California's patterns of general education in the CSU and UC systems.

In about a month, ASSIST will post information about each approved course, including its prefix, number, title, approved area, and dates of approval. In the meantime, you can rely on the following pages as you prepare catalog copy and communicate with those on your campus who manage curriculum and transfer.

Each page of the Decisions Report will tell you:

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW						
IGETC Decisions For Campus						Page 1 of 1 30 March 2009
Course Name	Course Title	Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed Notes
ADJUS 101	Introduction to Administration of Justice		4J	4H	F07	The primary focus of this course (an institution of justice as opposed to criminal behavior) makes it most appropriately accepted in IGETC Area 4H.
ENGL 200	World Literature to the 17th Century		3B	3B	F07	
ENGL 201	World Literature from the 17th Century to the Present		3B	3B	F07	
HIST 154	History of Great Britain from Prehistory Times to 1688		3B 4P	3B 4P	F07	Reviewers suggested that the college consider adopting a more recently published text.

At the top, which **pattern** the decision relates to:

- IGETC (CSU and UC general education)
- GE-Breadth (CSU only)
- American Institutions (CSU only)

Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
n of	4J	4H	F07		The primary focus of this course (an institution of justice as opposed to criminal behavior) makes it most appropriate for acceptance in IGETC Area 4H.

Which area in the pattern your institution proposed for the course.

Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
n of	4J	4H	F07		The primary focus of this course (an institution of justice as opposed to criminal behavior) makes it most appropriate for acceptance in IGETC Area 4H.

Which area is approved for the course. In most cases this is the same as the area proposed -- but not in the example to the left, which was proposed in 4J but approved in 4H.

For courses that are denied, or approved in a different area, the Notes section will give you a reason. Sometimes an *approved* course will also have Notes, such as a request to update the textbooks in use. In these cases the request for revision isn't binding, and you can publicize the approval. Notes aren't published on ASSIST.

Reviewers are careful to keep the GE-Breadth pattern at least as permissive as IGETC, to protect students who switch. So when a course is proposed for an area in IGETC but not for the corresponding GE-Breadth, reviewers will approve in the same area for both sides.

More documents about the review procedure, including detailed guidelines published by the system offices for reviewers of GE courses, are available at <http://www.calstate.edu/app/general-ed-transfer.shtml>.

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW

IGETC Decisions For Campus

Institution Name	Course Name	Course Title	Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
Santa Monica College	ANTHRO 10	Forensic Anthropology		5B	NO			The focus of this course appears to be on the technical aspects of forensic anthropology rather than the basic tenets, principles, and theories of life science.
	ASTRON 6	Archaeoastronomy		4A	4A	S13		
	COM ST 31	Research Methods for Communication Studies		4G	4G	F12		Reviewers had reservations about the extent to which this course addresses principles, concepts, and theories of social science. Recommendation to approve is predicated on the course's being taught in conformity with the objectives of Area 4.
	HIST 14	U.S. Environmental History	ENVRN 14	4F 3B	4F NO	F13		This course is approved in IGETC Area 4 and not in Area 3 because the primary emphasis is on the social scientific perspective; the course does not have a strong cultural focus.

Legend:
N = Not Approved

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW

IGETC Decisions For Campus

Institution Name	Course Name	Course Title	Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
	HIST 32	Global Environmental History	ENVRN 32	4F 3B	4F NO	F13		This course is approved in IGETC Area 4 and not in Area 3 because the primary emphasis is on the social scientific perspective; the course does not have a strong cultural focus.
	POL SC 3	Introduction to Politics: Justice, Power and Agency		4H	4H	F13		
	PSYCH 40	Environmental Psychology	ENVRN 40	4I	4I	F11		This course retains approval in IGETC Area 4I.

Legend:
N = Not Approved

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW

CSU General Education - Breadth Decisions

Institution Name	Course Name	Course Title	Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
Santa Monica College	ANTHRO 10	Forensic Anthropology		B2	NO			The focus of this course appears to be on the technical aspects of forensic anthropology rather than the basic tenets, principles, and theories of life science.
	ASTRON 6	Archaeoastronomy		D1	D1	S13		
	COM ST 31	Research Methods for Communication Studies		D7	D7	S13		Reviewers had reservations about the extent to which this course addresses principles, concepts, and theories of social science. Acceptance is predicated on the course's being taught in conformity with the objectives of Area D.
	HIST 14	U.S. Environmental History	ENVRN 14	D6 C2	D6 NO	F13		This course is approved in CSU GE Area D and not in Area C because the primary emphasis is on the social scientific perspective; the course does not have a strong cultural focus.
	HIST 32	Global Environmental History	ENVRN 32	D6 C2	D6 NO	F13		This course is approved in CSU GE Area D and not in Area C because the primary emphasis is on the social scientific perspective; the course does not have a strong cultural focus.

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW

CSU General Education - Breadth Decisions

Legend:
N = Not Approved

Institution Name	Course Name	Course Title	Cross Listed Courses	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
Santa Monica College	POL SC 3	Introduction to Politics: Justice, Power and Agency		D8	D8	F13		
	PSYCH 40	Environmental Psychology	ENVRN 40	D9	D9	F11		This course retains approval in CSU GE Area D9.

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW

CSU American Institution Decisions For Campus

Legend:
N = Not Approved

Institution Name	Course Name	Course Title	Area Proposed	Area Accepted	Date Accepted	Date Removed	Notes
Santa Monica College	HIST 32	Global Environmental History	ENVRN 32	US-1	NO		This course is denied for US-1 because it does not meet any of the criteria for this area.

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW
 2012-2013 off-OSCAR Review Reports to Community College Campuses

Institution	Course	Area/Term Proposed	Submission Date	Area Accepted	Term Accepted	Notes
Santa Monica	HIST 47	1B, 4F/F12	1/18/2013	1B 4F A3 D6	F12 F12 retain F12	

ONLINE SERVICES FOR CURRICULUM AND ARTICULATION REVIEW
 2012-2013 off-OSCAR Review Reports to Community College Campuses

Institution	Course	Area/Term Proposed	Submission Date	Area Accepted	Term Accepted	Notes
Santa Monica	HIST 47	1B, 4F/F12	1/18/2013	1B 4F A3 D6	F12 F12 retain F12	

Changes to Cosmetology Salon Courses

due to elimination of repeatability (while also ensuring ability of students to complete required hours for State Board of Cosmetology)

Cosmetology Salon Courses	CURRENT Hours Per Week (Semester Equivalent)	CURRENT Units	PROPOSED Hours Per Week (Semester Equivalent)	PROPOSED Units
COSM 29 (Salon 2)	3 (lecture)	1	6 (lab)	2
COSM 39 (Salon 3)	6 (lecture)	2	12 (lab)	4
COSM 49 (Salon 4)	12 (lecture)	4	24 (lab)	6
COSM 59 (Salon 5)	12 (lecture)	4	24 (lab)	6
COSM 69 (Salon 6)	12 (lecture)	4	24 (lab)	6

Transferability: Does NOT transfer to CSU or UC
 SMC GE Area: Does NOT satisfy any area of SMC GE:

Degree Applicability: Credit - Degree Applicable

Prerequisite(s):
 COSM 11A
 COSM 11B
 COSM 11C
 COSM 11D
 COSM 14A
 COSM 14B
 COSM 16
 COSM 18

MLT Courses and Program Notes for Curriculum Committee

1. Admission to the MLT Program (and MLT 1):
 - a. Students must apply to be admitted to the MLT Program.
 - b. Students must have successfully completed (or be in process of completing) the following courses to be admitted:
 - i. Anatomy 1 and
 - ii. Chemistry 12 and
 - iii. Microbiology 1 and
 - iv. Physiology 3
 - c. Only students admitted to the program will be allowed to enroll in MLT 1.

2. MLT Course Prerequisites
 - a. MLT 1 Prerequisite: "Admittance to the MLT Program"
 - b. MLT 2-5 Prerequisites:
 - i. MLT 1 and
 - ii. Anatomy 1 and
 - iii. Chemistry 12 and
 - iv. Microbiology 1 and
 - v. Physiology 3
 - c. MLT 10 Prerequisites:
 - i. MLT 1, 2, 3, 4, 5 and
 - ii. Phlebotomy 1 or CA Certified Phlebotomy Technician License (CPT 1 or 2)

3. PHLBMY 1 Prerequisites
 - a. Must be 18 years old
 - b. High School diploma or GED
 - c. Valid "CPR for Healthcare Providers" Certification
 - d. Physical Exam/Immunizations Current
 - e. Pass Background Check (cannot be on probation)
 - f. Ability to communicate well in English

COMMON CHARACTERISTICS FOR MLT 2, 3, 4, and 5

Changes to existing courses (MLT 2, 3, 4) include:

- Unit Change: from 5 to 6 (based on 4.5 Lecture Hours and 4.5 Lab hours)
- DE Hybrid delivery (Lecture via DE, Lab on ground)

Course Unit/Hours	
Credit Hours	6.00
Weekly Lecture Hours	4.50
Weekly Laboratory Hours	4.50
Total Semester Instructional Hours	162.00
Repeatability	May be repeated 0 time(s)
Grading Methods	Letter Grade or P/NP
Transfer/General Ed: Transfers to CSU	
Does NOT satisfy any GE area in any GE Pattern	
Program Applicability	
Designation	Credit - Degree Applicable
Proposed For	AS Degree and Certificate of Achievement -Medical Lab Technician
Prerequisites : ANATMY 1, CHEM 12, MCRBIO 1, MLT 1, PHYS 3,	
Methods of Presentation	Lab Lecture and Discussion
Other Methods	Demonstration Case Studies Self Studies Online modules either at http://www.medtraining.org/ or on eCollege
Methods of Evaluation	<ul style="list-style-type: none"> • 30% - Final exam • 45% - Lab Reports: Laboratory Assignments Lab Practical - Practicum style tests to show working knowledge of procedural tests • 5% - Other: Core Abilities - lab skills/technique performance as assessed by instructor throughout course • 20% - Quizzes • 100% - Total
Minimum Qualification	<p>Faculty must demonstrate adequate knowledge and proficiency in their content areas and the ability to teach effectively at the appropriate level. (e.g., clinical laboratory scientists/medical technologists, clinical laboratory technicians/medical laboratory technicians, administrators, managers and physicians). Requirements according to NAACLS Standards Required for Accredited CLT/MLT Programs.</p> <p>Instructors employed for practical experience are licensed physicians and surgeons, doctorate scientists, clinical laboratory bioanalysts, clinical laboratory scientists, licensed clinical laboratory specialist, licensed medical laboratory technicians with five years of practical experience, or certified public health microbiologists. Requirements according to State of California regulations DPH-08-001.</p>

MLT 2 - Hematology, Coagulation, Urine and Body Fluid Analysis

Course Cover	
Catalog Course Description	This course will emphasize the theory and practice of manual and automated procedures in hematology and coagulation and the relationship of these procedures to the diagnosis of disease. This course will also examine the physical, chemical, and microscopic properties of urine and other body fluids and correlate selected chemical and microscopic constituents of urine and other body fluids with various disease states. Case studies and online modules will be used to integrate laboratory tests with clinical scenarios to emphasize their clinical significance.
Course Objectives	
Regarding Hematology	
1. Discuss hematopoiesis.	
2. Discuss the proper method of blood collection.	
3. Review basic microscopic and spectroscopic methodologies.	
4. Define cellular structure in relationship to morphology seen with Wright and Giemsa staining.	
5. Identify when shown peripheral blood smears, Kodachrome, laserdisc or computer slides: -All stages of WBC, RBC, and platelet maturation. -Normal and abnormal RBC and WBC morphology and RBC and WBC inclusions. -Cells found in normal peripheral smears versus those found in abnormal smears.	
6. Discuss hemoglobin synthesis, structure, function, and metabolism.	
7. Categorize the more common anemias by pathophysiology, utilizing pertinent laboratory data.	
8. State the principle, methodology and normal results for all routine hematology tests.	
9. Classify leukocyte abnormalities presented as to whether reactive, malignant, hereditary or acquired. Use the FAB nomenclature to classify leukemias.	
10. Discuss universal precautions and safety.	
11. Discuss quality control, quality assurance in the hematology laboratory.	
12. Discuss basic theories of hemostasis including: -Interrelationship of the three systems in the hemostatic mechanism. -Blood coagulation factors. -Cascade theory. -Fibrinolytic mechanism. -Regulatory mechanisms.	
13. Discuss routine and special laboratory examination of the hemostatic mechanism.	
14. Discuss qualitative and quantitative platelet disorders.	
15. Discuss antithrombic therapy as it relates to laboratory procedures.	
16. Discuss hemostasis deficiencies, distinguishing between hereditary and acquired disorders.	
17. Evaluate given clinical and laboratory data and determine cause of defects in the hemostatic mechanism.	
18. Discuss the principles of instrumentation in the hematology and coagulation laboratory.	
19. Associate normal peripheral blood and common pathological blood states with histograms and scatter grams.	
Regarding Coagulation	
1. Demonstrate proper use of the various anticoagulants required in the clinical laboratory.	
2. Perform the procedures used for the collection of blood samples, properly label samples, and determine specimen acceptability for hematology and coagulation procedures.	
3. Select appropriate test protocol from the hematology and coagulation lab manual.	

4. Demonstrate working knowledge of and operate the equipment required in a hematology and coagulation laboratory including pipettes, microscopes, centrifuges, automated cell counters, semi-automated and automated optical clot detection equipment.	
5. Perform appropriate preventative maintenance as required, identify basic malfunctions, and perform preliminary problem solving on analyzers.	
6. Demonstrate proficiency in the techniques of the procedures listed in the outline, properly recording and reporting results, including critical values, quality control, recognizing inconsistencies that need investigation before reporting results.	
7. Associate common pathological states with common cytochemical stains.	
8. Associate common pathological states with histograms.	
9. Perform all procedures will regard to prescribed safety protocol.	
10. Apply the laboratory data to the stated case studies and discuss the implications of these cases to the study of hematology.	
11. Demonstrate ethical and professional responsibility in the performance of all procedures.	
Regarding Urinalysis	
1. Identify the forces involved in fluid formation in the body and correlate the body cavity with containing fluid.	
2. Describe the basic physiology and anatomy of the kidney and relate this function to normal and abnormal test results.	
3. Describe disease states of the renal system as to etiology, clinical symptoms and expected laboratory results.	
4. Relate the appropriate method of collection and preservation of urine specimens for all urinalysis testing. Perform with efficiency and speed routine urinalysis and tests for tubular and glomerular function.	
5. List reagents and techniques used to identify amino acids, carbohydrates other than glucose, mucopolysaccharides, mucolipids, amino acids, and proteins.	
Regarding Body Fluids	
1. Correctly apply quality control procedures to perform testing on body fluids.	
2. Correctly prepare specimens for cell morphology examination and describe and recognize various cell types that occur in body fluids.	
3. Relate the origin, composition, the methods of analysis, the diagnostic importance of test results and explain the specific methodology used for each of the following body fluids: Amniotic Fluid Cerebrospinal Fluid Synovial Fluid Seminal Serous	
Course Content	
50%	Hematology
20%	Coagulation
20%	Urinalysis
10%	Body Fluid Analysis
Total: 100%	
Lab Content	
30%	CBC Differentials
10%	Lab Safety
20%	Manual Methodologies in Hematology
30%	Automated Methodologies in Hematology, Coagulation, Urinalysis and Body Fluids

10%	Instrumentation and Quality Control
Total: 100%	
Appropriate Textbooks	
1. Bernadette F. Rodak, George A. Fritsma, & Kathryn Doig. <i>Hematology: Clinical Principles and Applications</i> , 3rd ed. -, 2007, ISBN: 9781416030065.	
2. Susan King Strasinger, Marjorie Schaub Di Lorenzo. <i>Urinalysis And Body Fluids (Paperback)</i> , ed. -, 2008, ISBN: 9780803616974.	
Other	
1. Online MTS (Medical Training Solutions) modules at http://www.medtraining.org/ Provided by Medical Training Solutions, Inc., PO Box 17349, Seattle, WA 98127, site licenses will be purchased for students to be utilized either via eCollege or on-campus in the Biology computer lab	
Sample Assignments	
<p>1. Online module: "Peripheral Blood" Student will access module content which includes images, video and text through http://www.medtraining.org/ and then complete the online module quizzes. Scores will then be recorded and transmitted to instructor. Upon successful completion of "Peripheral Blood" module, the student will be able to:</p> <ol style="list-style-type: none"> 1. Describe the steps necessary for the preparation of a Wright-stained peripheral blood smear and its proper microscopic evaluation. 2. Identify the sequence of cell types encountered during normal maturation of myeloid, erythroid, and megakaryocytic cells in the marrow. 3. Recognize and name the normal and abnormal forms of neutrophils, erythrocytes, lymphocytes, macrophages, and platelets using proper medical terminology. 4. Correlate single morphologic abnormalities seen in any of the above cell lineages to one or more specific disease states. 5. Integrate combinations of morphologic abnormalities involving one or more cell lineages to suggest a diagnosis of a disease state. <p>2. Online module: "Urinalysis" Student will access module content which includes images, video and text through http://www.medtraining.org/ and then complete the online module quizzes. Scores will then be recorded and transmitted to instructor. Upon successful completion of "Urinalysis" module, the student will be able to:</p> <ol style="list-style-type: none"> 1. Describe the anatomic structures involved in urine formation. 2. Describe the three parts of a complete urinalysis. 3. Describe three methods of enhancing the visualization of urinary sediment structures. 4. Identify and differentiate the common cell types found in urinary sediment. 5. Enumerate red blood cells and white blood cells in unstained urinary sediment. 6. Identify the types of casts seen in urinary sediment and state the clinical significance associated with each finding. 7. Differentiate between crystals found in normal urine and crystals associated with clinical disease. 8. Describe typical urinary sediment findings and key biochemical findings associated with selected renal disorders. 	
Student Learning Outcomes	
1. Evaluate the suitability of blood specimens collected and submitted to the laboratory for hematology and coagulation analyses according to the specific acceptance and rejection criteria.	
2. Correlate the results observed from a complete blood count (CBC) panel with associated diseases	

- | |
|---|
| 3. Describe the mechanisms and principles of common automated instruments used in the hematology and coagulation department |
| 4. Describe the composition, formation, and function of selected body fluids discussed in class. |
| 5. Evaluate the suitability of the body fluids collected and submitted to the laboratory for analysis according to the specific acceptance and rejection criteria |
| 6. Describe the clinical significance of the abnormal and normal test results obtained in a urinalysis assay |

MLT 3 - Blood Banking and Immunology

Course Cover	
Catalog Course Description	This course introduces the theory of antigen-antibody reactions as it relates to blood grouping and typing, antibody detection and compatibility testing. Also discussed are blood donor screening and component preparations, immunologically related diseases, transplantation, and principles of antigen-antibody based tests. This course will utilize computer technology to enhance student learning.
Course Objectives	
1. Relate the physical and biochemical characteristics of the immunoglobulins.	
2. Discuss basic genetics and apply them to the necessary areas of blood banking.	
3. Discuss the rationale behind the utilization of serological reactions in the diagnoses of disease.	
4. Outline the principle behind the detection of antigen-antibody reactions in the following methodologies, antigen or antibody binding tests, fluid precipitation, gel precipitation, agglutination reactions, complement fixation and neutralization.	
5. Describe the ABO, Rh and other blood group antigens, relating methods for detecting and their clinical significance.	
6. Discuss the function of blood and component transfusion, the indications and contraindications for utilization and the laboratories role in preparation.	
7. Describe in detail the procedures performed in a clinical blood bank and serology laboratory.	
8. Discuss clinical conditions associated with Immunohematology.	
9. Demonstrate general knowledge of the wide variety and far reaching consequences of diseases of the immune system.	
10. Relate quality assurance regulation, safety and regulatory issues in Immunohematology.	
11. Describe HLA and its nomenclature, genetics, role in paternity testing and histocompatibility typing.	
12. Correctly obtain and process specimens to be used for immunohematology.	
13. Prepare red cell suspensions for use in blood bank procedures.	
14. Recognize and correctly grade hemagglutination, hemolysis and latex agglutination reactions. Perform serial dilution techniques. Titer positive antibody screens when necessary within one dilution of instructor.	
15. Recognize importance of antigen-antibody ratios in immunological reactions.	
16. Perform and interpret direct and indirect antiglobulin tests with 100% accuracy while recognizing and avoiding common pitfalls of technique. Utilize Coombs control cells and interpret correctly.	
17. Perform and interpret routine ABO forward and reverse grouping and Rh(o) (D)/weak D(Du) testing with 100% accuracy.	
18. Perform and antibody screen using commercially prepared cells with 80% accuracy.	
19. Perform a routine cross match with 100% accuracy and determine if the unit can be safely transfused realizing when the pathologist should be consulted.	
20. State the importance of quality assurance programs for blood banking and serology and perform routine procedures. Describe elements of a quality control program.	
21. State the principle behind and make decisions when to use variety of elution and absorption techniques in blood banking. Evaluate elution and absorption techniques.	
22. Perform and interpret routine cell panel for detection of red cell antibodies and be familiar with special techniques employed in antibody identification.	
23. Perform and evaluate other (than ABO) blood group antigen typing (including additional Rh antigens).	

24. Recognize discrepancies in ABO grouping and utilize basic problem solving skills to resolve these discrepancies.	
25. Recognize incompatible results on cross matching procedures. Perform preliminary problem solving techniques to determine if said units could safely transfused. Follow SOP for dealing with incompatibilities.	
26. Select appropriate blood group and type for a variety of blood components for transfusion therapy in routine and non-routine situations. State AABB appropriate handling and storage for the variety of blood products.	
27. Determine the acceptability of blood donor, be familiar with processing of blood, appropriate testing and labelling once drawn.	
28. Using DAT, ABO, Rh, and elution studies, perform cord blood workups and identify potential causes of Hemolytic Disease of the Newborn (HDN).	
29. Perform and evaluate testing for administration of Rhogam.	
30. Perform the functions of the clinical laboratory in the investigation transfusion complications.	
31. State and follow established procedure for emergency transfusions.	
32. Complete and maintain required blood banking records for accreditation, AABB inspection, federal guidelines.	
33. Perform and interpret RPR testing for syphilis.	
34. Describe routine procedures used in syphilis.	
35. Outline procedures and given results interpret serological testing for hepatitis.	
36. Perform and interpret rapid strep serological tests, be familiar with procedures for Antistreptolysin O titers, rapid cold agglutinin detection and cold agglutinin titers.	
37. Be familiar with testing for Bacterial Agglutinations.	
38. Perform and interpret serological tests for C-reactive protein, infectious mononucleosis, and rheumatoid arthritis.	
39. Perform and interpret serological testing for pregnancy.	
40. Outline procedures and given results interpret results from ANA testing.	
41. Discuss antibodies detected in a variety of autoimmune diseases.	
42. Perform and interpret fetal screening for fetal-maternal bleed. Calculate vials of Rhogam necessary to administer.	
43. Demonstrate familiarity with serological rubella testing.	
44. Articulate currently available methods for HIV testing.	
Course Content	
10%	ABO Rh blood groups
10%	Antigen typing and antibody identification
10%	Serology
10%	Blood donor selection and testing
10%	Transfusion therapy and reactions
10%	Immune system overview (cells, basic functions, biochemical characteristics)
10%	Precipitation and agglutination techniques
10%	Cross matching, special tests and immunological reactions
10%	Immuno disorders and diseases
10%	Screening and testing methods (fetal specific as well as for various diseases)
Total: 100%	

Lab Content	
30%	ABO and Antibody ID
20%	Manual Methodologies in Immunohematology
20%	Specimen Acceptance and Rejection
10%	Automated Technologies
10%	Quality Control
10%	Instrument Maintenance and Repair
Total: 100%	
Appropriate Textbooks	
Textbooks such as the following are appropriate:	
1. Kathy D. Blaney, MS, BB(ASCP)SBB and Paula R. Howard, MS, MT(ASCP)SBB. <i>Basic & Applied Concepts of Immunohematology</i> , 2nd ed. -, 2008, ISBN: 978-0-323-048.	
Other	
1. Online MTS (Medical Training Solutions) modules at http://www.medtraining.org/ Provided by Medical Training Solutions, Inc., PO Box 17349, Seattle, WA 98127, site licenses will be purchased for students to be utilized either via eCollege or on-campus in the Biology computer lab	
Sample Assignments	
<ol style="list-style-type: none"> 1. Online module: "Ordering and Administering" Student will access module content which includes images, video and text through http://www.medtraining.org/ and then complete the online module quizzes. Scores will then be recorded and transmitted to instructor. Upon successful completion of "Ordering and Administering" module, the student will be able to: <ol style="list-style-type: none"> A. List the steps required to correctly order blood products for transfusion. B. Identify basic blood products and explain indications for use C. Define Zero Tolerance Policy of patient identification during transfusion administration D. List the steps required to complete a bedside check of a patient receiving a blood transfusion E. Identify the steps to perform an evaluation of a blood product before transfusion. F. Recognize signs and symptoms of an adverse event during and following blood product administration G. Describe actions to perform if a transfusion reaction occurs 2. Case Study <p>Working in groups of 3 to 4, students will be presented with a case study that describes a brief medical scenario. Following the scenario will be related questions that the students will answer and then present the case study to the class. The following is an example of a possible case study.</p> <p>A 22-year-old man with a history of allergic reactions to peanuts was admitted to our hospital in a coma. After inadvertently ingesting satay sauce, which contains peanuts, during a Chinese meal, he had become unwell and had had a cardiorespiratory arrest that resulted in cerebral anoxia, coma, and brain death. A high level of peanut-specific IgE was detected in his serum ... multiple organs were subsequently procured. The donor's HLA phenotype was A1,24;B8,44;DRB1*03,13.</p> <p>...the donor's liver and right kidney were given in transplantation to a 35-year-old man, and the left kidney and pancreas were given to a 27-year-old woman. The man (HLA phenotype, A2,19;B12,- ;DRB1*07,13) had end-stage renal failure.... The woman (HLA phenotype, A1,24;B8,44;DRB1*03,04) had chronic renal failure....</p>	

Both transplant recipients received immunosuppressive induction therapy with muromonab-CD3 (OKT3) and corticosteroids, azathioprine, and cyclosporine. Neither had ever had any allergy to peanuts. Three months after transplantation, the recipient of the liver-kidney transplant reported a skin rash and laryngeal dyspnea after eating peanuts. Allergy to peanuts was diagnosed on the basis of the clinical findings; the absence of specific IgE antibodies before transplantation, their presence at the time the symptoms appeared, and their decline thereafter; and a positive basophil degranulation test.

Questions

- A. What does HLA stand for? What is an HLA phenotype?
- B. How does HLA relate to MHC in immune physiology?
- C. Why is it important to understand the “HLA phenotypes” of the individuals in this case?
- D. From what you know about the structure of an antibody, explain how an IgE can be “peanut specific.”
- E. One way to test for an allergy is to mix a specific allergen with basophils and mast cells from a patient and look for “degranulation.” What is occurring when these cells degranulate? How does this become a positive test for a specific allergy?
- F. Why were the patients put on an immunosuppressive therapy after their transplantations?

Student Learning Outcomes

1. State the principles of the common immunology/ serology assays performed in the immunology department of a clinical laboratory
2. Correlate an abnormal immunology/ serology test result with the appropriate disease or sets of common diseases
3. Evaluate the suitability of specimens submitted to the immunology department according to a specific criteria of specimen acceptance and rejection

MLT 4 - Clinical Chemistry

Course Cover	
Catalog Course Description	This course will discuss basic interpretations of biochemistry and the concentration of enzymes, carbohydrates, lipids, proteins, electrolytes, and blood gases. The need for drug testing and evaluation will also be a part of this curriculum. The student will perform routine clinical tests on biological fluids, maintain quality assurance records, and perform preventative maintenance on instrumentation. This course will utilize computer technology to enhance student learning.
Course Objectives	
Regarding Clinical Chemistry, upon completion of the lecture portion of this course the student shall be able to:	
1. Relate the proper specimen collection and handling, type of quality control used, reference ranges, principle of analysis currently available, and sources of analytical errors for each of the analytes discussed or approached in the course.	
2. Outline the normal digestion, anabolism and catabolism of carbohydrates, proteins, and lipids within the body.	
3. Discuss the basic principles of laboratory instrumentation and state how they relate to the measurement of serum or body fluid analytes.	
4. Demonstrate an understanding of the mechanism by which the body regulates water and pH homeostasis.	
5. Discuss the anatomy and physiology of the following organs or systems. State some of the common pathological states and what analyte measurements would be utilize to monitor the function of each: Renal, Cardiovascular, Hepatic, Thyroid, Bone, and Pancreatic.	
6. List the reasons that therapeutic drugs are monitored and state the current drugs most often monitored and the procedure most often used.	
Regarding Clinical Chemistry, upon completion of the laboratory portion of this course the student shall be able to:	
1. Demonstrate the following skills as pertaining to each individual test that is listed. i. Relate the proper specimen collection and handling techniques. ii. Perform acceptable quality control measures iii. State if results are within reference range iv. State principle of analysis of method available v. State sources of error and methods to minimize or eliminate these errors. vi. Perform the analysis within +/- 2SD of the recognized mean for a control serum; Proteins, enzymes, electrolytes, carbohydrates, lipids, nonprotein nitrogen; Perform & Calculate: creatinine clearance, anion gap, osmolarity, dilutions, VLDL, LDL, Beers Law.	
2. Explain the basic principles of laboratory instrumentation available in the clinical labs.	
3. Perform routine preventative maintenance and troubleshooting procedures on the instruments available.	
4. Determine if the results on different analytes are consistent as far as determining the status of the following organs or systems: Renal, cardiovascular, hepatic, pancreatic.	
Course Content	
25%	Carbohydrates, Acid Base and Electrolytes
25%	Proteins and Other Nitrogen-Containing Compounds
25%	Enzymes, Lipids and Lipoproteins
25%	Special Chemistry (Endocrinology, Tumor Markers, TDM, Toxicology)

Total: 100%	
Lab Content	
10%	Laboratory Safety
30%	Pipetting Skills and Reagent Preparatin
20%	Quality Control
30%	Automated Instrumentation and Methodologies
10%	Computer Use for Instrumentation
Total: 100%	
Appropriate Textbooks	
1. Michael L. Bishop, Edward P. Fody, and Larry Schoeff. Baltimore, MD. <i>Clinical Chemistry: Principles, Procedures, Correlations</i> , 5th ed. Lippincott Williams & Wilkins, 2005, ISBN: 0-7817-4611-6.	
Other	
1. Online MTS (Medical Training Solutions) modules at http://www.medtraining.org/ Provided by Medical Training Solutions, Inc., PO Box 17349, Seattle, WA 98127, site licenses will be purchased for students to be utilized either via eCollege or on-campus in the Biology computer lab	
Sample Assignments	
<p>1. Online module: "Protein Electrophoresis": Student will access module content which includes images, video and text through http://www.medtraining.org/ and then complete the online module quizzes. Scores will then be recorded and transmitted to instructor. Upon successful completion of "Protein Electrophoresis" module, the student will be able to:</p> <ul style="list-style-type: none"> A. Describe the methods of agarose gel electrophoresis, immunofixation, CSF isoelectric focusing and densitometry. B. Name the clinical conditions most commonly associated with monoclonal gammopathy, and some key clinical features of each condition. C. View an agarose gel, an immunofixation, a densitometry, and determine if a monoclonal gammopathy is present. If it is present, the user will be able to identify the immunoglobulin type. D. View an agarose gel of serum, urine, or an isoelectric focusing gel of cerebrospinal fluid and identify the electrophoresis pattern (e.g., inflammation, liver disease, hemolysis, alpha-1 antitrypsin deficiency, tubular proteinuria, CSF oligoclonal banding, etc). Online exercise has an Exam following the content. <p>2. Online module: "Cardiac Markers" Student will access module content which includes images, video and text through http://www.medtraining.org/ and then complete the online module quizzes. Scores will then be recorded and transmitted to instructor. Upon successful completion of "Cardiac Markers" module, the student will be able to:</p> <ul style="list-style-type: none"> A. Describe basic cardiac anatomy, physiology, and direction of coronary blood flow B. Correlate the electrical activity of the heart with coronary blood flow C. Define the terms: angina, ischemia, cardiovascular disease, and coronary artery disease D. List the symptoms of ischemia E. Describe the pathophysiology of coronary artery disease, acute coronary syndrome, acute myocardial infarction, and heart failure F. List the criteria for diagnosing an acute myocardial infarction G. List the causes and symptoms of heart failure H. Identify the current biomarkers of acute myocardial infarction I. Identify the current biomarker for heart failure 	

- J. Discuss the Framingham Score, including risk factors used in the calculation
 - K. Identify biomarkers of coronary risk assessment
3. Case Study

Working in groups of 3 to 4, students will be presented with a case study that describes a brief medical scenario. Following the scenario will be related questions that the students will answer and then present the case study to the class. The following is an example of a possible case study.

A 31-year-old woman was admitted into a regional hospital for abdominal pain, decreased appetite, malaise, confusion, and tea-colored urine. Investigations showed acute liver failure with a markedly decreased liver function characterized by greatly increased aminotransferases, bilirubin concentration, prothrombin time and international normalized ratio. There was no history of liver disease or intake of herbal medicines or over-the-counter medications. Her condition worsened 2 days later, and she was transferred to our hospital for further management and the possibility of liver transplantation. A physical examination revealed a jaundiced woman in a fair general condition and with a soft but tender right upper quadrant with no guarding or rebound tenderness of the abdomen. She went into a semicomatose state 1 day later. Routine laboratory testing of a blood sample obtained on her arrival in the hospital revealed the following results: bilirubin, 1210 $\mu\text{mol/L}$ (reference interval, 7–19 $\mu\text{mol/L}$); alanine aminotransferase, 6170 U/L (reference interval, 5–31 U/L); aspartate aminotransferase, 5080 U/L (reference interval, 12–28 U/L); alkaline phosphatase, 150 U/L (reference interval, 34–104 U/L); ammonia, 171 $\mu\text{mol/L}$ (reference interval, 0–33 $\mu\text{mol/L}$); lactate dehydrogenase, 6830 U/L (reference interval, 200–360 U/L); prothrombin time, 39.7 s (reference interval, 11.3–13.2 s); international normalized ratio, 3.3; acetaminophen, 121 $\mu\text{mol/L}$ (therapeutic up to 100 $\mu\text{mol/L}$). Other results were unremarkable. A serologic evaluation was negative for hepatitis A and B. The plasma acetaminophen concentration prompted the clinical suspicion of drug overdose, but she denied taking acetaminophen. The patient's liver enzymes, prothrombin time, international normalized ratio, and acetaminophen concentrations were monitored on subsequent days. Her general condition and liver function gradually improved, but her plasma acetaminophen concentration remained $>100 \mu\text{mol/L}$. Failure of the liver to metabolize the drug was suspected, and liver transplantation was contemplated at that juncture.

- A. What are the common causes of acute liver failure?
- B. What is the usual pharmacokinetic pattern of acetaminophen after ingestion, and how does overdose cause liver injury?
- C. What methods are available to measure acetaminophen concentrations?
- D. What factors interfere with acetaminophen measurement?

Student Learning Outcomes

1. Evaluate suitability of clinical chemistry specimens according to the criteria of acceptance and rejection.
2. Prepare chemistry specimens for analysis.
3. Recognize normal chemistry test results and correlate abnormal results with the correct disease.

MLT 5 - Clinical Microbiology

Course Cover	
Catalog Course Description	Course will emphasize basic skills, principles, and laboratory techniques for staining, culturing, isolation, biochemical techniques and identification of human pathogenic microorganisms. Included in the course are techniques used to determine the susceptibility of pathogenic microorganisms to different antibiotics and other drugs. This course will also cover basic principles in identification of parasites, viruses, and fungal microorganisms
Course Objectives	
Upon satisfactory completion of the course, students will be able to:	
1. Describe the modes of disease transmission and host susceptibility.	
2. Identify organisms of clinical or medical importance.	
3. Correlate laboratory results such as culture and microscopic morphology of microorganisms, biochemical, and molecular studies with diseases.	
4. Perform and interpret susceptibility testing.	
5. Practice safe laboratory techniques and infection control in the microbiology department.	
6. Perform, interpret, and troubleshoot quality control procedures.	
7. Explain the principle, operation, and maintenance of automated instruments.	
8. Describe procedures used for specimen collection of microbiological specimens from various sites in the body.	
Course Content	
20%	Bacteriology: Pre-analytical assessment and specimen collection
20%	Bacteriology: Analytical assessment - organism identification, biochemical assays, and susceptibility testing
20%	Bacteriology: Post-analytical assessment - reporting critical and normal values and troubleshooting
10%	Case studies
10%	Mycology
10%	Virology
10%	Parasitology
Total: 100%	
Lab Content	
30%	Pathogenic Organism Identification
30%	Susceptibility Testing
20%	Virology, Mycology, and Parasitology
10%	Automated Testing in Microbiology
10%	Specimen Collection and Processing
Total: 100%	
Appropriate Textbooks	
1. Forbes, B.A., D.F. Sahm, and A.S. Weissfeld. <i>Bailey & Scott's Diagnostic Microbiology - Text and Study Guide Package, 12e [Hardcover]</i> , 12 ed. Elsevier/ Evolve, 2007, ISBN: 0323052541.	
Sample Assignments	

1. Lecture Assignment:

- A. Draw a flow chart of organisms that belong to the Streptococcus genus.
- B. Include in the flow chart the biochemical properties of each of the pathogenic organisms and how they are used to distinguish the organisms from each other.

2. Laboratory Assignment:

- A. Set up a Triple Sugar Iron assay for the following organisms in the Enterobacteriaceae family: E. coli, S. typhimurium, S. sonnei, P. mirabilis, and P. aeruginosa.
- B. Classify the organisms as fermenters or non-fermenters according to the TSI results.
- C. Determine the antibiotic susceptibility patterns of each of the represented organisms.

Student Learning Outcomes

1. Classify pathogenic organisms according to their characteristics and properties as bacterial, viral, parasitic, or fungal

2. Select the appropriate media used to culture human specimens and correctly identify the organisms, if any, that are found.

3. Determine the antibiotic susceptibility patterns of the most common pathogens encountered in the clinical laboratory.

4. Identify pre-analytical factors that can potentially affect the test results and utilize the specimen acceptance and rejection criteria prior to specimen analysis.

Prerequisite Worksheet

Medical Laboratory Technician Courses 2, 3, 4, and 5
Prerequisite: CHEM 12, ANATMY 1, PHYS 3, MCRBIO 1, MLT 1

SECTION 1 - CONTENT REVIEW: Check items 1-9 below. If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

Prerequisite Worksheet

Note: While the MLT courses each deal with particular aspects of the discipline, they are part of the MLT program as a whole. This is why there is such an extensive prerequisite list, it applies to entrance skills that will be necessary for all courses in the MLT series that lead up to their Practicum course (MLT 10). Please see specific courses for how the exit skills of the prereqs apply to each individual MLT course.

ENTRANCE SKILLS FOR: MLT 2, 3, 4, & 5

A)	Ability to handle chemicals safely. (Chem 12)
B)	Knowledge of common chemical concepts such as atom, molecule, major types of bonding, ionization, oxidation, reduction and polarity (Chem 12)
C)	Ability to identify common organic functional groups (Chem 12)
D)	Knowledge of acidity, basicity and pH calculation (Chem 12)
E)	Ability to properly use common laboratory equipment and glassware (Chem 12)
F)	Ability to perform basic lab skills such as solution preparation, dilution and titration (Chem 12)
G)	Ability to achieve a reasonably high degree of reproducibility, accuracy and precision in their lab results (Chem 12)
H)	Ability to apply dimensional analysis and demonstrate a working knowledge of metric units including those for mass (g), length (m), area (m ²), volume (L and m ³), energy (J), quantity (moles) and concentration (M) as well as metric prefixes and abbreviations such as kilo, micro, nano, etc (Chem 12)
I)	Ability to clearly focus on materials of a variety of sizes, thickness, and densities under a microscope. (Anatomy 1)
J)	Ability to identify tissues, organs, and body structures of the human body at a detailed level in actual specimens as well as in models and other representations. (Anatomy 1)
K)	Ability to describe the structures, interrelationships and general functions of major structures, organs, and organ systems of the human body. (Anatomy 1)
L)	Ability to correlate concepts of microscopic structure, macroscopic structure, and functions to the whole human body. (Anatomy 1)
M)	Ability to describe the various organs that make up the following systems: Nervous, Endocrine, Circulatory, Immune, Respiratory, Excretory, Digestive, Reproductive. (Anatomy 1)
N)	Ability to describe an understanding of the major principles of cell biology including all major structures, functions, and physiological activities. (Physiology 3)
O)	Ability to describe and distinguish the four classes of macromolecules, their respective subgroups, and their structural and functional characteristics. (Physiology 3)
P)	Understanding of basic physiological processes including respiration, digestion, circulation, excretion, homeostasis, blood pressure, neuronal transduction, hormone action, sensory physiology, muscular contractions, specific and nonspecific immunity, reproduction. (Physiology 3)
Q)	Ability to focus microscopes appropriately in selecting lighting direction and intensity, magnification, focus including use of the iris diaphragm, condenser, and filters, and effective ability to recognize structures viewed. (Microbiology 1)
R)	Ability to make reliable observations and record these observations systematically. (Microbiology 1)
S)	Knowledge of aseptic transfer and pure culture techniques to ensure bacterial contamination control. (Microbiology 1)
T)	Understanding of infectious diseases associated with mode of transmission, etiology, and diagnosis. (Microbiology 1)

U)	Knowledge of techniques associated with cultivating, staining, and identification of bacterial cultures. (Microbiology 1)
V)	Knowledge of procedures associated with the laboratory Quality Assessment program to ensure quality patient care as required by local, state, and federal regulatory agencies (MLT 1)
W)	Ability to distinguish between tasks associated with the pre-analytical, analytical, and post-analytical stages of testing (MLT 1)
X)	Understanding of the laboratory safety procedures critical to performing assays in a clinical laboratory setting (MLT 1)
Y)	Ability to read and follow lab procedures (multiple courses)
Z)	Ability to understand and follow lab safety rules (multiple courses)
AA)	Ability to apply critical thinking to transfer memorized information into conceptual understandings (multiple courses)
BB)	Ability to read and understand written material at the college level (multiple courses)
CC)	Ability to read and synthesize material from multiple sources to generate a clear coherent thesis (multiple courses)
DD)	Ability to properly incorporate and document evidence in support of a thesis (multiple courses)
EE)	Ability to recognize and critically assess unstated assumptions or inferences underlying written references or data sets, and to incorporate these in their analysis of a thesis. (multiple courses)

EXIT SKILLS FOR: CHEM 12, ANATMY 1, PHYS 3, MCRBIO 1, AND MLT 1

	Chemistry 12 related Exit Skills
1.	Understand how to handle chemicals safely
2.	Demonstrate knowledge of common chemical concepts such as atom, molecule, major types of bonding, ionization, oxidation, reduction and polarity
3.	Identify common organic functional groups
4.	Demonstrate knowledge of acidity, basicity and pH calculation
5.	Effectively use common chemistry equipment including pH-meter, laboratory balance, volumetric glassware, Bunsen burners etc.
6.	Ability to perform basic lab skills such as solution preparation, dilution and titration
7.	Achieve a reasonably high degree of reproducibility, accuracy and precision in their lab results
8.	Apply dimensional analysis and demonstrate a working knowledge of metric units including those for mass (g), length (m), area (m ²), volume (L and m ³), energy (J), quantity (moles) and concentration (M) as well as metric prefixes and abbreviations such as kilo, micro, nano, etc
	Anatomy 1 related Exit Skills
9.	Clearly focus on materials of a variety of sizes, thickness, and densities under a microscope.
10.	Identify tissues, organs, and body structures of the human body at a detailed level in actual specimens as well as in models and other representations.
11.	Describe the structures, interrelationships and general functions of major structures, organs, and organ systems of the human body.
12.	Correlate concepts of microscopic structure, macroscopic structure, and functions to the whole human body.

13.	Describe the various organs that make up the following systems: Nervous, Endocrine, Circulatory, Immune, Respiratory, Excretory, Digestive, Reproductive
	Physiology 3 related Exit Skills
14.	Describe an understanding of the major principles of cell biology including all major structures, functions, and physiological activities.
15.	Describe and distinguish the four classes of macromolecules, their respective subgroups, and their structural and functional characteristics.
16.	Understanding of basic physiological processes including respiration, digestion, circulation, excretion, homeostasis, blood pressure, neuronal transduction, hormone action, sensory physiology, muscular contractions, specific and nonspecific immunity, reproduction
	Microbiology 1 related Exit Skills
17.	Focus microscopes appropriately in selecting lighting direction and intensity, magnification, focus including use of the iris diaphragm, condenser, and filters, and effective ability to recognize structures viewed.
18.	Make reliable observations and record these observations systematically.
19.	Demonstrate aseptic transfer techniques, pure culture techniques, and describe physical and chemical methods of control.
20.	Demonstrate knowledge of infectious diseases and their impact on mankind in relation to history, mode of transmission, etiology, diagnosis, and organ systems involved.
21.	Apply techniques of cultivating, staining, and safely manipulating cultures of bacteria.
	MLT 1 related Exit Skills
22.	Demonstrate the ability to apply appropriate Quality Assessment protocols to troubleshoot errors encountered in clinical laboratory testing.
23.	Perform the appropriate procedures required to successfully complete pre-analytical, analytical, and post-analytical tasks associated with clinical testing
24.	Demonstrate the ability to wear the appropriate clinical laboratory attire that constitute as personal protective equipment (PPE) to comply by the clinical laboratory standard safety procedures
	Skills obtained from Chemistry 12, Anatomy 1, Physiology 3, and Microbiology 1
25.	Read and follow lab procedures
26.	Understand and follow lab safety rules
27.	Applied critical thinking to transfer memorized information into conceptual understandings
28.	Read and understand written material at the college level
29.	Read and synthesis material from multiple sources to generate a clear coherent thesis
30.	Properly incorporate and document evidence in support of a thesis
31.	Recognize and critically assess unstated assumptions or inferences underlying written references or data sets, and to incorporate these in their analysis of a thesis.

Please note that for MLT 2, 3, 4, and 5 Entrance Skills Y – EE relate to the various prerequisite science courses.

	ENTRANCE SKILLS FOR MLT 2, 3, 4, & 5																																			
	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	AA	BB	CC	DD	EE					
1	C																																			
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PHLBMY 1 - Phlebotomy for MLT

Course Cover	
Catalog Course Description	Emphasis on providing students with a comprehensive knowledge of various venipuncture and skin puncture techniques. Topics covered include specimen collection and handling, universal precautions, laboratory safety, and basic medical terminology. It will also cover concepts in providing care for a culturally diverse population.
Course Unit/Hours	
Credit Hours	6.00
Weekly Lecture Hours	4.50
Weekly Laboratory Hours	4.50
Total Semester Instructional Hours	162.00
Repeatability	May be repeated 0 time(s)
Grading Methods	Letter Grade or P/NP
Transfer/General Ed: Transfers to CSU	
Does NOT satisfy any GE area in any GE Pattern	
Program Applicability	
Designation	Credit - Degree Applicable
Proposed For	AS Degree and Certificate of Achievement -Medical Lab Technician
Prerequisites and Advisories:	
<ul style="list-style-type: none"> a. Must be at least 18 years old b. High School diploma or GED c. Valid "CPR for Healthcare Providers" Certification d. Physical Exam/Immunizations Current e. Pass Background Check (cannot be on probation) f. Ability to communicate well in English 	
Course Objectives	
Upon satisfactory completion of the course, students will be able to:	
1. Demonstrate knowledge of health care delivery system as well as the basic medical terminology used	
2. Describe effective ways to protect health care workers and patients against blood borne pathogens.	
3. Demonstrate a basic understanding of the anatomy and physiology of body systems with emphasis on the circulatory system	
4. Associate test requisitions with the specific clinical laboratory departments that perform the tests.	
5. Describe the appropriate use of collection equipment with specific emphasis on tube additives, their mechanism, and the order of draw.	
6. Describe effective ways of protecting patients from nosocomial infections.	
7. Demonstrate knowledge in the area of first aid, mechanical and electrical safety, as well as fire safety.	
8. Demonstrate proper techniques to safely perform venipuncture and skin puncture.	
9. Describe the common pre-analytical errors that can significantly alter results.	
10. Describe the correct process relevant to requisition assessment, specimen transport, and processing.	
11. Identify and perform laboratory protocols to ensure quality assurance in phlebotomy.	

12. Demonstrate understanding of the basic concepts of communication, personal and patient interaction, stress management, professional behavior, and legal implications of the clinical work environment	
Course Content	
30%	Venipuncture Equipment and Techniques
10%	Skin Puncture Equipment and Techniques
20%	Specimen Collection and Processing
10%	State and federal regulations regarding phlebotomy
20%	Clinical Practice
10%	Professionalism
Total: 100%	
Lab Content	
30%	Venipuncture Equipment, Skills, and Technique
10%	Skin Puncture Equipment, Skills, and Technique
10%	Infection Control, Safety, and First Aid
10%	Professional Ethics, Legal, and Regulatory Issues
10%	Specimen Handling, Transportation, and Processing
10%	Point of Care Testing and Competency
10%	Pre-Analytical Complications (Phlebotomy) that Cause Medical Errors
10%	Phlebotomy Practice and Quality Assessment
Total: 100%	
Methods of Presentation	
Methods	Group Work Lab Lecture and Discussion Observation and Demonstration Work Experience (internship)
Methods of Evaluation	
Methods	<ul style="list-style-type: none"> • 5% - Class Participation • 20% - Exams/Tests • 30% - Final exam • 10% - Group Projects • 5% - Oral Presentation • 30% - Other: Clinical Training at affiliate sites • 100% - Total
Appropriate Textbooks	
1. Garza, D., K. Becan-McBride. <i>Phlebotomy Handbook: Blood Specimen Collection from Basic to Advanced</i> , ed. Pearson, 2009, ISBN: 0135134242.	
Sample Assignments	
Demonstrate the correct steps (26 steps) to obtain a blood sample via venipuncture techniques:	
<ol style="list-style-type: none"> a. Patient Identification b. Test Requisition c. Vein selection d. Selection of appropriate equipment e. Selection of appropriate blood tubes 	

- f. Correct needle insertion and specimen retrieval
- g. Correct needle and apparatus removal
- h. Patient care after needle removal
- i. Distribution of specimens to appropriate laboratory department.

Student Learning Outcomes

1. Demonstrate venipuncture skills by selecting the appropriate equipment and materials depending on the size and location of the vein.

2. Describe phlebotomist's role in protecting patient privacy and confidentiality in the workplace to abide by federal, state, and institutional regulations

3. Safely perform venipunctures and skin punctures according to a sequential 26 point step procedure presented in class.

4. Apply the specimen rejection and acceptance criteria to evaluate the suitability of specimens submitted in the clinical laboratory for analysis.

MLT 10 - MLT Clinical Practicum

Course Cover	
Catalog Course Description	Emphasis is on providing students with entry-level clinical laboratory practice and experience in the different clinical laboratory departments. Daily activities will include supervised pre-analytical, analytical, and post-analytical evaluation of patient specimens in an affiliated clinical laboratory. The laboratory departments include hematology, coagulation, urinalysis, body fluids, microbiology, chemistry, immunology, and immunohematology. An assessment at the end of the clinical training will evaluate the students on their entry-level clinical laboratory skills.
Course Unit/Hours	
Credit Hours	Min: 12.00
Weekly Lecture Hours	Min: 0
Weekly Laboratory Hours	Min: 40.00 (Sem: 720)
Total Semester Instructional Hours	720.00
Repeatability	May be repeated 0 time(s)
Grading Methods	Letter Grade or P/NP
Transfer/General Ed: Transfers to CSU	
Does NOT satisfy any GE area in any GE Pattern	
Program Applicability	
Designation	Credit - Degree Applicable
Proposed For	AS Degree and Certificate of Achievement -Medical Lab Technician
Prerequisite	
MLT 1, 2, 3, 4, 5 and PHLBMY 1 or CA Certified Phlebotomy Technician License (CPT 1 or 2)	
Course Objectives	
1. Perform pre-analytical assessment of clinical specimens to ensure quality of results in a clinical laboratory setting.	
2. Perform specimen processing such as blood specimen centrifugation, aliquoting samples, dilution of samples, and distribution of samples to the appropriate departments.	
3. Perform Quality Control (QC) procedures to assess and evaluate the validity of clinical testing and results.	
4. Perform troubleshooting procedures as required by each department to ensure that the pre-analytical, analytical, and post-analytical tasks are performed correctly.	
5. Observe and practice safety regulations in the clinical laboratory by wearing the appropriate personal protective equipment	
6. Determine the suitability of specimens that are submitted to each department for analytical testing by applying the pre-analytical evaluation criteria of specimen rejection and acceptance	
Course Content	
20%	Pre-Analytical Procedures: Specimen Processing and Allocation
20%	Analytical Procedures: Reagents, Quality Control, and Patient Specimen assays
20%	Post- Analytical Procedures: Patient Results Reporting, Critical Values, and Troubleshooting
10%	Professionalism
10%	Laboratory Instrumentation: Assay Principles, Maintenance, and Troubleshooting
10%	Quality Assurance Procedures

10%	Entry-level Competencies Evaluation
Total: 100%	
Lab Content	
20%	Pre-analytical, Analytical, Post-Analytical Evaluation of Patient Specimens
20%	Professionalism, Safety, and Infection Control
20%	Instrumentation Use Competency: Maintenance, Use, and Troubleshooting practices
20%	State and Federal Regulatory Standards Compliance
20%	Laboratory Values/ Parameters Competence
Total: 100%	
Methods of Presentation	
Methods	Observation and Demonstration Other Work Experience (internship)
Methods of Evaluation	
Methods	<ul style="list-style-type: none"> • 75% - Final Performance Clinical preceptor evaluation • 25% - Final exam Comprehensive Final Exam • 100% - Total
Sample Assignments	
Case studies: Microbiology	
<p>a. Identify the pathogenic organism that is associated with presented clinical presentation.</p> <p>b. Rule out the possibility of similar pathogens by determining the microscopic, macroscopic, and biochemical properties of the associated pathogens.</p> <p>c. Determine the antibiotic susceptibility pattern of the pathogenic organism.</p>	
Student Learning Outcomes	
1. Perform analysis on clinical specimens that are categorized as low to moderate complexity in all laboratory departments.	
2. Perform tasks as a medical laboratory technician at an entry-level competency.	
3. Abide by all the professionalism standards as set forth by the institution that is conducting the clinical training.	
Minimum Qualification	<p>Faculty must demonstrate adequate knowledge and proficiency in their content areas and the ability to teach effectively at the appropriate level. (e.g., clinical laboratory scientists/medical technologists, clinical laboratory technicians/medical laboratory technicians, administrators, managers and physicians). Requirements according to NAACLS Standards Required for Accredited CLT/MLT Programs.</p> <p>Instructors employed for practical experience are licensed physicians and surgeons, doctorate scientists, clinical laboratory bioanalysts, clinical laboratory scientists, licensed clinical laboratory specialist, licensed medical laboratory technicians with five years of practical experience, or certified public health microbiologists. Requirements according to State of California regulations DPH-08-001.</p>

Prerequisite Checklist and Worksheet

MLT 10
Prerequisite: MLT 1, 2, 3, 4, 5, and Phlebotomy 1 or CA Certified Phlebotomy Technician License (CPT 1 or 2)

SECTION 1 - CONTENT REVIEW: If any criterion is not met, the prerequisite will be disallowed.

Criterion	Met	Not Met
1. Faculty with appropriate expertise have been involved in the determination of the prerequisite, corequisite or advisory.	X	
2. The department in which the course is (will be) taught has considered course objectives in accordance with accreditation standards.	X	
3. Selection of this prerequisite, corequisite or advisory is based on tests, the type and number of examinations, and grading criteria.	X	
4. Selection of this prerequisite, corequisite or advisory is based on a detailed course syllabus and outline of record, related instructional materials and course format.	X	
5. The body of knowledge and/or skills which are necessary for success before and/or concurrent with enrollment have been specified in writing.	X	
6. The course materials presented in this prerequisite or corequisite have been reviewed and determined to teach knowledge or skills needed for success in the course requiring this prerequisite.	X	
7. The body of knowledge and/or skills necessary for success in the course have been matched with the knowledge and skills developed by the prerequisite, corequisite or advisory.	X	
8. The body of knowledge and/or skills taught in the prerequisite are not an instructional unit of the course requiring the prerequisite.	X	
9. Written documentation that steps 1 to 8 above have been taken is readily available in departmental files.	X	

SECTION II - ADDITIONAL LEVEL OF SCRUTINY:

In addition to the affirmation of content review listed in section I, an additional level of scrutiny is also required. The level of scrutiny depends on which type of prerequisite is involved. There are six types and each is listed below. Please identify which one is being used to justify the proposed prerequisite. The additional level of scrutiny corresponding to each type of prerequisite is identified below.

- | |
|--|
| <u>X</u> Type 2: Sequential within and across disciplines (e.g., Physics 7, 8, 9, ...) |
|--|
- Complete the Prerequisite Worksheet**

Prerequisite Worksheet

ENTRANCE SKILLS FOR MLT 10

(What the student needs to be able to do or understand BEFORE entering the course in order to be successful)

A)	Understand the functions and duties of a Medical Laboratory Technician
B)	Understand the theory and practice of manual and automated procedures in hematology, coagulation and the relationship of these procedures to the diagnosis of disease.
C)	Understand the physical, chemical, and microscopic properties of urine and other body fluids and correlate selected chemical and microscopic constituents of urine and other body fluids with various disease states.
D)	Understand the theory of antigen-antibody reactions as it relates to blood grouping and typing, antibody detection and compatibility testing.
E)	Understand blood donor screening and component preparations, immunologically related diseases, transplantation, and principles of antigen-antibody based tests.
F)	Understand basic interpretations of biochemistry and the concentration of enzymes, carbohydrates, lipids, proteins, electrolytes, and blood gases.
G)	Understand the need for drug testing and evaluation.
H)	Ability to perform routine clinical tests on biological fluids, maintain quality assurance records, and perform preventative maintenance on instrumentation.
I)	Understand basic skills, principles, and laboratory techniques for staining, culturing, isolation, biochemical techniques and identification of human pathogenic microorganisms.
J)	Understand the techniques used to determine the susceptibility of pathogenic microorganisms to different antibiotics and other drugs.
K)	Understand basic principles in identification of parasites, viruses, and fungal microorganisms.
L)	Knowledge of various venipuncture and skin puncture techniques.
M)	Knowledge of specimen collection and handling, universal precautions, laboratory safety, and basic medical terminology.
N)	Understanding of concepts in providing care for a culturally diverse population.

EXIT SKILLS (objectives) FOR MLT 1, 2, 3, 4, 5, & Phlebotomy 1 or CA Certified Phlebotomy Technician License (CPT 1 or 2)

(What the student has the demonstrated ability to do or understand AFTER successful completion of this course)

1.	Understand the functions and duties of a Medical Laboratory Technician (MLT 1)
2.	Understand the theory and practice of manual and automated procedures in hematology, coagulation and the relationship of these procedures to the diagnosis of disease. (MLT 2)
3.	Understand the physical, chemical, and microscopic properties of urine and other body fluids and correlate selected chemical and microscopic constituents of urine and other body fluids with various disease states. (MLT 2)
4.	Understand the theory of antigen-antibody reactions as it relates to blood grouping and typing, antibody detection and compatibility testing. (MLT 3)
5.	Understand blood donor screening and component preparations, immunologically related diseases, transplantation, and principles of antigen-antibody based tests. (MLT 3)
6.	Understand basic interpretations of biochemistry and the concentration of enzymes, carbohydrates, lipids, proteins, electrolytes, and blood gases. (MLT 4)
7.	Understand the need for drug testing and evaluation. (MLT 4)

8.	Ability to perform routine clinical tests on biological fluids, maintain quality assurance records, and perform preventative maintenance on instrumentation. (MLT 4)
9.	Understand basic skills, principles, and laboratory techniques for staining, culturing, isolation, biochemical techniques and identification of human pathogenic microorganisms. (MLT 5)
10	Understand the techniques used to determine the susceptibility of pathogenic microorganisms to different antibiotics and other drugs. (MLT 5)
11	Understand basic principles in identification of parasites, viruses, and fungal microorganisms. (MLT 5)
12	Knowledge of various venipuncture and skin puncture techniques. (PHLBMY 1)
13	Knowledge of specimen collection and handling, universal precautions, laboratory safety, and basic medical terminology. (PHLBMY 1)
14	Understanding of concepts in providing care for a culturally diverse population. (PHLBMY 1)

DISTANCE EDUCATION APPLICATION (HYBRID): MLT 2, 3, 4, 5, 10 and PHLBMY 1

This Distance Education course meets the same standard of course quality as is applied to traditional classroom courses in the following categories, as stated in the official course outline of record:

X Course objectives have not changed.

X Course content has not changed.

X Method of instruction meets the same standard of course quality.

X Outside assignments meet the same standard of course quality.

X Required texts meet the same standard of course quality.

X Serves comparable number of students per section as a traditional course in the same department.

Additional considerations for all distance education courses:

X Determination and judgments about the equality of the distance education course were made with the full involvement of the faculty as defined by Administrative Regulation 5420 and college curriculum approval procedures.

X Adequate technology resources exist to support this course/section.

X Library resources are accessible to students.

X Specific expectations are set for students with respect to a minimum amount of time per week for student and homework assignments.

X Adequately fulfills "effective contact between faculty member and student" required by Title 5.

X Will not affect existing or potential articulation with other colleges.

X Special needs (i.e., texts, materials, etc.) are reasonable.

X Complies with current access guidelines for students with disabilities.

GUIDELINES AND QUESTIONS FOR CURRICULUM APPROVAL OF A DISTANCE EDUCATION COURSE

Contact/Interaction Guidelines and Best Practices:

a. Instructor-student Interaction There should be multiple, frequent, and on-going communication exchanges between the instructor and each student via course communication and collaboration features such as discussion threads, blogs or chats, comments on student work, and/or individual e-mail. The instructor should regularly initiate communication with the students, and promptly respond to communication initiated by the students to ensure effective participation and clarity of material and assignments. The instructor also provides instructions and support as needed for course navigation and information assistance, clarification about content, assignments, projects, quizzes, and exams. On an on-going basis, the instructor also provides performance feedback, comments, recommendations, and suggestions. The instructor informs the students of the expected frequency and times of any type of interaction with the students throughout the course.

<p>1a. Interactions: Describe the nature and expected frequency of <u>instructor-student</u> interactions:</p>	<p>The interaction between students and instructor online will be via email, discussion threads, and PowerPoint lectures with designated assignments and objectives available via the online platform. The instructor will be available at specific block times during the week (3 days per week, 1 hour per session) for the students to interact and discuss concerns and questions with the instructor. The instructor will be available by email at all times and have additional office hours for in-person/ on-campus meetings to help support students in these hybrid format courses.</p>
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b. Student-student Interaction: Students are expected to interact with each other throughout the course and communicate regarding the course material and homework experiences. Typically, students use asynchronous discussion forums and email for communication and collaboration activities.

<p>1b. Interactions: Describe the nature and expected frequency of <u>student-student</u> interactions:</p>	<p>Students will be required to interact online via discussion boards and facilitated group discussions at least 3 times per week. They will be required to submit questions, respond to relevant questions posted by the instructor and/or other students, and comment on topics and ideas presented. These interactions will be tracked by the instructor to document their online participation in the discussions.</p>
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c. Student-content Interaction: Students interact with the material provided by the instructor. Additionally, to ensure a student-centered e-learning environment, a variety of assignments and activities should be provided. Assignments and activities should be designed for each content module or unit so that students may assess their comprehension of the course material before they complete a graded assignment. These activities are designed to ensure individualized learning, providing immediate and specific instructional feedback while addressing different learning styles. Course material must be easily accessible by all students. Instructional goals require that students frequently (several times per week) interact with online course materials.

<p>1c. Interactions: Describe the nature and expected frequency of <u>student-content interactions</u>:</p>	<p>The students will be able to access the PowerPoint lecture materials as well as objectives and assignments for the course. They will also be required to access the Socrative website via www.socrative.com to take their online quizzes for which immediate feedback is available. Access to the website is by instructor permission only and quizzes are timed. We will also utilize e-companion for the Quizzes, Journal, and Live applications for the online component of the course. There will be weekly quizzes for this course. All exams will be administered on ground. Each chapter lecture module will have a homework assessment included that has an estimated time of 45 minutes to an hour to complete. They will have at least 4 such modules during the week.</p>
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<p>1d. Interactions:</p>		
<p>Online class activities that promote class interaction and engagement</p>	<p>Brief Description</p>	<p>% of Online Course Hours</p>
<p>Homework Study Guides</p>	<p>Students will be given an online module for lectures and an accompanying study guide or assignment questions. Students can utilize the online lecture modules and/or textbook to answer the assigned questions. These will be submitted to the instructor online via the journal tool or other course tool for evaluation.</p>	<p>30%</p>
<p>Online Quizzes</p>	<p>Students will be given a short online quiz to evaluate retention of materials presented in the lecture modules. We will utilize online applications available in e-companion (Quizzes application) or the socrative quiz applications to provide immediate feedback for these quizzes. The quizzes will be timed at the discretion of the instructor. The quizzes will be available at any time (to be taken only once) for students to take during the week. The instructor, however, will set deadlines as to when the quizzes must be completed.</p>	<p>30%</p>
<p>Discussion Board contribution</p>	<p>Students will be required to submit questions to the discussion board at least 3 times a week and submit answers to questions posted by the instructor at least 3 times a week.</p>	<p>30%</p>
<p>Case Studies</p>	<p>Students will be given case studies to evaluate their ability to apply the concepts that they have learned in each of the lecture modules to simulated clinical situations. They will participate in Discussion Threads (available on e-companion) to post questions and comments to help them interact with their classmates. These case studies can be designed as group projects and/or independent projects. Case study answers will be submitted by students online by using the Journal application on e-companion.</p>	<p>10%</p>

Instruction Best Practices:

The course includes Information, Learning, and Communication/Collaboration features that coincide with student learning outcomes specified in the course outline. The course is divided into modules or units that coincide directly with those concepts and objectives described on the course outline. A typical instructional module includes (1) textbook assignment / multimedia references; (2) study guides; (3) instructional activities and practices; (4) discussion forum(s); (5) graded assignment(s); (6) other course-specific components as necessary. The material is presented through the available technologies. Assignment activities allow students to assess their performance and progress in each module at their own pace within the general deadlines provided. Class activities provide immediate feedback to ensure progressive involvement and successful completion of each module in the course.

<p>2. Instruction: Describe how content will be organized and delivered in the interest of achieving course outcomes/objectives (e.g. what are the methods of instruction being used, technologies used, approximate time schedule, necessary instructional materials.)</p>	<p>The content will be organized according to the textbook chapter presentation and references. The delivery of the content will be by the following methods: online lecture and assignment modules. Lectures will be presented by PowerPoint and assignments will be posted per lecture module. In addition, students will also take a short online quiz following the lecture module. These will take approximately 45 minutes per chapter module. There will be a minimum of at least 4 such exercises per week. Technologies required would be student access to e-companion.</p>
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Assessment Best Practices:

Assessments of various forms are conducted regularly, preferably on a weekly basis. The instructor updates grades in a timely manner. Assessments designed for this course utilize methodologies appropriate for online modality. The bulk of the grade for the course is based on students' ongoing assignments: essays, tests, discussions, group and individual projects. As per current Curriculum guidelines, no singular assessment should be worth more than 30% of the course grade.

3. Assignments / Assessments: Describe how assignments and assessments are used so that instructor-student contact is maintained and students are given regular, meaningful feedback. Describe interactions that encourage students' participation. Describe assessments that are verifiable, equivalent to on-ground, and appropriate. Describe the criteria used to substantiate student learning; explain how these interactions will be assessed.

% of grade	Activity	Assessment method
30%	Homework/ Study Guides	Students will be given regular assignments (at least twice per week) and they will be submitted to the instructor online. The instructors will then submit feedback via the journal tool directly to students.

30%	Online Quizzes	Each lecture module will be accompanied by a short online quiz to assess if the students comprehended the materials presented. Students will be given online quizzes for which the answers to the questions will be immediately available. This can be done through, for example, the Socrative website – www. socrative.com or tool available in eCollege where the instructor can post quizzes, record quizzes that students have taken, and give students immediate feedback to the quizzes.
30%	Question and Answer Discussion Board	The instructor will post daily questions/ topics relevant to the lecture material and students are required to participate via discussion threads posted in the course. Each student will need to meaningfully contribute to the discussion questions posted (either by the instructor or other classmates). The items that they post must be relevant to the topics presented.
10%	Case Studies Assessment	The instructor will post case studies or simulated clinical conditions that cover the topics presented in the lecture module. The instructor will evaluate the students' ability to apply the concepts learned in lecture and apply it to "real life" situations by using medical terminology, suggestion of appropriate laboratory assays and expected results associated with the particular anomaly, and recommendations on therapeutic interventions. In addition, if the case studies are group work in nature, the students will be evaluated on the documented time they spent online interacting with their group members to arrive at case study conclusions. They will be given guidelines on the definition of meaningful online contributions to group case studies.

Technology:

4. Technology: Describe the technical qualifications an instructor would need and the support that might be necessary for this course to be delivered at a distance (e.g. the college's existing technology, CCCConfer certification, other specialized instructor training, support personnel, materials and resources, technical support, etc.)	The instructor would need to be trained to use and be supported by the college's course management system.
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Student Support:

5. Student Support: Describe any student support services one might want or need to integrate into the online classroom for this course (e.g. links to counseling, financial aid, bookstore, library, etc.)	Students will need to have access to online resources provided by the main textbook that we will be using and this needs to be integrated in the online materials used by the students.
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Accessibility:

<p>6. Accessibility: Describe any student support services one might want or need to integrate into the online classroom for this course (e.g. links to counseling, financial aid, bookstore, library, etc.) Describe how the design of the course will ensure access for students with disabilities including compliance with the regulations of Section 508 of the Rehabilitation Act.</p>	<p>For any videos and demonstrations used online, captions will be provided to ensure access for all students.</p>
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Online Strategies:

<p>7. Online Strategies: Describe any student support services one might want or need to integrate into the online classroom for this course (e.g. links to counseling, financial aid, bookstore, library, etc.) Describe how the design of the course will ensure access for students with disabilities including compliance with the regulations of Section 508 of the Rehabilitation Act. Using one of the course objectives, describe an online lesson/activity that might be used in the course to facilitate student learning of that objective. Be sure the sample lesson/activity includes reference to the use of online teaching tools (such as drop box or threaded discussion, or multimedia such as Articulate, Flash, Jing, etc.).</p>	<p>Course objective: Describe the ABO, Rh and other blood group antigens, relating methods for detecting and their clinical significance. Online lesson/activity used in the course: We will use a threaded discussion to facilitate learning and mastery of this objective. Students will be given problems so that they can identify various pairings and permutations of ABO, Rh, and other blood group antigens and discuss how they solved the problems online. They will be given the opportunity to ask questions, discuss, and check their answers after the discussion period. Students will submit answers to this project in the dropbox application of e-companion.</p>
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SANTA MONICA COLLEGE PROGRAM OF STUDY

Medical Laboratory Technician Associate in Science (AS)

The Medical Laboratory Technician program prepares students to be employed in clinical laboratories serving public and private health care facilities to perform low to moderate complexity analysis of patient specimens. Completion of prerequisite courses (Anatomy 1, Chemistry 12, Microbiology 1, and Physiology 3) is required for admission into the program. Interested students should consult with a Health Sciences counselor. Additional information and application can be found at: www.smc.edu/AcademicPrograms/LifeSciences/MedicalLaboratoryTechnician/Pages/default.aspx

The program course of study is composed of the didactic portion in which principles of laboratory theory and techniques are taught and a practicum or clinical practice portion is conducted at affiliated clinical laboratories. The disciplines in which students will train are: hematology, coagulation, urinalysis, clinical chemistry, microbiology, immunology, and phlebotomy. Emphasis will be placed on student training to operate and maintain automated clinical laboratory instruments.

Graduates of the MLT program are eligible to sit for the national and state board exams and obtain licensure as medical laboratory technicians. A grade of "C" or better in all the MLT courses is required for successful completion of the courses and advancement into clinical training. For information on MLT licensing and exams, please see the California Department of Public Health, Laboratory Field Services website:

www.cdph.ca.gov/programs/lfs/Pages/MedicalLaboratoryTechnician%28MLT%29.aspx

MLT students who have previously earned a Bachelor's degree or higher at a regionally accredited institution in the United States are NOT required to complete GE requirements at the community college (including SMC's Global Citizenship degree requirement). Please see a Health Sciences counselor for additional information or clarification.

This Associate degree involves satisfactory completion of a minimum of 60 semester units with a C average or higher, including the semester units of the area of emphasis (articulated below), fulfillment of the Global Citizenship requirement, and fulfillment of all Santa Monica College general education requirements, CSU GE, or IGETC. At least 50% of the area of emphasis units must be completed at Santa Monica College. Each course in the area of emphasis must be completed with a grade of C or higher. Additional graduation requirements for the Associate degree are available at the Transfer/Counseling Center and online at www.smc.edu/articulation.

Catalog rights dictate that a student may satisfy the requirements of a degree or certificate by completing the general education and area of emphasis requirements in effect at any time of the student's continuous enrollment. Continuous enrollment is defined as enrollment in consecutive Fall and Spring semesters until completion.

Area of Emphasis

Required Courses		Units
MLT 1	Introduction to Clinical Laboratory Profession	1
MLT 2	Hematology, Coagulation, Urine and Body Fluid Analysis	6
MLT 3	Blood Banking and Immunology	6
MLT 4	Clinical Chemistry	6
MLT 5	Clinical Microbiology	6
MLT 10	MLT Clinical Practicum	12
Required Phlebotomy		
PHLBM 1	Phlebotomy for MLT	6
or		
CA Certified Phlebotomy Technician License (CPT 1 or 2)		0

Total Units for Area of Emphasis: **37**

PID 167

SANTA MONICA COLLEGE PROGRAM OF STUDY

DANCE

Associate in Arts (AA)

The Dance program prepares the serious dance student for university transfer and provides dance training and enrichment for both the beginner and the advanced dancer. The program offers a comprehensive curriculum with a broad range of dance courses to nurture versatile dance artists. The dance department encourages students to think independently, to value creative thought and diversity, and to be responsible global citizens.

The goal of the Dance Program is to prepare students for future careers in performance, choreography, teaching and related careers in dance. The program offers a wide array of dance classes designed to cultivate technique, creativity and performance skills while enhancing self confidence, creative thought/expression and critical thinking.

This Associate degree involves satisfactory completion of a minimum of 60 semester units with a C average or higher, including the semester units of the area of emphasis (articulated below), fulfillment of the Global Citizenship requirement, and fulfillment of all Santa Monica College general education requirements, CSU GE, or IGETC. At least 50% of the area of emphasis units must be completed at Santa Monica College. Each course in the area of emphasis must be completed with a grade of C or higher. Additional graduation requirements for the Associate degree are available at the Transfer/Counseling Center and online at www.smc.edu/articulation.

Catalog rights dictate that a student may satisfy the requirements of a degree or certificate by completing the general education and area of emphasis requirements in effect at any time of the student's continuous enrollment. Continuous enrollment is defined as enrollment in consecutive Fall and Spring semesters until completion.

Area of Emphasis

Required courses (22 25 units):

		Units
DANCE 05	Dance History	3
DANCE 7	Music For Dance	3
DANCE 33	Ballet 3	2
DANCE 34	Ballet 4	2
DANCE 35	Ballet 5	2
DANCE 36	Ballet 6	2
DANCE 43	Contemporary Modern Dance 3	2
DANCE 44	Contemporary Modern Dance 4	2
DANCE 45	Modern Dance 5	2
DANCE 46	Modern Dance 6	2
<u>DANCE 55A [ADDITION]</u>	<u>Dance Performance - Modern</u>	<u>3</u>
<u>DANCE 57A [ADDITION]</u>	<u>World Dance Performance</u>	<u>3</u>

Additional Dance Genre (2 units): [ADDITION]

		Units
DANCE 14	Beginning Modern Jazz Dance	1
DANCE 15	Intermediate Modern Jazz	1
DANCE 16	Advanced Modern Jazz	1
DANCE 17	Beginning Tap	1
DANCE 18	Intermediate Tap	1
DANCE 19	Ballroom Dance	1
DANCE 20	Ethnic Dance	2
DANCE 21	Asian Pacific Dance Survey	2
DANCE 22	Beginning Mexican Dance	2
DANCE 23	Intermediate Mexican Dance	2
DANCE 25	African Dance	2
DANCE 27	Brazilian Dance	2

DANCE 29	Middle EasternNorth African Dance	2
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Choreography (2 units): [ADDITION]

		Units
DANCE 60	Fundamentals Of Choreography I	2
DANCE 61	Fundamentals Of Choreography 2	2
DANCE 62	Fundamentals Of Choreography 3	2
DANCE 63	Fundamentals Of Choreography 4	2

Students planning to transfer to a four-year school in Dance should complete the lower-division major requirements for the transfer institution. Exact major requirements for UC and CSU campuses can be found online at www.assist.org. Articulation agreements with private institutions can be found online at www.smc.edu/articulation.

Recommended Additional Coursework: Students may want to consider some of the following courses in preparation for transfer. These courses are recommended, not required for this program.

		Units
DANCE 9	Dance Productions	3
DANCE 31	Ballet I	1
DANCE 32	Ballet 2	1
DANCE 37	Beginning Pointe	1
DANCE 41	Contemporary Modern Dance I	1
DANCE 42	Contemporary Modern Dance 2	1
DANCE 51	Introduction to Dance Therapy	1
DANCE 55A	Dance Performance - Modern	3
DANCE 55B	Dance Repertory - Modern	1
DANCE 55C	Modern Dance Staging Techniques	1
DANCE 57B	Repertory Ethnic Dance	1
DANCE 59A	Dance Performance - Ballet	3
DANCE 75	Dance for Children: Creative Dance in the Pre-K and Elementary Classroom	3
DANCE 79	Dance In New York City	1

Total Units for Area of Emphasis:

22 29

SANTA MONICA COLLEGE PROGRAM OF STUDY

Mobile Apps Development - Android

Department Certificate

The program in Mobile Apps Development provides students with the knowledge and skills necessary to work in the emerging mobile career field. Students learn how to design and write apps for the Android platform. In addition to programming courses, the program includes courses teaching the fundamentals of mobile app and icon design.

This Department Certificate involves satisfactory completion of the semester units of the area of emphasis (articulated below). At least 50% of the area of emphasis units must be completed at Santa Monica College. Each course in the area of emphasis must be completed with a grade of C or higher. Additional information for the Certificate is available at the Transfer/Counseling Center and online at www.smc.edu/articulation.

Catalog rights dictate that a student may satisfy the requirements of a degree or certificate by completing the general education and area of emphasis requirements in effect at any time of the student's continuous enrollment. Continuous enrollment is defined as enrollment in consecutive Fall and Spring semesters until completion.

Area of Emphasis

Required Courses		Units
CS 86	Android Development	3
CS 55	Java Programming	3
GR DES 75	Mobile Design 1	3
CS 56	Advanced Java Programming	3
Choose one of the following:		Units
CIS 60A	Photoshop I	3
CS 60	Database Concepts And Applications	3
CS 84	Programming With Xml	3
Total Units for Area of Emphasis:		15

PID 146

SANTA MONICA COLLEGE PROGRAM OF STUDY

Mobile Apps Development - iPhone

Department Certificate

The program in Mobile Apps Development provides students with the knowledge and skills necessary to work in the emerging mobile career field. Students learn how to design and write apps for either the iPhone/iPad/iPod platform. In addition to programming courses, the program includes courses teaching the fundamentals of mobile app and icon design.

This Department Certificate involves satisfactory completion of the semester units of the area of emphasis (articulated below). At least 50% of the area of emphasis units must be completed at Santa Monica College. Each course in the area of emphasis must be completed with a grade of C or higher. Additional information for the Certificate is available at the Transfer/Counseling Center and online at www.smc.edu/articulation.

Catalog rights dictate that a student may satisfy the requirements of a degree or certificate by completing the general education and area of emphasis requirements in effect at any time of the student's continuous enrollment. Continuous enrollment is defined as enrollment in consecutive Fall and Spring semesters until completion.

Area of Emphasis

Required Courses		Units
CS 53A	iOS Development with Objective-C	3
CS 53B	iOS Mobile App Development	3
CS 53C	iOS Advanced Mobile App Development	3
GR DES 75	Mobile Design 1	3
Choose one of the following:		Units
CIS 60A	Photoshop I	3
CS 60	Database Concepts And Applications	3
CS 84	Programming With Xml	3
Total Units for Area of Emphasis:		15

PID 138

**Proposed Revision of Curriculum Committee Configuration
(new term would be 2 years instead of 3)**

	CURRENT	REVISED CONFIGURATION	REVISED	Representative	Current Term Ends Spring
4	History, ESL		See 1.1 and 2.1	Emily Lodmer	2013
1.1	ESL, Modern Lang & Cul			(Toni Trives?)	2015
2	Social Science, Psychology		See 2.1 and 2.2	David Shirinyan	2014
2.1	History, Social Science				2015
2.2	ECE, Psychology			(David Shirinyan?)	2014
3	English			Jim Pacchioli	2014
4	Physical Science, Life Science		See 4.1 and 5.1	Deborah Schwyter	2013
4.1	Physical Science, Earth Science				2015
5	Kinesiology/PE, Health Science, ECE, Dance		See 2.2, 5.1, and 8.1	Elaine Roque	2015
5.1	Kinesiology/PE, Life Science, Health Science			(Elaine Roque?)	2015
6	Earth Science, Modern Language		See 1.1 and 4.1	Toni Trives	2015
7	Mathematics			Gary Taka	2013
8	Art, Music, Theatre Arts		See 8.1	Walter Meyer	2014
8.1	Art, Dance, Music Theater Arts			(Walter Meyer?)	2014
9	Design Technology, Computer Science Information Systems			Walt Louie	2015
10	Cosmetology, Photo/Fashion			Josh Sanseri	2015
11	Business, Communications			Pat Halliday (Teri Berstein)	2013
12	Counseling, (Library??)			Ellen Cutler	2013
13	Articulation Officer (If faculty)			Estela Narrie	2013
14	At-large member appointed by the Academic Senate President			Keith Fiddmont	2013
15	At-large member appointed by the Academic Senate President			Brenda Antrim	2013
16	Chair appointed by the Academic Senate President (non-voting except to break tie)			Guido Davis Del Piccolo	2013

It has been suggested by the Librarians that the Library NOT have an elected representative on the Curriculum Committee, but instead have a permanent NON-VOTING seat. This would NOT change the number of seats for faculty on the Committee (as this would be a non-voting member).