SANTA MONICA COLLEGE
ACADEMIC
SENATE
1900 Pico Boulevard
Santa Monica, CA 90405
310.434.4611

CURRICULUM COMMITTEE ❙ AGENDA

Wednesday, October 19, 2011 ❙ 3:00 p.m.
Loft Conference Room – Drescher Hall 300-E

Members:

Guido Davis Del Piccolo, *Chair*	Diane Gross	Emily Lodmer	Jeffery Shimizu
Georgia Lorenz, *Vice Chair*	Aileen Huang	Walter Meyer	Edie Spain
Brenda Benson	Maral Hyeler	Eric Minzenberg	Gary Taka
Ellen Cutler	Narhyn Johnson	Estela Narrie	Marco Vivero
Karin Chan	Randal Lawson	James Pacchioli	Carol Womack
Jasmine Delgado	Helen LeDonne	Deborah Schwyter	Julie Yarrish

Interested Parties:

Maria Bonin	Mary Colavito	Mitra Moassessi	Wendy Parise
Jamie Cavanaugh	Kiersten Elliott	Katharine Muller	Linda Sinclair
Jonathan Cohanne	Mona Martin	Eric Oifer	Eleanor Singleton
			Chris Young

Ex-Officio Members:

Janet Harclerode	Harrison Wills

A G E N D A

(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

- UC-Transferability Decisions
- CurricUNET workflow

V. Information Items:
(course updates)

1. Accounting 31A: Excel for Accounting (distance ed revision)
2. Accounting 31B: Advanced Excel for Accounting (distance ed revision)
3. ESL16A The Noun System And Articles
4. ESL16B Verb Tenses: Forms and Use
5. ESL20A Advanced Grammar Workshop 1
6. ESL20B Advanced Grammar Workshop 2
7. ESL23 Academic Reading and Study Skills
8. ESL25 Composition Fundamentals Review

**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.*

9. ESL28 Academic Vocabulary Skills
10. History 1: History of Western Civilization I
11. History 2: History of Western Civilization II
12. History 3: British Civilization I
13. History 4: British Civilization II
14. History 5: History of Latin America I
15. History 6: History of Latin America II
16. History 10: Ethnicity and American Culture
17. History 11: The United States through Reconstruction
18. History 12: The United States since Reconstruction
19. History 24: History of East Asia to 1600
20. History 25: History of East Asia since 1600
21. History 33: World Civilizations I
22. History 34: World Civilizations II
23. History 38: History of Africa to 1900
24. History 39: History of Africa from 1900

VI. New courses – credit:

a. Cosmetology 46: Nail Care 4/Manicuring 4……...….5
b. CS 30: MATLAB Programming……..14
c. Medical Laboratory Technician 5: Clinical Practicum……..……...…23

VII. Distance Education:

d. CS 30: MATLAB Programming

VIII. 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.

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CURRICULUM COMMITTEE ❙ MINUTES

Wednesday, October 5, 2011 ❙ 3:00 p.m.
Faculty & Staff Technology Resources Lab, MC-114
Media Center, SMC Main Campus

Members Present:

Guido Davis Del Piccolo, *Chair*
Georgia Lorenz, *Vice Chair*
Brenda Benson
Ellen Cutler
Karin Chan
Jasmine Delgado
Diane Gross
Maral Hyeler
Narhyn Johnson
Randal Lawson
Helen LeDonne
Emily Lodmer
Walter Meyer
Eric Minzenberg
Estela Narrie
James Pacchioli
Deborah Schwyter
Edie Spain
Gary Taka
Marco Vivero
Carol Womack
Julie Yarrish

Members Absent:

Aileen Huang
Jeffery Shimizu

Others Present:

Maria Bonin
Maki Fujiwara-Skroba
Timothy McDowell
Perviz Sawoski
William Sun

M I N U T E S

I. Call to order:

The meeting was called to order at 3:07 p.m.

II. Public Comments*

None

III. Approval of Minutes

The minutes of September 21, 2011 were approved as presented.

IV. Chair's report

The Academic Senate approved the following on September 27, 2011:

Course Revisions – credit:

COSM 26: Nail Care 2; COSM 31B: Hair Styling 3

New courses – credit:

ANTHRO 19: The Culture of Food; COSM 14A: Curly Hair Techniques 1; COSM 14B: Curly Hair Techniques 2; CS 30: MATLAB Programming;

**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.*

CS 53A: iOS Development with Objective-C; PHOTO 30: Introduction – Techniques of Lighting

Distance Education:

CS 53A: iOS Development with Objective-C

Global Citizenship:

ANTHRO 19: The Culture of Food

V. CURRICUNET training – Timothy McDowell, Training and Development Administrator, Governet (User Guide online at: www.smc.edu/curriculum - under "Curriculum Resources")

VI. Adjournment

The meeting was adjourned at 4:41 p.m.

VII. The next meeting of the Curriculum Committee will be held on Wednesday, October 19 at 3:00 p.m., in Drescher Hall -300E (Loft).

Course Outline of Record

Santa Monica College

Course Outline For

Cosmetology 46

Course Title:	Nail Care 4/Manicuring 4			**Units:**	.5
Total Instructional Hours:	36				
Hours per week (full semester equivalent) in Lecture:	.5	In-Class Lab:	1.5	Arranged:	

Date Submitted:	September 27, 2011
Date Updated:	October 5, 2011
Prerequisite:	COSM 36

I. Catalog Description:

This is the fourth nail care class required for all entering students who wish to be licensed for cosmetology or manicuring by the State of California. The student will learn State Board Rules and regulations, safety techniques and sanitation for Nails Care as well as the application of gel nails, pedicures, Spa manicures/pedicures and 3-D art.

II. Examples of Appropriate Text or Other Required Reading: (include all publication dates; for transferable courses at least one text should have been published within the last five years)

1.	Standard Cosmetology Text, Milady's Publishing 2012
2.	Standard Cosmetology Theory Workbook, Milady's Publishing 2012
3.	Standard cosmetology Practical Workbook, Milady's Publishing 2012

III. Course Objectives:
Upon completion of the course students will be able to:

1.	Practice Safety and sanitation rules
2.	Observe State board Rules and Regulations
3.	Demonstrate the proper application of gel nails
4.	Demonstrate the proper application of 3-D nail art.
5.	Demonstrate spa manicures and pedicures

IV. Methods of Presentation:

Demonstrations
Lecture/Power Point
Guest Artists
Hand outs
Video/DVD

V. Course Content:

% of course	Topic
10 %	Safety techniques and sanitation
10 %	State Board rules and regulations

30 %	Gel Nail procedures
30 %	3-D Nail Art manicure
10 % 10 %	Spa Manicure Spa Pedicure

VI. Methods of Evaluation: (Specific percentages will vary with instructor; approximate values are shown.)

% of grade	Evaluation Method
20 %	Participation
20 %	Quizzes
20 %	Homework
20 % 20 %	Final Exam Written Final Exam Practical

VII. Sample Assignments: (please describe at least 2 sample assignments)

1.	Perform a gel nail application
2.	Provide a notebook showing the different 3-D Art Manicures throughout history
3.	Visit 3 different nail salons and see the different 3-D art work that is produced

Course Approval and Data Sheet for: Cosmetology 46

Is this a New Course, Updated/Revised Course, or Reinstated Course?	**Updated/Revised**
If this is a NEW course, anticipated semester and year of first offering:	**Spring 2012**

If this is a new course, please provide a rationale for the addition of this course to the curriculum:

This is the fourth course required for the cosmetology and manicuring programs. This 4 hour course is an advanced and necessary continuation of the manicure and pedicure classes. This course focuses on spa manicure and pedicure procedures and techniques including; Gel nails, and 3-D art, all of which have become very popular and lucrative in the industry. This education and technical skills are required giving a competitive edge in the profession.

List all A.A. majors in which this course is/will be **required**:

- Cosmetology

List all Certificates of Achievement in which this course is/will be **required**:

- Cosmetology Certificate of Achievement
- Manicuring Certificate of Achievement (departmental)

Should this course be **transferable to the CSU?**	**NO**
Should this course be **transferable to the UC?**	**NO**

Repeatability (requires that the student's experience will be qualitatively different with each repetition).

- How many times should this course be repeatable? 1

Course Load Factor suggested by department: .75
Rationale for the above load factor suggestion:

Appropriate Minimum Qualifications for faculty teaching this course: (Refer to: *Minimum Qualifications for Faculty and Administrators in California Community Colleges* adopted by The Board of Governors)

- Cosmetology

Student / Program / Institutional Learning Outcomes

September 21, 2011
Cosmetology 46

Course Level Student Learning Outcomes: (Must list <u>at least 2</u>)

1.	Given a client the student will practice safety and sanitation rules, observe state board rules and regulations while demonstrating the proper application of gel nails.
	As assessed by: Demonstration according to State Board standards

2.	Given a client the student will identify and defend a 3-D Nail art manicure
	As assessed by: Demonstration according to State Board standards

3.	Given a client the student will use the proper technique for the application of a pedicure.
	As assessed by: Demonstration according to State Board standards

Demonstrate how this course supports/maps to <u>at least one</u> program learning outcome. Please include all that apply:

1.	Students will demonstrate sanitation and disinfection in compliance to the State Board and perform all procedures to pass the California exam Students will be prepared to pass the State Board exam

2.	Students will demonstrate gel nails in compliance to the state board and perform all procedures to pass the California exam Students will be prepared to pass the State Board exam

Demonstrate how this course supports/maps to <u>at least one</u> of the following Institutional Learning Outcomes. Please include all that apply. Through their experiences at SMC, students will

ILO #1	acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
	Students will communicate with each client having knowledge of current industry techniques using the latest equipment

ILO #4	take responsibility for their own impact on the earth by living a sustainable and ethical life style.
	Students are educated in good work ethics needed for employment and the environment

S/ILO Committee Use Only	reviewed by:	CKS	9-27-11

form modified 03/03/2011

Associate Degree Course Criteria and Standards, as per Title V, Section 55002

COSMETOLOGY 46, Nail Care 4

Section I – Course Criteria
Items 1 through 14 below. If any criterion is not met, course credit is non-applicable toward the associate degree.

		Criterion Met	Criterion Not Met
1.	This course is a collegiate course meeting the needs of students eligible for admission. It will be offered as described in the course outline of record (attached).	X	
2.	This course is to be taught by an instructor with a masters or higher degree, or the equivalent, in an approved discipline.	X	
3.	The course outline of record specifies the unit value, scope, student objectives and content in terms of a specific body of knowledge.	X	
4.	The course outline of record specifies requested reading and writing assignments, and other assignments to be done outside of class (homework).	X	
5.	The course outline of record specifies instructional methodology and methods of evaluation for determining whether the stated student objectives have been met.	X	
6.	This course will be taught in accordance with a set of instructional objectives common to all students enrolled in the course (all sections).	X	
7.	This course will provide for the measurement of student performance in terms of the stated course objectives. A formal grade based upon uniform standards of student evaluation will be issued for the permanent record of each student.	X	
8.	This formal grade will be based on student ability to demonstrate proficiency in the subject matter by means of either (1) written essays, (2) problem solving exercises, or (3) student skill demonstrations.	X	
9.	The number of units of credit assigned to the course is based upon the number of lecture, laboratory, and/or activity hours as specified in the course outline.	X	
10.	A minimum of three hours of work per week (including class time) is required for each unit of credit, prorated for short term, lab and activity courses.	X	
11.	Subject matter is treated with a scope and intensity which requires students to study independently outside of class time.	X	
12.	Learning skills and a vocabulary deemed appropriate for a college course are required. Educational materials used are judged to be college level.	X	
13.	Repeated enrollments are not allowed, except as permitted by provisions of Division 2, Title V, Sections 55761-55763 and 58161.	X	
14.	Student ability to (1) think critically and (2) understand and apply concepts at a college level is required in order to participate in the course.	X	

Section II – Recommendations for Prerequisites

15.	Are entrance skills and consequent prerequisites for the course required?	**YES**
	If yes, state the recommended prerequisites:	COSM 36, Nail Care 3

16.	Is eligibility for enrollment in a certain level of English and/or mathematics necessary for success in this course?		**NO**	
	If yes, state the English and/or math level necessary for success:			
	English level recommended:		Math level recommended:	

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APPROVALS PAGE

NOTE: We now ONLY accept electronic approvals.

- Department Chairs can simply input the Department vote and date of that vote, type their name indicating approval, and enter the date of that approval.
- The entire document must also be sent electronically to Carol Womack (WOMACK_CAROL@SMC.EDU) for Librarian approval (again, electronically).

(Cosmetology 46)

Department/Area Vote(s):

	Yes	No	Not voting	Date of vote
Enter Department or Area	4			9-21-11
Additional Department or Area (if applicable)				
Please list any other Departments, Areas, or Chairpersons consulted regarding this course:				

Department Chair(s) Approval:

Department Chair Approval:	Helen LeDonne	Date:	9-21-11
Additional Department Chair Approval: (if applicable)		Date:	

SMC Librarian:

List of suggested materials has been given to librarian?	Yes		No	×
Library has adequate materials to support course?	Yes	×	No	

Librarian Approval:	Carol Womack	Date:	10/4/2011

Approvals:

Articulation Officer:		Date:	
Instructional Dean:		Date:	
Curriculum Committee:		Date:	
Academic Senate:		Date:	
Board of Trustees:		Date:	

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Prerequisite, Corequisite, & Advisory Checklist and Worksheet (as per Matriculation Regulations)

COSMOTOLOGY 46, Nail Care 4

Prerequisite: Cosmetology 36 ; Nail Care 3

Other prerequisites, corequisites, and advisories also required for this course:
(Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

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.

	Type 1:	Standard Prerequisite
X	Type 2:	Sequential within and across disciplines
	Type 3:	Course in communication or computational skills as prerequisite for course other than another skills course
X	Type 4:	Program prerequisites
	Type 5:	Health and Safety
	Type 6:	Recency and other measures of readiness (miscellaneous)

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SECTION III - EXPLANATION OF ADDITIONAL LEVEL OF SCRUTINY

Depending on the type of prerequisite, supplementary facts should be listed here. (E.g. If the type of prerequisite chosen is Type 1, Standard prerequisite, the three campuses of UC or CSU and the course names and numbers used to qualify the prerequisite should be listed here. It may be necessary to append explanatory pages of material.)

SECTION IV - ADDITIONAL LEVELS OF SCRUTINY REQUIRED FOR EACH TYPE OF PREREQUISITE OR COREQUISITE.

TYPE 1, STANDARD PREREQUISITE: So as to demonstrate that the prerequisite is customary and reasonable, identify three campuses of UC or CSU that offer the equivalent course with the equivalent prerequisite.

TYPE 2, SEQUENTIAL WITHIN AND ACROSS DISCIPLINES: Include in the course outline (to be attached) a list of specific skills and/or knowledge a student must possess in order to be sufficiently prepared to succeed in the course.

Students must know the disinfection and sanitation procedures, State Board Rules and regulations, the basis manicure and pedicure, the applications of acrylic nails and French manicures in order to understand the procedure for the gel nail applications and 3-D art manicures.

TYPE 3, COURSES IN COMMUNICATION OR COMPUTATION SKILLS AS PREREQUISITES FOR COURSES OTHER THAN ANOTHER SKILLS COURSE: Include some method of data collection which uses sound research principles to show the prerequisite is necessary for success in the course. Acceptable data collection might include either (1) the extent to which students who have taken the prerequisite course feel it is necessary, (2) an appraisal of students= readiness for the course as to whether students have met the prerequisite (i.e. can the faculty member tell if the student has really taken the prerequisite). Or (3) a comparison at any point during the course of the students= performance with whether or not the student has completed the prerequisite.

TYPE 4, PROGRAM PREREQUISITE: In order for a prerequisite to be justified for student entrance into a program, the prerequisite must be required for at least one of the courses in the program. Explain and justify.

Students must know the disinfection and sanitation procedures, State Board Rules and regulations, the basis manicure and pedicure, the applications of nail tips and nail wraps in order to understand the procedure for acrylic nail applications and French manicures, as well as gel nails to be in compliance with the state board earning the mandated number of hours per discipline.

TYPE 5, HEALTH AND SAFETY: Faculty in the discipline and the curriculum committee must determine that students who lack the prerequisite might endanger themselves, other students or staff.

TYPE 6, RECENCY AND OTHER MEASURES OF READINESS (MISCELLANEOUS): Data must be collected according to sound research principles in order to justify such prerequisites.

You are required to complete the Prerequisite Worksheet on the following page.

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Prerequisite Worksheet

ENTRANCE SKILLS FOR Nail Care 4, COSM 46

A)	Demonstrate safety procedures and sanitary precautions for acrylic nails
B)	Understand and demonstrate the proper technique of a pedicure
C)	Understand and demonstrate the proper technique for a French manicure
D)	Demonstrate and understand the proper technique for a plain manicure

EXIT SKILLS FOR COSM 36

1.	Understand and demonstrate all safety and sanitary precautions for gel nails
2.	Understand and demonstrate all safety and sanitary precautions for a spa pedicure
3.	Demonstrate 3-D nail art
4.	Understand and demonstrate all safety and sanitary precautions for a spa manicure

	ENTRANCE SKILLS FOR (course in question)										
EXIT SKILLS FOR (previous level course)		A	B	C	D	E	F	G	H	I	J
	1	X									
	2		X								
	3			X							
	4				X						
	5										
	6										
	7										
	8										
	9										
	10										

form modified 03/03/2011

Course Outline of Record

Santa Monica College

Course Outline For

CS 30

Course Title:	MATLAB Programming	**Units:**	3
Total Instructional Hours: (usually 18 per unit)	54		
Hours per week (full semester equivalent) in Lecture:	3	In-Class Lab: **0**	Arranged : **0**

Date Submitted:	August 24, 2011
Date Updated:	October 13, 2011

Transfer: UC pending, CSU

Prerequisite(s):	Math 7
Skills Advisory:	none

I. Catalog Description:

MATLAB is a scientific computing tool for data modeling and analysis, image processing, and other data intensive applications. This course is designed primarily for students majoring in the sciences. It covers the basics of programming using MATLAB and uses numerical methods as an application to help students learn how to accelerate simple and complex numerical data modeling and analyses.

II. Examples of Appropriate Text or Other Required Reading: (include all publication dates; for transferable courses at least one text should have been published within the last five years)

1.	Getting Started With MATLAB: An introduction for Scientists and Engineers . Rudra Pratap. Oxford University Press. 2009. ISBN13: 9780199731244
2.	An Introduction to Problem Solving with MATLAB v.7. Second Edition. Jon Sticklen and M. Taner Eskil. Oxford University Press. 2006 ISBN13: 9780199767816
3.	MATLAB Programming. WIKIBOOKS. http://en.wikibooks.org/wiki/MATLAB_Programming

III. Course Objectives:

Upon completion of the course students will be able to:

1.	Demonstrate and use the basic operations of MATLAB
2.	Model data and perform numerical analysis using MATLAB
3.	Use MATLAB to draw 2-D and 3-D graphs.

IV. Methods of Presentation:

Lectures will be used to present theory and concepts. In some cases animated Powerpoint slides may be used to supplement lectures. Sample codes extensions will be used to explain how to apply problem solving techniques from simple to more complex problems. Feedback on assignments will provide important learning tips along with class discussions.

V. Course Content:

% of course	Topic
10%	Basic operation of the software
25%	Working with Numbers, Arrays, Matrices and Vectors

5%	Creating and using Functions
5%	Writing scripts
25%	Mathematical Applications
25%	Graphics: 2-D and 3-D
5%	Handling errors

VI. Methods of Evaluation: (Specific percentages will vary with instructor; approximate values are shown.)

% of grade	Evaluation Method
20%	10-12 assignments
20%	5-6 quizzes
30%	2-3 exams
30%	Final exam

VII. Sample Assignments: (please describe at least 2 sample assignments)

1.	Design and write code to implement the function $f(x) = x^2 + 3$ and find f(0). Plot the data for f(x) over x from $-\pi$ to π.
2.	Given a defined set of data, use the built-in functions of MATLAB to save and then load the data using a loop. For each file you load in the loop, generate the plot for a best fit of the data.

Course Approval and Data Sheet for: CS 30

Is this a New Course, Updated/Revised Course, or Reinstated Course?	**New**
If this is a NEW course, anticipated semester and year of first offering:	**Spring 2012**

If this is a new course, please provide a rationale for the addition of this course to the curriculum:

New course required by NASA CIPAIR grant. Additionally, course has been recommended by Advisory Board members for several years. Course will be essential for students completing any NASA and other science based internships.

Should this course be **transferable to the CSU?**	**Yes**
Should this course be **transferable to the UC?**	**Yes**

If you are requesting UC transferability, please list either a comparable lower division course offered at one of the UC campuses or a comparable California Community College course which is transferable to UC:

- California Community College: Ohlone College
- Course Number: 101A
- Course Title: Calculus with Analytic Geometry

Repeatability (requires that the student's experience will be qualitatively different with each repetition).

- How many times should this course be repeatable? **0**

Course Load Factor suggested by department: 1
Rationale for the above load factor suggestion: Same as existing courses.

Appropriate Minimum Qualifications for faculty teaching this course: (Refer to: *Minimum Qualifications for Faculty and Administrators in California Community Colleges* adopted by The Board of Governors)

- Computer Science

Student / Program / Institutional Learning Outcomes

September 2011
CS 30

Course Level Student Learning Outcomes: (Must list <u>at least 2</u>)

1.	Students use the MATLAB language to model data from different scientific fields.
	As assessed by: quizzes, assignments and tests.

2.	Students can map problems into logical entities to be mapped into programs
	As assessed by: quizzes, assignments and tests.

Demonstrate how this course supports/maps to <u>at least one</u> program learning outcome. Please include all that apply:

1.	Manage projects, analyze systems, develop software, program in a variety of computer languages, author Web pages, and develop Web applications. In this course, students need to analyze then translate problems from scientific and English languages into logical entities then create solutions using code. As assessed by: lab assignments, and exams.
2.	Create and manipulate data structures and databases. In the MATLAB course, students are given large amounts of data that they need to map to solve equations and or create graphs. This data could be in any level of format, from tables to mathematically represented data models. As assessed by: lab assignments, and exams.

Demonstrate how this course supports/maps to <u>at least one</u> of the following Institutional Learning Outcomes. Please include all that apply. Through their experiences at SMC, students will

ILO #1	acquire the self-confidence and self-discipline to pursue their intellectual curiosities with integrity in both their personal and professional lives.
	Through their knowledge and experience of mapping data to solve scientific programs, students will have a deeper understanding of the different science fields sparking their interest in obtaining undergraduate and post graduate degrees. Professional students taking this course will be able to find solutions to problems with more speed and efficiency.

ILO #2	obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
	MATLAB is a language aimed for use by scientist to solve problems, prove theorems, project data outcomes, and model otherwise theoretical situations. It allows scientists to communicate and impose confidence in ideas, data and models.

S/ILO Committee Use Only	reviewed by:	CKS	9/13/11

Associate Degree Course Criteria and Standards, as per Title V, Section 55002

CS 30

Section I – Course Criteria
Items 1 through 14 below. If any criterion is not met, course credit is non-applicable toward the associate degree.

		Criterion Met	Criterion Not Met
1.	This course is a collegiate course meeting the needs of students eligible for admission. It will be offered as described in the course outline of record (attached).	x	
2.	This course is to be taught by an instructor with a masters or higher degree, or the equivalent, in an approved discipline.	x	
3.	The course outline of record specifies the unit value, scope, student objectives and content in terms of a specific body of knowledge.	x	
4.	The course outline of record specifies requested reading and writing assignments, and other assignments to be done outside of class (homework).	x	
5.	The course outline of record specifies instructional methodology and methods of evaluation for determining whether the stated student objectives have been met.	x	
6.	This course will be taught in accordance with a set of instructional objectives common to all students enrolled in the course (all sections).	x	
7.	This course will provide for the measurement of student performance in terms of the stated course objectives. A formal grade based upon uniform standards of student evaluation will be issued for the permanent record of each student.	x	
8.	This formal grade will be based on student ability to demonstrate proficiency in the subject matter by means of either (1) written essays, (2) problem solving exercises, or (3) student skill demonstrations.	x	
9.	The number of units of credit assigned to the course is based upon the number of lecture, laboratory, and/or activity hours as specified in the course outline.	x	
10.	A minimum of three hours of work per week (including class time) is required for each unit of credit, prorated for short term, lab and activity courses.	x	
11.	Subject matter is treated with a scope and intensity which requires students to study independently outside of class time.	x	
12.	Learning skills and a vocabulary deemed appropriate for a college course are required. Educational materials used are judged to be college level.	x	
13.	Repeated enrollments are not allowed, except as permitted by provisions of Division 2, Title V, Sections 55761-55763 and 58161.	x	
14.	Student ability to (1) think critically and (2) understand and apply concepts at a college level is required in order to participate in the course.	x	

Section II – Recommendations for Prerequisites

15.	Are entrance skills and consequent prerequisites for the course required?	**YES**
	If yes, state the recommended prerequisites:	**Math 7**

16.	Is eligibility for enrollment in a certain level of English and/or mathematics necessary for success in this course?		**YES**	
	If yes, state the English and/or math level necessary for success:			
	English level recommended:		Math level recommended:	**Calculus (Math 7)**

APPROVALS PAGE

CS 30

Department/Area Vote(s):

	Yes	No	Not voting	Date of vote
Enter Department or Area	12	0	0	8/24/11
Additional Department or Area (if applicable)				
Please list any other Departments, Areas, or Chairpersons consulted regarding this course:				

Department Chair(s) Approval:

Department Chair Approval:	Fariba Bolandhemat	Date:	Aug 30, 2011
Additional Department Chair Approval: (if applicable)		Date:	

SMC Librarian:

List of suggested materials has been given to librarian?	Yes	×	No	
Library has adequate materials to support course? *Library will acquire materials to support course*	Yes		No	×

Librarian Approval:	Carol Womack	Date:	9/14/11

Approvals:

Articulation Officer:		Date:	
Instructional Dean:		Date:	
Curriculum Committee:		Date:	
Academic Senate:		Date:	
Board of Trustees:		Date:	

Prerequisite, Corequisite, & Advisory Checklist and Worksheet (as per Matriculation Regulations)

CS 30
Prerequisite: Math 7, Calculus 1.
Other prerequisites, corequisites, and advisories also required for this course: (Please note that a separate sheet is required for each prerequisite, corequisite, or advisory)

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.

	Type 1:	Standard Prerequisite
	Type 2:	Sequential within and across disciplines

x	Type 3:	Course in communication or computational skills as prerequisite for course other than another skills course
	Type 4:	Program prerequisites
	Type 5:	Health and Safety
	Type 6:	Recency and other measures of readiness (miscellaneous)

SECTION III - EXPLANATION OF ADDITIONAL LEVEL OF SCRUTINY

Depending on the type of prerequisite, supplementary facts should be listed here. (E.g. If the type of prerequisite chosen is Type 1, Standard prerequisite, the three campuses of UC or CSU and the course names and numbers used to qualify the prerequisite should be listed here. It may be necessary to append explanatory pages of material.)

SECTION IV - ADDITIONAL LEVELS OF SCRUTINY REQUIRED FOR EACH TYPE OF PREREQUISITE OR COREQUISITE.

TYPE 1, STANDARD PREREQUISITE: So as to demonstrate that the prerequisite is customary and reasonable, identify three campuses of UC or CSU that offer the equivalent course with the equivalent prerequisite.

TYPE 2, SEQUENTIAL WITHIN AND ACROSS DISCIPLINES: Include in the course outline (to be attached) a list of specific skills and/or knowledge a student must possess in order to be sufficiently prepared to succeed in the course.

TYPE 3, COURSES IN COMMUNICATION OR COMPUTATION SKILLS AS PREREQUISITES FOR COURSES OTHER THAN ANOTHER SKILLS COURSE: Include some method of data collection which uses sound research principles to show the prerequisite is necessary for success in the course. Acceptable data collection might include either (1) the extent to which students who have taken the prerequisite course feel it is necessary, (2) an appraisal of students= readiness for the course as to whether students have met the prerequisite (i.e. can the faculty member tell if the student has really taken the prerequisite). Or (3) a comparison at any point during the course of the students= performance with whether or not the student has completed the prerequisite.

TYPE 4, PROGRAM PREREQUISITE: In order for a prerequisite to be justified for student entrance into a program, the prerequisite must be required for at least one of the courses in the program. Explain and justify.

TYPE 5, HEALTH AND SAFETY: Faculty in the discipline and the curriculum committee must determine that students who lack the prerequisite might endanger themselves, other students or staff.

TYPE 6, RECENCY AND OTHER MEASURES OF READINESS (MISCELLANEOUS): Data must be collected according to sound research principles in order to justify such prerequisites.

You are required to complete the Prerequisite Worksheet on the following page.

Prerequisite Worksheet

ENTRANCE SKILLS FOR CS 30

A)	Knowledge of Numbers, vectors, matrices
B)	Setup equations for graphing lines, curves, and other 2D graphs.
C)	Analyze a problem into a series of steps and state what procedure to follow to solve each step to reach the final solution.

EXIT SKILLS FOR MATH 7

1.	Evaluate limits using basic limit theorems and the epsilon-delta definition.
2.	State and apply the definition of continuity to determine a function's points of continuity and discontinuity.
3.	Differentiate elementary functions using basic derivative theorems and the definition of the derivative.
4.	Integrate elementary functions using basic integral theorems and the definition of the definite integral.
5.	Approximate definite integrals using numerical integration (trapezoidal and Simpson's rules).
6.	Solve derivative application problems including optimization, related rates, linearization, curve sketching and rectilinear motion.
7.	Prerequisite of Math 7: Math 20 Objectives A and F: A: Simplify advanced numerical and algebraic expressions involving multiple operations. F: Solve systems of linear equations in three variables using matrix row reduction.

		ENTRANCE SKILLS FOR (CS 30)									
		A	B	C	D	E	F	G	H	I	J
EXIT SKILLS FOR (Math 7)	1			X							
	2			X							
	3			X							
	4			X							
	5			X							
	6		X	X							
	7	X									
	8										
	9										
	10										

Course Outline of Record

Santa Monica College

Course Outline For
Medical Laboratory Technician 5

Course Title:	Clinical Practicum			**Units:**	9
Total Instructional Hours: (usually 18 per unit)	480				
Hours per week (full semester equivalent) in Lecture:		In-Class Lab:	27	Arranged:	

Date Submitted:	September 30, 2011
Date Updated:	October 7, 2011

Transfer:	CSU

Prerequisite(s):	MLT 1, MLT2, MLT 3, MLT 4
Skills Advisory:	None

I. Catalog Description:

Students will work one-on-one with clinical instructors to refine clinical laboratory skills within a designated clinical affiliate laboratory. This rotation will include 480 hours of clinical practicum experience. This course will integrate knowledge gained in all MLT courses with practical experience in phlebotomy, hematology, coagulation, urinalysis, body fluid analysis, immunology, microbiology, serology, and clinical chemistry.

II. Examples of Appropriate Text or Other Required Reading: (include all publication dates; for transferable courses at least one text should have been published within the last five years)

1.	Success! in Clinical Laboratory Science Certification Exams, 2010, 4th ed. Anna Ciulla and Donald Lehman. Prentice Hall, 1176 pp. ISBN-10 0-13-512648-7, ISBN-13 978-0-13-512648-6.
2.	BOR Study Guide for the Clinical Laboratory Certification Examinations, 2009, 5th ed. Patricia Tanabe and E. Blair Holladay. American Society of Clin. Pathologists. ISBN-10 0-89-189587-6, ISBN-13 978-0-89-189587-9

III. Course Objectives:
Upon completion of the course students will be able to:

1.	Correlate the knowledge and skills obtained in college courses to clinical situations.
2.	Follow department policies, procedures and instruction.
3.	Proficiently obtain and handle specimens.
4.	Use basic equipment proficiently, is able to maintain it and to perform minor repairs.
5.	Perform routine chemistry, microbiology, serology, hematology, coagulation, and urinalysis tests according to procedures and criteria set in the laboratory.
6.	Organize own work to accomplish tasks with speed and efficiency without sacrificing accuracy.
7.	Work responsibly and independently with very little supervision.
8.	Recognize discrepancies or errors by review of patient results and quality control. Perform preliminary investigation and follow correct protocol for reporting problems.
9.	Interact with laboratory personnel, other health professionals, and patients in a congenial and cooperative manner.
10.	Demonstrate skills for obtaining and benefitting from continuing education such as surveying literature, utilizing workshops and seminars to their potential, and to communicate what they have learned to others.

IV. Methods of Presentation:

- After satisfactorily completing all of the on-campus Medical Laboratory Technician courses, the student will spend 480 hours in a hospital setting. The student will work closely with a clinical instructor. Methodology of each instructor will vary but the student will be evaluated on theory and capabilities of performing in the clinical laboratory. The student's primary objective is to refine the skills learned and to put them to practice in a full service clinical laboratory. A general schedule of time and areas of concentration in the laboratory at each site will be determined by the MLT Program Coordinator and the Clinical Instructor. Methods of presentation at hospital settings may include:
    - One-to-one instruction
    - Discussion
    - Demonstration
    - Performance of laboratory procedures
- The student will receive a packet of paperwork upon beginning this course. The paperwork should include the following:
    - Course Policies
    - Core Abilities Assessment and Clinical Rotation Grading Criteria
    - For each rotational area: Phlebotomy and Processing, Core Lab, Microbiology, Serology
        - List of Proficiency Objectives
        - Core Abilities Assessment Evaluation
        - Task Objectives Evaluation
        - Clinical Rotation Grade Form
        - Clinical Timesheet / Student Attendance Sheet
        - Student Evaluation of Clinical Experience

V. Course Content:

% of course	Topic
18%	Core Abilities
35%	Clinical Chemistry
20%	Hematology and Coagulation
10%	Immunology
12%	Microbiology
5%	Urinalysis and Other Body Fluids

VI. Methods of Evaluation: (Specific percentages will vary with instructor; approximate values are shown.)

% of grade	Evaluation Method
33%	Core Abilities Assessment Evaluation
34%	Technical Competencies in Task Objective Evaluations
33%	Mock Board of Registry Exams

VII. Sample Assignments: (please describe at least 2 sample assignments)

1.	Students will complete the BOR Study Guide in preparation for the ASCP certification exam.
2.	Students will maintain a written journal detailing their progress in successfully mastering all required skills and task objectives in the clinical lab setting.

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Course Approval and Data Sheet for: Medical Laboratory Technician 5

Is this a New Course, Updated/Revised Course, or Reinstated Course?	**New**
If this is a NEW course, anticipated semester and year of first offering:	**Winter 2014**

If this is a new course, please provide a rationale for the addition of this course to the curriculum:

To alleviate the clinical laboratory workforce shortage in California, there is a demand for Medical Laboratory Technicians (MLTs). This creates an opportunity for community colleges to train Medical Laboratory Technicians as the needed middle step in the clinical laboratory career ladder, thereby bridging the gap between the lower rung job of Phlebotomist and Laboratory Assistant and the high rung job of Clinical Laboratory Scientist (CLS), which is most in demand. This is the third in a series of courses that will prepare students to take the California MLT licensing exam and the certification exams offered by the American Society of Clinical Pathology.

List all A.A. majors in which this course is/will be **required**:

- MLT (forthcoming)

Should this course be **transferable to the CSU?**	YES
Should this course be **transferable to the UC?**	NO

Repeatability (requires that the student's experience will be qualitatively different with each repetition).

- How many times should this course be repeatable? none

Course Load Factor suggested by department: 1.0
Rationale for the above load factor suggestion: This is consistent with Life Science Department courses with both a lecture and a lab component.

Appropriate Minimum Qualifications for faculty teaching this course: (Refer to: *Minimum Qualifications for Faculty and Administrators in California Community Colleges* adopted by The Board of Governors)

- 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.
- 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.

Student / Program / Institutional Learning Outcomes

September 30, 2011
Medical Laboratory Technician 5

Course Level Student Learning Outcomes: (Must list <u>at least 2</u>)

1.	Communicate ideas clearly and proficiently in writing and speaking, appropriately adjusting content and arrangement for varying audiences, purposes, and situations. Critical Core Ability − Demonstrates appropriate problem solving skills where technical problem is recognized, clearly communicates to the trainer, identifies process for resolution, and applies process. Task Objective − Demonstrates proper procedures for patient and specimen identification − Demonstrates an understanding of test requisitioning, data entry, receiving specimens and printing labels, collection lists and reports.
	As assessed by: Core Abilities Assessment and Task Objective Evaluations - must be checked off on 5 critical core abilities and receive a score of "3" or higher on each task.

2.	Demonstrate the ability to think critically by gathering facts, generating insights, analyzing data, and evaluating information. Critical Core Ability − Demonstrates technical competence, able to perform tasks with minimal or no assistance, appropriate use of procedure manuals and reference materials for testing, displays confidence after instruction Task Objective − Identify factors that affect specimen collection procedures and test results and take appropriate actions within predetermined limits when applicable.
	As assessed by: Core Abilities Assessment and Task Objective Evaluations - must be checked off on 5 critical core abilities and receive a score of "3" or higher on each task.

3.	Exhibit workplace skills that include respect for others, teamwork competence, attendance/punctuality, decision making, conflict resolution, truthfulness/honesty, positive attitude, judgment, and responsibility. Critical Core Ability − Maintains professional demeanor in routine and stressful situations and maintains professional integrity Task Objective − Demonstrate professional conduct, stress management, interpersonal and communication skills with patients, peers and other health care personnel and the public, recognizing possible legal implications.
	As assessed by: Core Abilities Assessment and Task Objective Evaluations - must be checked off on 5 critical core abilities and receive a score of "3" or higher on each task.

Demonstrate how this course supports/maps to <u>at least one</u> program learning outcome. Please include all that apply:

1.	Provides students with the foundational knowledge and skills necessary to perform diagnostic laboratory analysis in accordance with established laboratory procedures and professional standards of practice, without error of clinical significance.
	The student will gain experience in performance of techniques related to specimen collection, handling, storage and preparation, biochemical and/or physiologic theory, principles of methods, analyses of chemical constituents of physiological specimens, disease manifestations and clinical correlations. This course will utilize computer technology to enhance student learning.

Demonstrate how this course supports/maps to <u>at least one</u> of the following Institutional Learning Outcomes. Please include all that apply. Through their experiences at SMC, students will

ILO #2	Obtain the knowledge and academic skills necessary to access, evaluate, and interpret ideas, images, and information critically in order to communicate effectively, reach conclusions, and solve problems.
	This course is the fifth and final in a series towards MLT licensing. In the workforce, an MLT prepares and analyzes specimens of blood and body fluids using microscopes, analyzers and other sophisticated laboratory equipment and computerized instruments to search for basic clues to the absence, presence, extent, and causes of diseases.

S/ILO Committee Use Only	reviewed by:	CKS	9/30/11

Associate Degree Course Criteria and Standards, as per Title V, Section 55002

Medical Laboratory Technician 5

Section I – Course Criteria
Items 1 through 14 below. If any criterion is not met, course credit is non-applicable toward the associate degree.

		Criterion Met	Criterion Not Met
1.	This course is a collegiate course meeting the needs of students eligible for admission. It will be offered as described in the course outline of record (attached).	x	
2.	This course is to be taught by an instructor with masters or higher degree, or the equivalent, in an approved discipline.	x	
3.	The course outline of record specifies the unit value, scope, student objectives and content in terms of a specific body of knowledge.	x	
4.	The course outline of record specifies requested reading and writing assignments, and other assignments to be done outside of class (homework).	x	
5.	The course outline of record specifies instructional methodology and methods of evaluation for determining whether the stated student objectives have been met.	x	
6.	This course will be taught in accordance with a set of instructional objectives common to all students enrolled in the course (all sections).	x	
7.	This course will provide for the measurement of student performance in terms of the stated course objectives. A formal grade based upon uniform standards of student evaluation will be issued for the permanent record of each student.	x	
8.	This formal grade will be based on student ability to demonstrate proficiency in the subject matter by means of either (1) written essays, (2) problem solving exercises, or (3) student skill demonstrations.	x	
9.	The number of units of credit assigned to the course is based upon the number of lecture, laboratory, and/or activity hours as specified in the course outline.	x	
10.	A minimum of three hours of work per week (including class time) is required for each unit of credit, prorated for short term, lab and activity courses.	x	
11.	Subject matter is treated with a scope and intensity which requires students to study independently outside of class time.	x	
12.	Learning skills and a vocabulary deemed appropriate for a college course are required. Educational materials used are judged to be college level.	x	
13.	Repeated enrollments are not allowed, except as permitted by provisions of Division 2, Title V, Sections 55761-55763 and 58161.	x	
14.	Student ability to (1) think critically and (2) understand and apply concepts at a college level is required in order to participate in the course.	x	

Section II – Recommendations for Prerequisites

15.	Are entrance skills and consequent prerequisites for the course required?	**YES**
	If yes, state the recommended prerequisites:	MLT 1, MLT 2a, MLT 2b, MLT 3, MLT 4

16.	Is eligibility for enrollment in a certain level of English and/or mathematics necessary for success in this course?		**YES**	
	If yes, state the English and/or math level necessary for success:			
	English level recommended:	English 1	Math level recommended:	

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APPROVALS PAGE

Medical Laboratory Technician 5

Department/Area Vote(s):

	Yes	No	Not voting	Date of vote
Life Science	20	0	1	09/29/11
Additional Department or Area (if applicable)				
Please list any other Departments, Areas, or Chairpersons consulted regarding this course:				

Department Chair Approval:	Garen Baghdasarian	Date:	09/29/11
Additional Department Chair Approval: (if applicable)		Date:	

SMC Librarian:

List of suggested materials has been given to librarian?	Yes		No	×
Library has adequate materials to support course? *Library will acquire materials to support course.*	Yes	×	No	

Librarian Approval:	Carol Womack	Date:	10/3/11

Approvals:

Articulation Officer:		Date:	
Instructional Dean:		Date:	
Curriculum Committee:		Date:	
Academic Senate:		Date:	
Board of Trustees:		Date:	

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Prerequisite, Corequisite, & Advisory Checklist and Worksheet (as per Matriculation Regulations)

Medical Laboratory Technician 5

Prerequisite: MLT 1; Introduction to Clinical Laboratory Profession
Prerequisite: MLT 2a; Phlebotomy (note: to be done at hospital partners sites)
Prerequisite: MLT 2b; Hematology, Coagulation, Urine and Body Fluid Analysis (currently called MLT 2)
Prerequisite: MLT 3; Blood Banking and Immunology
Prerequisite: MLT 4; Clinical Chemistry

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.

	Type 1:	Standard Prerequisite
x	Type 2:	Sequential within and across disciplines
	Type 3:	Course in communication or computational skills as prerequisite for course other than another skills course
x	Type 4:	Program prerequisites
	Type 5:	Health and Safety
	Type 6:	Recency and other measures of readiness (miscellaneous)

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Prerequisite Worksheet

ENTRANCE SKILLS FOR: MLT 5

A)	Understand regulatory requirements, safety regulations and ethical standards of practice.
B)	Ability to communicate specimen requirements, reference ranges, test results, and procedures for laboratory tests according to a standard format
C)	Ability to follow established procedures for collecting and processing biological specimens for analysis
D)	Understanding and applying aseptic technique as well as exhibit manual dexterity in aseptic technique
E)	Understand instrument operation and troubleshooting of equipment common in a clinical laboratory. Can recognize unexpected results and instrument malfunction and take appropriate action.
F)	Ability to maintain technical competence through continued professional development
G)	Understand basic physiology and how it relates to appropriate test selection and abnormal test results
H)	Evaluate and correlate laboratory tests results to disease processes
I)	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 and how they relate to pertinent clinical laboratory tests
J)	Recognize and critically assess unstated assumptions or inferences underlying written references or data sets, and to incorporate these in their analysis of a thesis.
K)	Applied critical thinking to transfer memorized information into conceptual understandings
L)	Understand the technical and procedural aspects of laboratory tests.
M)	Ability to perform basic lab skills such as solution preparation, dilution and titration
N)	Achieve a reasonably high degree of reproducibility, accuracy and precision in their lab results
O)	Make reliable observations and record these observations systematically.

EXIT SKILLS FOR: MLT 1, MLT 2, MLT 3, MLT 4

	Medical Laboratory Technician 1 related Exit Skills
1.	Explain compliance with regulatory requirements, safety regulations, quality assessment and ethical standards of practice
2.	Demonstrate an understanding of information processing in the clinical laboratory
3.	Distinguish between pre-analytic, analytic and post-analytic stages of laboratory testing
4.	Demonstrate an understanding of the importance of and pitfalls in quality assessment in the laboratory
5.	Describe different laboratory safety procedures and regulatory compliance rules and regulations
6.	Demonstrate understanding of and ability to assess information processing and data management systems in the clinical laboratory setting.
7.	Maintain ethical and professional conduct
8.	Understand the significance of continued professional development
	Medical Laboratory Technician 2 related Exit Skills
9.	Describe proper method of blood, urine and other body fluid collection
10.	Describe hematopoiesis as well as recognize normal and abnormal examples of WBC, RBC and platelet maturation
11.	Identify the forces involved in fluid formation in the body and correlate the body cavity with containing fluid.
12.	Identify the principle, methodology and normal results for all routine hematology and urinalysis tests.
13.	Evaluate given clinical and laboratory data and determine cause of defects in the hemostatic mechanism or renal

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	system.
14.	Understanding the principles of instrumentation in the hematology and coagulation laboratory.
15.	Correlate common pathological states with common cytochemical stains, histograms and other lab data.
	Medical Laboratory Technician 3 related Entrance Skills
16.	Describe in detail the procedures performed in a clinical blood bank and serology laboratory and clinical conditions associated with Immunohematology.
17.	Understanding and applying ability to correctly grade hemagglutination, hemolysis and latex agglutination reactions. Perform serial dilution techniques. Titer positive antibody screens when necessary within one dilution of instructor.
18.	Perform and interpret routine immunological and serological typing, tests, screens and panels, both direct and indirect.
	Medical Laboratory Technician 4 related Entrance Skills
19.	Describe normal digestion, anabolism and catabolism of carbohydrates, proteins, and lipids within the body.
20.	Understanding of the mechanism by which the body regulates water and pH homeostasis.
21.	Describe the anatomy and physiology of the following organs or systems, including 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.
22.	Understanding of the principle of analysis methods, sources of error and be able to perform various analyses within +/- 2SD of the recognized mean for a control serum.
	Skills obtained from MLT 1, MLT 2, MLT 3, MLT 4
23.	Understand and follow lab safety rules, perform all procedures will regard to prescribed safety protocol.
24.	Demonstrate ethical and professional responsibility in the performance of all procedures.
25.	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.
26.	Applied critical thinking to transfer memorized information into conceptual understandings
27.	Read and understand written material at the college level
28.	Read and synthesis material from multiple sources to generate a clear coherent thesis
29.	Properly incorporate and document evidence in support of a thesis
30.	Recognize and critically assess unstated assumptions or inferences underlying written references or data sets, and to incorporate these in their analysis of a thesis.

	ENTRANCE SKILLS FOR MLT 5															
EXIT SKILLS FOR MLT 1, MLT 2, MLT 3, MLT 4		A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	1	MLT 1														
	2		MLT 1													
	3			MLT 1	MLT 1											
	4					MLT1										
	5	MLT 1														
	6		MLT 1													
	7	MLT 1														
	8						MLT 1									
	9				MLT 2			MLT 2								
	10								MLT 2	MLT 2						
	11									MLT 2						
	12										MLT 2					
	13								MLT 2			MLT 2				
	14					MLT2										
	15								MLT 2			MLT 2				
	16								MLT 3				MLT 3			
	17				MLT 3						MLT 3			MLT 3		
	18				MLT 3					MLT 3						
	19									MLT 4						
	20									MLT 4						
	21									MLT 4						
	22													MLT 4	MLT 4	
	23	X			X								X			
	24	X														
	25		X	X	X	X								X	X	
	26											X				
	27											X				
	28											X				
	29															X
	30		X			X										X

MLT 1 – Introduction to Clinical Laboratory Profession exit skills necessary as entrance skills for MLT 5
MLT 2 – Hematology, Coagulation, Urine and Body Fluid Analysis exit skills necessary as entrance skills for MLT 5
MLT 3 – Blood Banking and Immunology exit skills necessary as entrance skills for MLT 5
MLT 4 – Clinical Chemistry exit skills necessary as entrance skills for MLT 5
X – Exit skills gained from all prerequisites, MLT 1, MLT 2, MLT 3, MLT 4, necessary as entrance skills for MLT 5

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