MA 64 Course Outline as of Fall 1997

CATALOG INFORMATION

Dept and Nbr: MA 64 Title: LAB TECHNIQUES
Full Title: Laboratory Techniques
Last Reviewed: 1/27/1997

Units		Course Hours per Week		Nbr of Weeks	Course Hours Total	
Maximum	2.00	Lecture Scheduled	1.00	17.5	Lecture Scheduled	17.50
Minimum	2.00	Lab Scheduled	3.00	17.5	Lab Scheduled	52.50
		Contact DHR	0		Contact DHR	0
		Contact Total	4.00		Contact Total	70.00
		Non-contact DHR	0		Non-contact DHR	0

Total Out of Class Hours: 35.00 Total Student Learning Hours: 105.00

Title 5 Category:	AA Degree Applicable
Grading:	Grade or P/NP
Repeatability:	00 - Two Repeats if Grade was D, F, NC, or NP
Also Listed As:	
Formerly:	

Catalog Description:
This course provides students with an introduction to the clinical laboratory. Students will perform low-complexity lab tests. Urine specimens are collected for dipstick or examination. Hematology, blood chemistry, serology testing, and normal ranges are studied. Medical microbiology techniques are used to set up slides for examination by the physician, & specimens are examined under the microscope.

Prerequisites/Corequisites:
Course Completion of HLC 160 (or HLC 60) and Course Completion of ANAT 58 and Course Completion of MA 161 (or MA 61 or MSR 61) and Course Completion of MA 162 (or MA 62 or MSR 62B) and Course Completion of MA 63A

Recommended Preparation:
Eligibility for ENGL 1A & MA 60 (formerly MSR 60, MSR 69) or 6 months' experience in a medical office.

Limits on Enrollment:

Schedule of Classes Information:
Description: Introduction to the clinical laboratory. Urinalysis, hematology, blood chemistry, &

serology testing, & normal ranges, are studied. Students will perform low complexity tests and use microscopes to examine lab slides. (Grade or P/NP)
Prerequisites/Corequisites: Course Completion of HLC 160 (or HLC 60) and Course Completion of ANAT 58 and Course Completion of MA 161 (or MA 61 or MSR 61) and Course Completion of MA 162 (or MA 62 or MSR 62B) and Course Completion of MA 63A
Recommended: Eligibility for ENGL 1A & MA 60 (formerly MSR 60, MSR 69) or 6 months' experience in a medical office.
Limits on Enrollment:
Transfer Credit: CSU;
Repeatability: Two Repeats if Grade was D, F, NC, or NP

ARTICULATION, MAJOR, and CERTIFICATION INFORMATION:

AS Degree:	**Area**			Effective:	Inactive:
CSU GE:	**Transfer Area**			Effective:	Inactive:
IGETC:	**Transfer Area**			Effective:	Inactive:
CSU Transfer:	Transferable	Effective:	Fall 1997	Inactive:	Fall 2011
UC Transfer:		Effective:		Inactive:	

CID:

Certificate/Major Applicable:
Not Certificate/Major Applicable

COURSE CONTENT

Outcomes and Objectives:
At the completion of this course, the student will be able to:
1. Use a laboratory directory.
2. Complete a laboratory request form.
3. Read a laboratory report.
4. Instruct a patient in the preparation necessary for a laboratory test requiring fasting.
5. Collect a biologic specimen.
6. Handle and store a biologic specimen.
7. Employ quality control methods.
8. Practice laboratory safety.
9. Instruct an individual in the procedure for obtaining a clean-catch midstream urine specimen.
10. Assess the color and clarity of a urine specimen.
11. Measure the specific gravity of a urine specimen.
12. Perform a chemical assessment of a urine specimen, using dipstick or tablet reagent urinalysis (nonautomated)
13. Determine the amount of glucose present in a urine specimen, using the Clinitest testing kit.
14. Prepare the specimen, and identify the urine sediment on a slide prepared for microscopic examination by the physician.
15. Perform a urine pregnancy test, using visual color comparisons.

16. Teach a patient about urinary tract infection.
17. Describe the normal appearance and function of erythrocytes, leukocytes, thrombocytes, and hemoglobin.
18. State the normal values or ranges for hematologic tests, e.g., hemoglobin, hematocrit, red & white blood cell counts, & the differential cell count.
19. Identify normal ranges for common blood chemistry tests.
20. Explain the purpose of common serologic tests.
21. Use, properly handle,& care for a compound microscope.
22. Obtain a specimen for a throat culture.
23. Obtain a microbiologic specimen using a collection & transport system.
24. Prepare a wet mount.
25. Prepare a hanging drop slide.
26. Prepare a microbiologic smear.
27. Teach a patient about strep throat.
28. Instruct a patient for a Hemoccult slide test.

Topics and Scope:

I. Introduction to the clinical laboratory
  A. Laboratory tests
  B. Purpose of laboraty testing
  C. Relationship between the medical office & clinical laboratory
    1. CLIA regulations and low-complexity tests medical students may perform.
  D. Laboratory requests
    1. purpose
    2. parts of a lab request form
  E. Laboratory reports
    1. using a lab directory
  F. Patient preparation & instructions
  G. Collecting, handling, & transporting specimens
    1. guidelines
  H. Testing the specimen
    1. categories of laboratory tests
  I. Quality control
  J. Laboratory safety
II. Urinalysis
  A. Structure and function of the urinary system
  B. Composition of urine
  C. Terms relating to the urinary system
  D. Collection of urine - methods
  E. Analysis of urine
  F. Chemical examination of the urine
  G. Microscopic examination of urine
    1. prepare slide for doctor to examine
    2. identify urine sediment
  H. Urine pregnancy testing, using visual color comparisons
  I. Patient Teaching: Urinary tract infections
III. Hematology, blood chemistry, & serology
  A. Hematology
  B. Components and function of blood

1. Normal ranges for hematologic tests, e.g., hemoglobin, hematocrit, red & white blood cell counts, & the differential cell count.

C. Normal ranges for common blood chemistry tests.
D. Purpose of common serologic tests.

IV. Medical Microbiology
A. Normal flora, infection, microorganisms, & disease.
B. Use, proper handling, & care of compound microscope.
C. Obtaining a specimen for a throat culture.
D. Obtaining a microbiologic specimen using a collection & transport system.
E. Preparing a wet mount.
F. Preparing a hanging drop slide.
G. Preparing a microbiologic smear.
H. Teaching a patient about strep throat.
I. Instructing a patient for a Hemoccult slide test.

Assignment:

ASSIGNMENTS:
1. Complete reading assignments, 15-20 pages/week
2. Complete written asignments:
   a. self-evaluation related to reading 5-10 questions/week
3. Practice lab tests and medical microbiology in lab setting under instructor supervision
4. Achieve satisfactory score on skill performance evaluation checkoff as each clinical skill is completed.

Methods of Evaluation/Basis of Grade:

Writing: Assessment tools that demonstrate writing skills and/or require students to select, organize and explain ideas in writing.

Written homework	Writing 20 - 50%

Problem Solving: Assessment tools, other than exams, that demonstrate competence in computational or non-computational problem solving skills.

Homework problems, Lab reports, Quizzes	Problem solving 10 - 15%

Skill Demonstrations: All skill-based and physical demonstrations used for assessment purposes including skill performance exams.

Class performances, Performance exams	Skill Demonstrations 30 - 50%

Exams: All forms of formal testing, other than skill performance exams.

Multiple choice, True/false, Matching items, Completion	Exams 10 - 20%

Other: Includes any assessment tools that do not logically fit into the above categories.

None	Other Category 0 - 0%

Representative Textbooks and Materials:
Clinical Procedures for Medical Assistants. By K. Bonewit-West, 4th Ed., Saunders, 1995.