MINNESOTA WEST COMMUNITY & TECHNICAL COLLEGE
COURSE OUTLINE

DEPT: Medical laboratory Technician                     COURSE NO. MDLT 1115

COURSE TITLE: Biological Fluids       Credits: 3 (2 lecture/1 lab)

CATALOG DESCRIPTION: The course introduces the student to the practical aspects of renal physiology and the theory of urine chemical, physical and microscopic tests. In addition, analysis of other body fluids (fecal specimens, cerebral spinal fluid, seminal fluid, amniotic fluid, synovial fluid) is reviewed in the lecture portion of the class. In the laboratory the student will perform physical, chemical and microscopic analysis on urine specimens. Prerequisite: None. Microscopic usage is helpful.

AUDIENCE: Medical Laboratory Technician students or other healthcare providers

FULFILLS MN TRANSFER CURRICULUM AREA(S):
Non-applicable

PREREQUISITES OR NECESSARY ENTRY SKILLS/KNOWLEDGE: Use of microscope

LENGTH OF COURSE: Twp hour lecture per week and 2 hours of lab per week for 16 weeks

THIS COURSE IS USUALLY OFFERED: Spring only

Four goals are emphasized in course at Minnesota West Community & Technical College:

1. ACADEMIC CONTENT:
   a. Become familiar with basic terms associated with biological fluids
   b. Perform chemical and physical examination of urines and other body fluids
   c. Perform microscopic analysis of urine and other body fluids
   d. Do mathematical calculations as they pertain to biological fluid analysis
   e. Perform screening tests used in diagnosis of diseases regarding urines and other body fluids

2. THINKING SKILLS:
   a. Identify cells and other formed elements under the microscope
   b. Correlation of lab results and diseases
   c. Recall of correct procedures for laboratory tests
   d. Reasoning and the feasibility of laboratory result reported
3. **COMMUNICATION SKILLS:**
   a. Writing precise laboratory results
   b. Communicate to the healthcare provider the results obtained on the lab specimen
   c. Group problem solving
   d. Communicating with patients
   e. Instructing patients regarding how to collect samples.

4. **HUMAN DIVERSITY:**
   a. Working with other students in the laboratory
   b. Sharing of equipment and instruments

**TOPICS TO BE COVERED:**
   a. Terminology associated with body fluids
   b. Collection & transport of body fluids
   c. Performance and analysis of laboratory procedures
   d. Reporting of laboratory results
   e. Mathematics and formulas used
   f. Anatomy & physiology of kidneys
   g. Correlation of lab results and disease
   h. Quality control and quality assurance
   i. Safety and infection control

**LIST OF EXPECTED COURSE OUTCOMES:**

Upon completion of this course the student should be able to:

A. Describe the composition, formation and functions of selected body fluids.
B. Process and analyze body fluid specimens using only necessary supplies and within a reasonable amount of time.
C. Exhibit an understanding of the anatomy and functions of the renal system.
D. Collect and perform macroscopic and microscopic analysis of urine samples within stated limits of accuracy.
E. Evaluate laboratory test outcomes and correlate test results with patient condition(s).
F. Defend the value of maintaining a safe laboratory environment.
G. Demonstrate improvement in the affective traits of organizational skills, work habits, attitude, interpersonal skills, and problem-solving ability.

**LEARNING/TEACHNG TECHNIQUES used in this course are:**

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<th></th>
<th>Collaborative Learning</th>
<th>Problem Solving</th>
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<tr>
<td></td>
<td>Student Presentations</td>
<td>Interactive lectures</td>
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<td>Creative Projects</td>
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<td>Lecture</td>
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<td>Demonstrations</td>
<td>Other (describe below)</td>
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<td>Lab</td>
<td>Case Studies</td>
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ASSIGNMENTS AND ASSESSMENTS FOR THIS CLASS INCLUDE:

- X Reading
- X Tests
- Individual Projects
- Oral Presentations
- X Worksheets
- Collaborative Projects
- Textbook Problems
- Papers
- Portfolio
- X Group Problems
- Other (describe below)

The information in this course outline is subject to revision

To receive reasonable accommodations for a documented disability, please contact the campus Student Services Advisor or campus Disability Coordinator as arrangements must be made in advance. In addition, students are encouraged to notify their instructor.

Veteran Services: Minnesota West is dedicated to assisting veterans and eligible family members in achieving their educational goals efficiently. Active duty and reserve/guard military members should advise their instructor of all regularly scheduled military appointments and duties that conflict with scheduled course requirements. Instructors will make every effort to work with the student to identify adjusted timelines. If you are a veteran, please contact the Minnesota West Veterans Service Office.

This document is available in alternative formats to individuals with disabilities by contacting the
Student Services Advisor or by calling 800-658-2330 or
Minnesota Relay Service at 800-627-3529 or by using your preferred relay service.

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