Course Syllabus

MLAB 1211 – Urinalysis

Revision Date: October 28, 2014

Catalog Description: An introduction to the study of urine and body fluid analysis. Includes the anatomy and physiology of the kidney, physical, chemical and microscopic examination of urine, cerebrospinal fluid and other body fluids as well as quality control, quality assurance and safety. (5110040000)

Lecture hours = 2, Lab hours = 1

Prerequisites: Enrollment in this course and the Medical Laboratory Technology Program require department head approval and successful completion of the admissions process. Students must be accepted into the MLT Program

Semester Credit Hours: 2
Lecture Hours per Week: 2
Lab Hours per Week: 1
Contact Hours per Semester: 80

State Approval Code: 5110040000

Instructional Goals and Purposes:
Panola College’s instructional goals include 1) creating an academic atmosphere in which students may develop their intellects and skills and 2) providing courses so students may receive a certificate/an associate degree or transfer to a senior institution that offers baccalaureate degrees.

Rationale/Introduction: The initial phase of this course covers the study of macroscopic and microscopic structure of the kidney and the principles of renal function. The analysis of urine with specific application of techniques is included. The second phase of this course covers the composition, formation, and functions of body fluids other than blood and urine. Included is the collection, processing, and laboratory analysis of body fluids. Throughout this course, special emphasis is placed on correlating or laboratory results with the patient’s probable condition.

Course Instructional Goals and Purposes:
MLAB 1211 is structured to meet the MLAB Program goals addressing, but not limited to:
• Developing a working knowledge of the principles and procedures of body fluid and urinalysis laboratory testing
• Producing accurate, skilled clinical laboratory workers with strong ethical and professional values, to meet the needs of area employers
• Promoting respect and understanding of allied health professionals through renewed understanding of the clinical laboratory technician’s role as a member of the allied health care team

Learning Objectives:
Applying principles of safety, quality assurance and quality control; evaluate specimen acceptability; explain principles of each test included in a routine urinalysis; describe the composition, formation, and function of selected body fluids; explain the anatomy and functions of the renal system/ and evaluate and correlate laboratory results with patient condition(s).

Upon successful completion of this course, the student should be able to:
1. Describe the composition, formation, and functions of selected body fluids.
2. Determine acceptability of urine or body fluid for testing based on labeling, volume, collection, handling, and storage.
3. Perform macroscopic and microscopic analysis of urine samples within stated limits of accuracy.
4. Explain the principle of each performed test.
5. Evaluate laboratory test outcomes and correlate test results with patient condition(s).
6. Perform and evaluate quality control.
7. Describe the anatomy and function of the renal system.

Specific Course Objectives (Includes SCANS Information)
Recently the U.S. Department of Labor established the Secretary’s Commission on Achieving Necessary Skills (SCANS) to examine the demands of the workplace and whether the nation’s students are capable of meeting those demands. The Commission determined that today’s jobs generally require competencies in the following areas.

a. Resources: Identifies, organizes, plans, and allocates resources
b. Interpersonal: Works with others
c. Information: Acquires and uses information
d. Systems: Understands complex interrelationships
e. Technology: Works with a variety of technologies

The Texas Higher Education Coordinating Board is now requiring all degree plans in institutions of higher education incorporate these competencies and identify to the student how these competencies are achieved in course objectives.
Examples of SCANS competencies being incorporated are as follows:

<table>
<thead>
<tr>
<th>SCANS COMPETENCY</th>
<th>Clinical Competencies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resources</td>
<td>Performs procedures such as reagent preparation and use, performing cell counts and differentials on body fluids including identification of possible malignant cells, intracellular bacteria, and types of inclusions in macrophages; performing physical and dipstick rapid chemical macroscopic and microscopic examinations of urine using only necessary supplies and within a predetermined reasonable amount of time.</td>
</tr>
<tr>
<td>Interpersonal</td>
<td>Demonstrate an understanding of the profession of Medical Laboratory Technology through ethical behavior when dealing with patients and other members of the health care team, including maintaining a professional appearance to relieve patient anxiety and maintaining patient confidentiality.</td>
</tr>
<tr>
<td>Information</td>
<td>Evaluate quality control results within pre-established parameters; perform all procedures using approved safety techniques including Standard Precautions. Communicate any out-of-range results to the instructor in an appropriate manner. Immediately report accidents or harmful situations to the instructor.</td>
</tr>
<tr>
<td>Systems</td>
<td>Identify/take corrective actions when quality control results do not fall within pre-established parameters. Use problem-solving skills to troubleshoot equipment or procedures that do not fall within standards.</td>
</tr>
<tr>
<td>Technology</td>
<td>Use classroom computer to review urine microscopics. Use classroom, library, or personal computer to search for relevant article for abstract presentation.</td>
</tr>
</tbody>
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**Course Grade**

Lecture Grade = 2/3 of grade  
Lab Grade = 1/3 of grade

**Lecture**

- Major Exams: 50%
- Quizzes: 15%
- Homework Assignments: 20%
- Final Exam: 15%
Laboratory
Pre-Lab Quizzes 10%
Case Assignments 20%
In-Lab Assignments 20%
Practicals 50%

Methods of Evaluation:
This is a mainly online course so it will require a lot of outside proactive work by the student. The instructor will provide guidance as needed. The student will be evaluated by assignments, quizzes, cases, and exams as assigned by the instructor outside of the classroom. The student will be required to come to a Panola College testing Center to take all major examinations. Laboratories will take place on three pre-determined Saturdays during the semester and will be mandatory. During the laboratories the students will be evaluated by case studies, in-lab assignments, and lab practicals as assigned by the instructor.

Texts, Required Readings, Materials, and Supplies
For current texts and materials, use the following link to access bookstore listings: http://www.panolacollegestore.com

Required:
ISBN: 978-1-4377-0989-6
White Laboratory Coat

Suggested:
Medical Dictionary

More Information:

Laboratory Dress Code
The student will be expected to attend class clean and neatly dressed in long pants or scrubs and wear closed-toe shoes. A laboratory coat will must be worn snapped or buttoned up during all laboratory sessions. Hair that is shoulder length or longer must be worn up or securely tied back. Gloves must be worn when handling biological materials.

Behavioral Conduct
While a student is representing Panola College as a Medical Laboratory Technology student, they will be expected to conduct themselves in such a manner as to reflect favorably on themselves and on the Program. If a student acts in such a manner as to reflect immature judgment or disrespect for others, the student will be called before the MLT Department Chair for determination of their status in the Program. Inappropriate
conduct is grounds discipline and may be cause for immediate probation or dismissal from the Program.

**Academic Dishonesty**
Under no circumstances shall a student submit work that is not their own. Copying answers for study questions, cheating on exams and/or submitting laboratory results which are not your own are expressly prohibited.

**Time Commitment**
According to “Hints on How to Succeed in College Classes” http://astrosociety.org/edu/resources/success.html you should budget your time per week for this two hour credit course as follows:

1. Reading assigned text 1 to 2 hours
2. Homework assignments 3 to 5 hours
3. Time for review and test preparation 2 hours
4. Total study time per week 6 to 9 hours **PER WEEK**

**OTHER:**
- For testing services, use the following link: http://www.panola.edu/elearning/testing.html
- If any student in this class has special classroom or testing needs because of a physical learning or emotional condition, please contact the ADA Student Coordinator in Support Services located in the Administration Building or go to http://www.panola.edu/student-success/disability-support-services/ for more information.
- Withdrawing from a course is the student’s responsibility. Students who do not attend class and who do not withdraw will receive the grade earned for the course.