Berkshire Medical Center

725 North Street
Pittsfield, MA 01201
(413) 447-2000

Berkshire Medical Center
School of Medical Laboratory Science

Course Syllabus

Course No.: MEDT 406
Course Title: Clinical Urinalysis and Body Fluids

Credits: 1 (through affiliated colleges/universities affiliation agreements)

Description:
Introduces the student to the study of body fluids including urine, cerebral spinal fluid, synovial fluid, serous fluids, seminal fluid, and miscellaneous other fluids. Discusses the physiological process of fluid production and abnormalities that may alter this production. Discusses specimen collection and analysis. Describes the controllable and non-controllable pre-analytical, analytical, and post-analytical variables that can affect testing. The student applies this theory in the clinical lab using current diagnostic techniques and instrumentation to correlate lab results with disease processes.

Primary Didactic Instructor: Lori Moore, M.Ed., MLS(ASCP)
lmoore@bhs1.org
413-447-2580

Clinical Coordinator: Brenda Alibozek
balibozek@bhs1.org
413-395-7677

Require Text:
Urinalysis and Body Fluids, 7th ed. (2021). Susan King Strasinger & Marjorie Schaub DiLorenzo.
The Urinalysis Department online procedures.

Reference text:
Fundamentals of Urine and Body Fluid Analysis, 4th edition, Nancy Brunzel, 2018
Color Atlas of the Urinary Sediment; Haber, Blomberg, etc, CAP Press, 2010
Graff's Textbook of Urinalysis and Body Fluids 3rd edition, L. Mundt and K Shanahan, 2016
Wet Urinalysis, Schumann, Friedman, 2003
Body Fluids, 3rd edition, Carl Kjeldsberg, Joseph Knight, 1993

Lecture:6 Urine lectures – August & September
4 Body fluid

Laboratory: 3 week clinical rotation in the Urinalysis Department.
**See individual student schedule for dates

Course Goals and Objectives

Based on the didactic material and clinical instruction students will score an average of 75% or better on evaluation tools (i.e. exams, task lists, evaluations, etc.) to demonstrate competency of the following objectives.

Upon completion of the Urinalysis/Body Fluids clinical and didactic course the student will:

1. Explain the anatomy of the kidney and physiology of urine production including its importance in the detection and treatment of disease.
2. Explain the importance of cellular and sediment elements found in urine and various other body fluids.
3. Differentiate the different kinds of epithelial cells and casts found in urine sediment.
4. Discuss each chemical test performed on urine including the reaction components, normal and abnormal results, clinical significance of abnormal results, and interfering substances.
5. Describe the significant renal diseases including physiology and expected laboratory test results.
6. Select best course of action when there is a discrepancy between chemical testing results and microscopic examination.
7. Discuss the basic methodology and principles of each test performed on urine and other body fluids in the clinical lab.
8. Describe the physiological processes of other body fluid production (not urine) and the mechanisms that lead to abnormalities in the various body fluids.
9. Identify cellular elements in body fluids other than urine.
10. Explain the importance of quality control and apply it to the urinalysis/body fluid testing laboratory.
11. Determine appropriate specimen collection, processing, and analysis of body fluid specimens by following established procedures and assist in resolution of issues.
12. Perform manual and automated testing on urine and other body fluids that result in valid laboratory results in the Urinalysis department.
13. Perform routine maintenance, trouble shooting, quality control, and calibrations on instrumentation in the Urinalysis or body fluid testing departments following established procedures.
14. Evaluate quality control data and determine course of action when quality control falls outside of range.
15. Interpret laboratory data generated from the urinalysis/body fluid testing laboratory regarding test accuracy and abnormal values.
16. Evaluate laboratory data and give possible cause or diagnosis for patient results.
17. Organize student workflow for efficiency to meet entry level skills.
18. Practice established confidentiality guidelines.
19. Demonstrate professional and ethical conduct with all healthcare professionals,
20. consumers, patients, and other laboratory staff and peers.

Basis for Student Evaluation

Lecture evaluation will consist of exams, assigned exercises, and unknown urine sediment identification. The laboratory evaluation will consist of task lists, written exams, clinical performance, affective evaluation and unknown urine sediment identification. The final grade will be composed of 60% lecture and 40% laboratory.

Affective behaviors

Didactic

Following appropriate training, during didactic instruction the student will:

1. Exhibit professional behavior during didactic instruction.
2. Attend lectures in a timely manner.
3. Respect other students and members of the laboratory.
4. Contribute to a positive learning environment.
5. Demonstrate an interest in the subject matter.
6. Comply with hospital and laboratory dress code and personal appearance policies.
7. Comply with institutional policies concerning safety and confidentiality.
8. Cooperate when situations arise and there is a necessary change in lecture schedule.
9. Participate in creating an inclusive learning environment.

Clinical

Following appropriate training, during clinical instruction the student will:

1. Comply with all hospital, laboratory, and school policies.
2. Demonstrate phone etiquette using BMC customer service standards.
3. Maintain a neat, clean, and orderly work area in the Urine department.
4. Value the advice and opinion of others.
5. Accept responsibility for their own actions notifying the instructor or supervisor of errors.
6. Be dependable and punctual for the clinical experience.
7. Organize their time to complete assignments and daily training.
8. Accept constructive feedback and use it as a tool for improved performance.
9. Establish a good rapport with departmental staff and uphold the concept of teamwork.
10. Cooperate when situations arise and there is a necessary change in lecture schedule.
11. Comply with hospital and laboratory dress code and personal appearance policies.
12. Contribute to a positive, inclusive clinical training environment.

Attendance

Students follow the School of MLS attendance policy. Students are allotted 80 hours for personal time and sick time during the course of the internship. The Program Director and clinical department must be notified of any sudden absence as soon as possible. The main lab number may be called 24 hours a day to notify the lab of an absence. The Program Director should be emailed to document the absence.

Any coursework or clinical training missed over the 80 hours allowed, will require consultation with the Program Director as to the course of action to make up lost training time.

Snow days

Cancellation of classes or clinical training due to inclement weather will be at the discretion of the Program Director.