MEDT 472 - Clinical Urinalysis Practicum

COURSE SYLLABUS

INTRODUCTION

The clinical practicum is the culmination of several years of study. It is an exciting time for students, and offers unique experiences in the clinical laboratory setting. Students will achieve from this experience benefits comparable to the effort they put forth.

STUDENT LEARNING GOALS

Student learning goals for the clinical urinalysis practicum focus on active participation in daily laboratory operations and personal performance as a laboratory professional. Thus, the learning goal for the technical portion of the clinical urinalysis practicum is to facilitate and enhance the student's application of clinical urinalysis theory, laboratory experience, and test data interpretation learned in campus courses to an active clinical laboratory setting. To accomplish this goal, students will apply principles of pre-analytical, analytical, and post-analytical components of laboratory practice in clinical urinalysis to the performance of laboratory operations in a contemporary clinical setting. The learning goal for the professional component is for students to attain high level interpersonal performance so as to interact professionally with fellow staff and all consumers of laboratory testing. The ultimate outcome of a successfully completed practicum experience is the ability to perform testing of the highest quality to support the laboratory's role in quality patient care and safety. Student achievement during this practicum course will lay the foundation for success as an entry-level medical laboratory scientist.

GENERAL COURSE OBJECTIVES

Upon the completion of this course, based upon the objectives detailed in this document, the student must achieve a final minimum average of 70% on the assessment tools utilized in this course.

Upon successful completion of the clinical practicum, studying assigned materials, and reviewing materials associated with the course objectives from MEDT 375 and MEDT 400, the student will:

1. Demonstrate correctly proper procedures for the collection, safe handling, and analysis of biological specimens to the satisfaction of the instructor.

2. Utilize correctly scientific principles, principles of methods for quantifying, clinical correlations, and clinical decision making for analytes of interest in clinical urinalysis.

3. Perform correctly laboratory testing according to established laboratory protocol.

4. Apply correctly appropriate problem solving steps for determining instrument/methodology problems, utilizing instrument manuals, laboratory procedure manuals, and information contained in package inserts.

5. Operate equipment properly, troubleshoot, and perform preventive and corrective maintenance according to the manufacturer's directions to the satisfaction of the instructor.

6. Utilize proper techniques in the performance of all laboratory testing to the satisfaction of the instructor.

7. Evaluate correctly laboratory test results to determine disease diagnosis.

8. Evaluate correctly acceptability of quality control and test result data.

9. Discuss the impact and apply principles of total quality management on laboratory operations, including relevance to the pre-analytical, analytical, and post-analytical stages of the testing process.

10. Comply with established safety regulations and regulations governing regulatory compliance related to laboratory practice to the satisfaction of the instructor.

11. Assess correctly critical pathways to facilitate diagnosis and to determine additional testing as warranted.

12. Communicate effectively and professionally as a member of the healthcare team to enable consultative and educational interactions with other healthcare personnel, the public, and patients to the satisfaction of the instructor.

13. Demonstrate ethical behavior and professionalism, including maintaining the confidentiality of patient information to the satisfaction of the instructor.

14. Participate in continuing education as opportunities arise for one's own professional career development to the satisfaction of the instructor.

OUTCOME EXPECTATION FOR STUDENTS BASED ON UNIVERSITY, PROGRAM, AND COURSE STUDENT LEARNING GOALS AND OBJECTIVES

The student learning goals and objectives, as stated for MEDT 472 Clinical Urinalysis Practicum, provide the foundation for student achievement of the Medical Laboratory Science Program's student learning goals and objectives. Achievement of the Program's combined goals and objectives is necessary for students to gain the knowledge needed to be successful entry-level medical laboratory scientists, as well as successful on passing the Board of Certification national examination. Additionally, the Medical Laboratory Science Program's student learning goals and objectives support student accomplishment of the University's general education goals for undergraduate students. The University's general education goals support a comprehensive understanding of the liberal arts and sciences, fostering student development for success in an increasingly challenging global society. The synergy for this collaborative educational effort is expressed in the table entitled "University and MLS Program Educational Goals and Objectives".

University and MLS Program Educational Goals and Objectives

UNIVERSITY GENERAL EDUCATION GOALS	MLS PROGRAM OBJECTIVES, SUPPORTING GEN ED GOAL(S) GED ED #:	MEDICAL LABORATORY SCIENCE PROGRAM EDUCATION OBJECTIVES	MEDT472 COURSE OBJECTIVE(S) SUPPORTING MLS ED OBJECTIVES COURSE OBJ #
1-Read critically, analyze arguments & information, & engage in constructive ideation.	**5**	**1**-Demonstrate proper procedures for the collection of safe handling & analysis of biological specimens.	**1**
2-Communicate effectively in writing, orally, & through creative expression.	**5**	**2**-Utilize scientific principles (e.g. physiology, immunology, biochemistry, molecular biology, genetics, microbiology, etc.), laboratory principles and methodologies for the clinical setting.	**2**
3-Work collaboratively & independently within & across a variety of cultural contexts and a spectrum of differences.	**5**	**3**-Perform laboratory testing with accuracy.	**3**
4-Critically evaluate the ethical implications of what they say and do.	**1,3**	**4**-Evaluate problems that impact on laboratory services and take corrective action.	**4**
5-Reason quantitatively, computationally, and scientifically.	**1,5**	**5**-Operate equipment properly, troubleshoot, and perform preventive and corrective maintenance.	**5**
	5	**6**-Utilize proper technique in the performance of all laboratory testing.	**6**
	1,5	**7**-Interpret clinical significance, clinical procedures, & laboratory test data accurately.	**2, 7, 11**
	5	**8**-Evaluate laboratory data using statistical analysis.	**8**
	1,5	**9**-Apply principles of continuous assessment to all laboratory services.	**9**
	1,2,5	**10**-Utilize principles of quality assurance and quality improvement for all phase of laboratory services (i.e. pre-analytical, analytical, & post-analytical).	**9**
	2,4	**11**-Comply with established laboratory safety regulations & regulations governing regulatory compliance related to laboratory practice.	**10**
	2,3	**12**-Communicate through oral and written skills effectively & professionally to enable consultative & educational interactions with healthcare personnel, the public, & patients in order to function successfully as a member of the healthcare team.	**12**
	4	**13**-Demonstrate ethical behavior & professionalism, maintain confidentiality of patient information, & participate in continuing education for one's own professional career development.	**13, 14**
	2,3	**14**-Apply principles of educational methodology to educate providers & users of laboratory services.	**N/A**
	1,5	**15**-Evaluate published scientific studies utilizing knowledge of research design.	**N/A**
	1,2,3,5	**16**-Apply principles & concepts of laboratory operations to critical pathways and clinical decision making, performance improvement dynamics of healthcare delivery systems in relationship to laboratory services, human resource management & financial management.	**11**
	1,3	**17**-Demonstrate a commitment to the future of medical laboratory profession through involvement in a national professional society.	**N/A**
	1,2,3	**18**-Demonstrate an understanding of human creativity & of various types of aesthetic & intellectual expression through study of the liberal arts.	**N/A**
	1,3	**19**- Demonstrate an understanding of the significance of cultural diversity as exhibited within the United States through study of the liberal arts including completion of a multicultural course.	**N/A**
	1,3	**20**-Demonstrate an understanding of the impact of globalization on society through study of the liberal arts.	**N/A**

COURSE DETAILS

This is a clinical practicum course, and it will meet at a clinical affiliate to be determined by the University instructor. Students will be notified of this location prior to the commencement of the clinical practicum. **Attendance at all clinical practicums is MANDATORY, and missed time must be rescheduled with the date/time at the discretion of the clinical instructor and the University instructor. See http://sites.udel.edu/mls/clinical-practicum-schedule/for further details about attendance expectations.**

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MODES OF INSTRUCTION

Clinical faculty will utilize various methods of instruction, including but not limited to a combination of:

- Clinical specimens
- Quality control materials
- Urinalysis automated analyzers
- Assay of CAP survey samples previously analyzed and stock samples
- Kodachromes of casts, crystals, and other formed elements
- Case studies

Students will receive instruction about proper operation of equipment, specimen processing, quality control, use of the LIS, and result interpretation and reporting mechanisms specific to the clinical facility where they are assigned.

METHODS OF ASSESSMENT

Upon the completion of this course, based upon affective, cognitive and psychomotor objectives, the student must achieve a final minimum average of 70% (C-) on the assessment tools utilized in this course.

The clinical instructor will administer written quizzes. In addition, the clinical instructor will assign papers or projects that are relevant to the practicum. This component of the Evaluation comprises 40% of the practicum grade.

A practical examination is another means of assessment employed by the clinical instructor. The instructions and rubric for the practical examination will be provided to the student prior to commencing the practical examination. The clinical instructor will complete the practical grading rubric and will return it to the University instructor. This component of the Evaluation comprises 40% of the practicum grade.

Affective assessment is incorporated into the mid- and final-evaluation process. A mid-evaluation will be completed by the clinical instructor and will be discussed with the student. If there are any issues to be addressed, this will also be shared with the University instructor. The final MEDT 472 Clinical Urinalysis Practicum Evaluation will be completed by the clinical instructor and discussed with/reviewed by the student. The affective component on the final Evaluation comprises 20% of the practicum grade.

A written final examination will be administered by the University instructor at the conclusion of the practicum. The University-administered written final examination component of the Evaluation does not affect the practicum grade, but is included on the form.

A sample MEDT 472 Clinical Urinalysis Practicum Evaluation can be found at the end of this syllabus.

Additional Requirements

Journals are one of the most frequently prescribed methods of reflecting on lifetime experiences. Each student is required to maintain a journal for each clinical practicum period. The student may record the sequence of daily events, as well as unusual or memorable situations or events that transpired and how he/she reacted to them. Think about what happened. How would you react the next time you encounter a similar situation? Or perhaps provide a commentary about a particular laboratory employee or environment that you encounter. Think about how your day impacted you professionally. Write regularly and record the date of each entry. Adhere to HIPAA and confidentiality guidelines; do not disclose any identifying facts or information. For more information and guidelines for the journal, see: http://sites.udel.edu/mls/clinical-practicum-evaluation/

Paperwork documenting attendance and orientation to the affiliate institution must be submitted to the University instructor at the conclusion of the practicum. Note that the attendance sheet must be signed by the Clinical instructor prior to completion of the practicum.

Site evaluations are a tool used by the Clinical and University instructors to assess the achievement of the clinical practicum experience and the academic preparation for it. Students are required to submit a completed Site Evaluation for each clinical practicum to the University instructor. These will be collated by affiliate institution and discipline, and will be provided in an anonymous format to the Clinical instructors during the summer following completion of the clinical practicums. Comments regarding academic preparation will be shared and discussed with the University instructors, and used to enhance the curriculum as indicated.

COURSE PREREQUISITES

MEDT 400
RESTRICTIONS:
Open to medical laboratory science majors only.

TEXTBOOKS AND OTHER RESOURCES

One of the following review books is required for all clinical practicums senior year and should be taken daily to your clinical practicum sites for review during slower periods:

Ciulla AP, Lehman DL. *Success! In Clinical Laboratory Sciences.* 4th ed. Upper Saddle River, NJ: Pearson Education, Inc.; 2010. ISBN: 978-0-13-512648-6

Tanabe, Patricia A., Holladay, E. Blair., eds. *BOC Study Guide: Clinical Laboratory Certification Examinations*. 5th ed. Chicago, Ill.: American Society For Clinical Pathology, 2014, c2009. Print. ISBN: 978-089189-5879

Students should refer to the textbook and lecture and laboratory course materials from MEDT 375 and MEDT 400. Students are expected to review these materials in preparation for this clinical practicum experience. In addition, students are expected to use these materials as resources during this practicum, as well as in preparation for the written final examination.

Students also have access to the reference library at the affiliate institution. This library provides students access to journals and medical-related books.

Through the University of Delaware, students have online access to DELCAT – UD's library online catalog https://library.udel.edu/.

DRESS CODE

All University of Delaware Medical Laboratory Science majors assume responsibility for their own attire while in the clinical setting. Each site has established guidelines for employee/students. In addition to abiding by the guidelines of the site at which the rotation occurs, each student must adhere to the following minimum guidelines of the University of Delaware Medical Laboratory Science Program described below.

- Navy medical scrub uniforms are required. Clothing must be neatly pressed and colors must match. Hose or socks are required when wearing pants. Female students must wear neutral or white stockings/panty hose when wearing a skirt. White shoes are recommended; flat shoes are required. Cloth or open-toed shoes, jeans, and sweat shirts are not acceptable.

- A clean, white labcoat is required unless otherwise specified by the clinical site. A University of Delaware pin with your name, denoting status as a University of Delaware student must be worn at all times while at the clinical affiliate sites.
- Safety glasses must be worn while in the clinical laboratory as per University of Delaware requirements.
- Hair styles which extend below the shoulder must be tied back.

- For safety reasons, most jewelry is limited. Small post earrings that do not extend below the ears are acceptable, long necklaces or dangling bracelets are not. Facial, ear cartilage and tongue piercings must be removed while at the affiliate institution. Tattoos that are visible must be covered.

- The various clinical sites may have additional dress code requirements. The student must adhere to any additional requirements at that site.

- Each student is expected to present a professional appearance and attitude at all times. NO EXCEPTIONS!!

ACADEMIC HONESTY

Honesty is essential in the profession of Medical Laboratory Science. You are encouraged to become familiar with the UD Student Guide to University Policies <http://www.udel.edu/stuguide/current>. The content of the handbook applies to this course. If you have any questions about this policy please consult with the instructor.

ACADEMIC SERVICES

The University of Delaware offers a variety of academic services for students. These services include coordinating tutoring sessions, providing academic skills workshops, and providing assistance for students with ADHD and learning disabilities. Students are encouraged to contact the Academic Enrichment Center at 831-2805 or <http://www.aec.udel.edu> to take advantage of these services.

AFFECTIVE OBJECTIVES

The following objectives have been listed as general affective objectives, since they apply to the overall performance and participation by the student during clinical rotations at the affiliate institutions. Among other qualities, the student is expected to demonstrate dependability, organizational skills, time efficiency and the ability to work with others in accordance with a professional program of study. As a member of the health care team, it is expected that the student will maintain an appropriate professional demeanor at all times.

During the clinical rotations and upon completion of the program of study in Medical Laboratory Science, the student will:

1. Comply with the established dress code policy as outlined in the clinical practicum manual.
2. Report to the laboratory at the scheduled time.
3. Notify the Clinical Coordinator and the University Education Coordinator when unable to report to

the clinical practicum.

4. Comply with the attendance policy as outlined in the clinical practicum manual.
5. Comply with instructions given either orally or written.
6. Demonstrate the ability to ask pertinent questions or for assistance if needed.
7. Demonstrate the ability to work independently within student guidelines.
8. Communicate courteously, effectively and professionally with instructors, laboratory staff, other health care personnel, patients and visitors.
9. Demonstrate interest and enthusiasm for the clinical laboratory science profession.
10. Accept evaluation of performance as constructive when offered by instructors and other laboratory personnel, and follow through with suggestions made.
11. Adhere to laboratory safety regulations in each clinical area.
12. Maintain a clean, organized work area.
13. Utilize reagents and supplies judiciously.
14. Replenish supplies required in the laboratory work area.
15. Demonstrate self-confidence in the operation of equipment and in the performance of laboratory procedures.
16. Report patient laboratory results only to authorized personnel.
17. Maintain the confidentiality of all privileged information.
18. Cooperate with other laboratory personnel to create a pleasant and efficient work environment.
19. Demonstrate the ability to concentrate on the laboratory test procedure being performed and the need to avoid distractions.
20. Demonstrate organizational skills through ability to coordinate the quantity of work needed to be done with the time available for its completion.
21. Practice acceptable quality assurance as established for each clinical area.
22. Defend the policy of running quality control samples according to laboratory protocol.
23. Coordinate theory with laboratory analysis to appropriately judge patient data.
24. Offer assistance to other laboratory personnel when scheduled assignment is complete.
25. Recognize technical problems and plan possible corrective action.
26. Maintain composure and work quality under stressful conditions.
27. Demonstrate concern for professional self-image and that of the medical laboratory science profession by practicing ethical behavior, participating in professional activities and attending professional seminars to maintain knowledge base.

COURSE OBJECTIVES RELATED TO SPECIFIC CONTENT AREAS

Upon the completion of this course, based upon the objectives detailed in this document, the student must achieve a final minimum average of 70% on the assessment tools utilized in this course.

UNIT I Professionalism
UNIT II Specimen Management/Safety
UNIT III Quality Control/Quality Assessment/Total Quality Management
UNIT IV Clinical Urinalysis

UNIT I: PROFESSIONALISM

Introduction

The student is expected to conduct himself/herself in a professional manner at all times. The ability to communicate in a respectful manner under all circumstances is an expectation of a professional. The student must remember that all patient information is privileged and as such strict confidentially must be maintained. The student should realize that in some ways his/her education is just beginning, and to remain current during the work years ahead, it is important to participate in continuing education activities on a routine basis. If continuing education activities are available at the affiliate institution during the practicum, it is expected that the student will avail himself/herself of the opportunity. Professional performance is guided by the affective objectives previously listed, and professional behavior is evaluated using the form located at the end of this syllabus.

Objectives

Upon successful completion of the clinical practicum, studying assigned materials, and reviewing materials associated with the course objectives from MEDT 375, MEDT 400, and 461/471, the student will:

1. Communicate effectively and professionally as a member of the healthcare team to enable consultative and educational interactions with other healthcare personnel, the public, and patients to the satisfaction of the instructor.
2. Demonstrate ethical behavior and professionalism to the satisfaction of the instructor.
3. Maintain confidentiality of patient information to the satisfaction of the instructor.
4. Participate in continuing education as opportunities arise for one's own professional career development to the satisfaction of the instructor.

Note: Review affective objectives and affective evaluation form.

UNIT II: SPECIMEN MANAGEMENT/SAFETY

Introduction

Thorough knowledge of safety procedures is essential before performing any duties in the clinical laboratory which might be hazardous to personnel. The urinalysis department is responsible for monitoring departmental criteria for specimen acceptance, processing of various testing, evaluating and reporting laboratory results. These pre-analytical, analytical, and post-analytical factors are essential for quality assessment in the laboratory. In the urinalysis department, a considerable amount of effort is placed on specimen handling and collection, since the final results for any analyte are dependent on these two factors. The following precautions or conditions are essential for quality specimens:

- correct identification of patient• correct labeling of specimen
- correct identification of the state of the patient – fasting, nonfasting, etc.
- correct time for specimen collection
- correct storage conditions

Prerequisite

The student will familiarize herself/himself with the overall management of the Urinalysis Department.

Objectives

Upon successful completion of the clinical practicum, studying assigned materials, and reviewing materials associated with the course objectives from MEDT 375 and MEDT 400, the student will:

1. Discuss the specimen management system used by the urinalysis laboratory.
2. Distribute specimens to workstations appropriately to the satisfaction of the instructor.
3. State the tests performed at each station or instrument in the urinalysis laboratory.
4. Evaluate correctly specimens for acceptance or rejection using laboratory guidelines.
5. Document correctly specimen rejection according to laboratory guidelines.
6. Report and/or call test results according to laboratory protocol to the satisfaction of the instructor.
7. Maintain correctly patient records according to laboratory protocol.
8. File correctly patient records according to laboratory protocol.
9. Utilize correctly safe techniques in handling and disposal of infectious materials according to laboratory protocol.
10. Comply with established safety regulations and regulations governing regulatory compliance related to laboratory practice to the satisfaction of the instructor.

UNIT III: QUALITY CONTROL / QUALITY ASSESSMENT / TOTAL QUALITY MANAGEMENT

Introduction
Quality is of utmost importance in every laboratory. Today's laboratories have a variety of programs in place to control, assess, and improve their quality.

Prerequisite
The student should read the department's quality control (QC), quality assessment (QA), total quality management (TQM) and/or continuous quality improvement (CQI) policies.

Objectives
Upon successful completion of the clinical practicum, studying assigned materials, and reviewing materials associated with the course objectives from MEDT 375 and MEDT 400, the student will:

1. Compare and contrast quality control, quality assessment, and total quality management.
2. Evaluate correctly laboratory QC data according to laboratory protocol.
3. Demonstrate the ability to identify appropriate corrective action when data falls out of control range to the satisfaction of the instructor.
4. Discuss how QC is monitored and recorded for each procedure in the urinalysis laboratory.
5. Record correctly QC data accurately according to departmental guidelines.
6. Identify QC shifts and trends when given laboratory data to analyze.
7. Suggest appropriate corrective action when QC shifts and trends are identified.
8. Discuss the need for departmental quality assessment and/or total quality management programs.
9. Explain the purpose of proficiency testing.
10. Discuss the impact of total quality management on laboratory operations, including relevance to the pre-analytical, analytical, and post-analytical stages of the testing process.
11. Apply correctly principles of total quality management on laboratory operations, including relevance to the pre-analytical, analytical, and post-analytical stages of the testing process.
12. Discuss the role of the medical laboratory scientist in maintaining laboratory quality.

UNIT IV: CLINICAL URINALYSIS

Introduction
The knowledge of the principles and clinical significance of routine urinalysis are essential to the entry level bench technologist. Proper performance and understanding of the macroscopic and microscopic procedures, quality assurance, and clinical correlation should be observed and practiced during this phase of the student's medical laboratory science instruction.

Prerequisites
The student should review the Automated Urinalysis Analyzer Instrument Manuals for those instruments that will be employed during the practicum period.

Objectives
Upon successful completion of the clinical practicum, studying assigned materials, and reviewing materials associated with the course objectives from MEDT 375 and MEDT 400, the student will:

1. Evaluate correctly urine specimens for acceptability using laboratory guidelines.
2. Take necessary action when the specimen is unsuitable for analysis to the satisfaction of the instructor.
3. Evaluate urine specimens correctly for their proper handling and timely examination according to established laboratory procedures.
4. Perform correctly the macroscopic and microscopic urinalysis tests according to established laboratory procedures.
5. Perform correctly the confirmatory tests when appropriate to complete a routine urinalysis according to established laboratory procedures.
6. Perform correctly the quality control procedures for routine urinalysis according to laboratory protocol.

7. Record correctly quality control results according to laboratory protocol.

8. Evaluate correctly quality control results according to established laboratory procedures, taking corrective action when necessary.
9. Calibrate correctly the reagent strip analyzer according to operator's guide.
10. Perform preventive maintenance of the reagent strip analyzer according to operator's guide to the satisfaction of the instructor.
11. Operate correctly the reagent strip analyzer according to operator's manual.
12. Record correctly patient results according to laboratory protocol, rechecking results as needed.
13. Evaluate correctly patient results, rechecking results as needed.
14. Interpret correctly a patient's urine microscopic results to determine whether a microscopic analysis should be performed, according to laboratory protocol
15. Differentiate among the following types of specimens: 2-hour, 24-hour, postprandial, clean catch, midstream
16. Categorize patient physical urinalysis results correctly as being "normal" or "abnormal"**:**
    - volume
    - specific gravity
    - clarity
    - color
    - odor
17. Differentiate among specific gravity, osmolality and osmolarity.
18. Illustrate the principles of refractometry and osmolality.
19. Evaluate correctly instances of normal versus abnormal results for the following chemical tests:
    - pH
    - protein
    - glucose
    - ketone bodies
    - occult blood
    - bilirubin
    - urobilinogen
    - nitrite
    - leukocytes
    - creatinine

20. Demonstrate the proper followup for abnormal or unexpected patient urinalysis results, according to laboratory protocol
21. Differentiate between diabetes insipidus and diabetes mellitus.
22. Correctly correlate urinalysis result patterns with normal and pathological conditions to the satisfaction of the instructor.
23. Interpret correctly the results of reducing substance testing with pediatric urine samples according to laboratory protocol.
24. Differentiate between conjugated and unconjugated bilirubin.
25. Identify the following urinary sediment/components in bright field, phase or polarized microscopy:
    - cell types
    - types of casts
    - crystals found in acid pH
    - crystals found in alkaline pH
26. Evaluate correctly instances of normal versus abnormal results for the following crystals:
    - bilirubin
    - cystine
    - leucine
    - tyrosine
    - cholesterol

ASSESSMENT TOOLS

See below for:
Clinical Practicum Student Affective Evaluation Grading Scale
Clinical Practicum Practical Evaluation Instructions
Clinical Practicum Practical Evaluation Grading Rubric
All students must complete the Urinalysis Tally included as part of the Clinical Practicum Student Evaluation (see below) to obtain a passing grade in MEDT472.
Clinical Practicum Student Evaluation – Revised, 2016

Clinical Practicum Student Affective Evaluation Grading Scale:

Instructions: For items #1 through #15: Rate on 1 - 5 point scale below. Record rating in the column provided.

Space is provided with each evaluation item for narrative appraisal. Any unsatisfactory evaluation **must** be documented. Please indicate strong points exhibited. **The completed evaluation form must be discussed with the student at mid-point and end of the clinical practicum.**

Performance Level	Rating Value	Performance Indicators
Outstanding	5	Contribution **far exceeds** what is normally expected of a student. Personal commitment to a high level of performance and professionalism is clear.
Exceeds Expectations	4	Seizes initiative in development and implementation of challenging projects. Accomplishments **exceed** requirements. Requires minimal direction
Fully Satisfactory	**3**	**Performance is what is expected in senior clinical practicum. Does not require significant improvement. Errors are minimal and seldom repeated. Requires only normal supervision and follow-up.**
Less Than Satisfactory	2	Performance generally does not meet minimum requirements for senior clinical practicum. Errors are significant and frequently repeated. Requires close surveillance and guidance.
Unacceptable Performance	1	Has had sufficient exposure to have shown better performance. Does not grasp basic concepts no matter how many times they have been explained. Does not demonstrate commitment to this aspect of professional development.

Practical Evaluation Instructions **Student:** _____

Eval by: _____ **Date:** _____

Clinical Urinalysis Practical

As detailed in the practical evaluation rubric, perform the following functions:

1. Perform daily maintenance procedures according to protocol.
2. Identify microscopic formed elements accurately.
3. Run controls as needed or required and evaluate their acceptability before running patient samples.
4. Run patient samples.
5. Handle instrumentation correctly.
6. Interpret patient results.
7. Conditions - The following conditions apply to this practical (all that are marked with a √):

____ Time limit = _____

____ Use of Instrument Operating Manuals is permitted

____ Use of course manuals is permitted

____ Other: Please describe _____

_____

_____

_____

Clinical Urinalysis Practical Evaluation Grading **Student:** _____

Eval by: _____ **Date:**_____

	TOTAL POINTS POSSIBLE:	TOTAL POINTS EARNED:	COMMENTS:
Instrument startup completed accurately and efficiently, troubleshooting done as necessary, all necessary documentation recorded accurately and legibly	10		
Reagents and supplies utilized efficiently, no unnecessary waste of materials	10		
Calibrations performed as needed, accurately evaluated, and documentation recorded accurately and legibly	10		
Appropriate QC processed, accurately evaluated, and documentation recorded accurately and legibly on instrument or LIS	20		
Unknown samples processed by instrumentation and accurately evaluated and reported	20		
Unknown samples analyzed for formed elements manually and accurately evaluated and reported	20		
Correlations or discrepancies noted between instrumentation results and manually performed tests	10		
Other			
TOTALS:			
PRACTICAL GRADE:			

UNIVERSITY OF DELAWARE

DEPARTMENT OF MEDICAL LABORATORY SCIENCES

MEDT472 CLINICAL LABORATORY PRACTICUM - STUDENT EVALUATION

Student's Name: _____

Affiliate Site: _____

Discipline: **URINALYSIS**

Signature of Evaluator(s): _____

Date of Final Evaluation: _____

(due at the completion of the clinical practicum period, please mail completed evaluation to UD coordinator)

AFFECTIVE EVALUATION SCORES from concurrent clinical practicum will be used to calculate final grade for Urinalysis Practicum. For example, if student has Urinalysis with Chemistry Practicum, the UD Education Coordinator will use the affective evaluation scores from the MEDT473/474 Clinical Chemistry Practicum Evaluation for the Urinalysis Practicum Evaluation. No further action is required by the Affiliate Instructor.

University of Delaware
Department of Medical Laboratory Sciences
Urinalysis Clinical Practicum Tally

Student's Name: _____

Affiliate Site: _____

Day (date)	Biochem Only	Micro Only	Complete UA	Other
1				
2				
3				
Total				

Comments:

The student recorded above has successfully completed the MEDT472 Urinalysis Tally objectives. Clinical Instructor's Signature:

UA Tally Objective: A minimum of 30 complete urinalyses should be performed (physical, chemical, microscopic). The emphasis should be placed on evaluating high quality urines to ensure that all major formed elements are observed. When a facility uses fully automated urinalysis, the student must still experience sufficient manual microscopics to observe all major formed elements. Student is responsible for returning the Urinalysis Tally to the Education Coordinator.

FINAL CLINICAL PRACTICUM GRADE REPORT

Please provide scores for the UA Tally and UA Practical below – the UD Clinical Education Coordinator will calculate the final grade based upon these scores and the affective score for the corresponding concurrent practicum. Thank you.

UA Tally - minimum of 30 complete UAs including microscopics	**UA Tally Score achieved _____**
Practical – please include brief description of UA practical below	**Practical Score achieved _____**

Description of UA Practical:

STOP – Grade will be calculated by the UD Education Coordinator. Thank you ☺

Student Affective Evaluation 20% **<u>The same numbers apply here as those on the final evaluation for the rotation discipline with which Urinalysis was included.</u>**	**UA Tally Score ____ X .40 = _____** **Practical Score ____ X .40 = _____** **Affective Score ____ X .20 = _____** **Grade for Practicum = _____** **PASS or FAIL**

Final Evaluation

Signature of student _____ Date _____