



Department of Medical Laboratory Analysis
College of Medical Laboratory Analysis
University of Cihan-Sulaimaniya

Subject: Body Fluid Analysis & Lab/ 1st semester
Course Book – Year 2022-2023

Lecturer's name:

Asst Prof. Dr. Hastyar Hama Rashid Najmuldeen

Academic Year: 2021/2022

Course Book

1. Course name	Body Fluid Analysis and Lab
2. Lecturer in charge	Asst Prof Dr. Hastyar Hama Rashid
3. Department/ College	Medical Laboratory Analysis
4. Time (hours) / week	2 Hrs Theory and 2 Hrs Practical
5. Office hours	4 hours
6. Course code	
7. Teacher's academic profile	https://uni.sulichan.edu.krd/qa/profile/hastyar.najmuldeen@sulichan.edu.krd/
8. Keywords	Body fluid, Specimens collection, Handling, Analysis, microscopic
9. Course overview: <p>This course is intended to provide the student suitable information about human body fluid (e.g. urine, cerebrospinal, seminal, pleural, peritoneal, pericardial, and synovial fluids), their normal characteristics and pathological changes will be study. Description of the laboratory tests used in the clinical evaluation of body fluid will also be presented.</p> <p>This course is scheduled for 2 hours theory + 2 hours lab per week. The theory part exactly followed by the given coursebook. After participating in this section, students would be able to understand and answer questions related to the area of body fluid analysis. The laboratory activities will be given on the dates indicated in the lab schedule. The lab activities will be based upon lab material studied, ie. lab exercises, using spectrophotometer techniques, centrifuge and pipetting. Moreover, students will practice deferent methods for estimation deferent fluid contents, interpretation of results and diagnosis of the abnormalities.</p>	
10. Course objective: <ol style="list-style-type: none">1. Provide students with general knowledge of body fluids, composition, normal and abnormal characteristics and laboratory techniques of body fluid analysis.2. Provide the student with a greater understanding of fluid abnormality as results of infections or pathological conditions.3. Provide a general background for students in Clinical Laboratory Science.4. Encourage student teamwork and collaboration in the lab.	

11. Student's obligation

A student has an obligation to respect the ethical standards of **Cihan University** in the following points:

A. Class Attendance and responsibilities:

1. Students are expected to attend each class for the entire semester.
2. Students are responsible for material present in lectures.
3. Students will take several quizzes over the course and the quiz marks will be counted toward the final grade. So, try to prepare yourself for quiz every week.

B. Penalty and acceptable excuses for class and exam absence:

1. Only students with official absence, family crises, and illness are excused from class.
2. Three occasions of lateness count as one absence.
3. The student who misses 10 percent of the classes will be placed on probation.
4. Since all examinations are announced in advance, **ZERO** grade will be given to any missed examination unless a student has an acceptable reason, such as illness, for not being able to take the examination during all those days when the examination was announced.

12. Forms of teaching:

Theoretical: power point presentation, discussion, videos and white board writing.

Practical: practical work in the lab., power point presentation, white board writing.

13. Assessment scheme:

Assessment Tool	Description	Weight
Quizzes	Students will take 10 quizzes over the course and the highest 7 quiz marks will be counted toward the final grade.	5%
Test	During the course schedule, students will take midterm and final tests along the course. Both of them will be count (there is no optional test). The test might include definitions, multiple choice, filling blanks, true and false, differences, description, explanation, short answers, Etc.	25%
Laboratory work	Laboratory topics and experiments are coordinated in a way to complete each other and to reinforce the concepts introduced in lecture portion. Topics, assessment tools, lab grades and other information related to the lab are discussed in the lab assessment tools.	40%
Final Exam	The exam will be close book and no materials are allowed, except those permitted by the exam committee. All materials	30%
Total		100%

Lab Marks distribution

Assessment tool	Description	Weight
Quizzes	Students will take 7 quizzes over the course and the highest 5 quiz marks will be counted toward the final grade.	7%
Lab reports	Students will submit a report for each lab as indicated in the schedule. All the reports will be counted toward the final lab grade.	
Technical work	Students will be evaluated based on their technical performance in the lab. Several points will be considered including application of safety rules and guidelines, work quality, team work and attitude, following up the results, tidiness, etc.	
Midterm exam	The test may include estimation, principle of each test, short answers, problem solving etc.	13%
Final exam	One test will be conducted at the end of the semester. The test may include estimation, multiple-choice questions, short answers, problem solving etc.	20%
Total		40%

14. Student learning outcome: Upon successful completion of this course, the student should be able to:

1. Describe the composition, formation and functions of selected body fluids.
2. Evaluate body fluid specimens to determine suitability for test(s) requested.
3. Evaluate body fluid specimens for acceptability based on.
4. Application of safety and governmental regulations and standards as applied to clinical laboratory science.
5. How to do sample labelling, collection, handling, storage requirements and analyse body fluid specimens using only necessary supplies and within stated limits of accuracy.
6. Evaluate laboratory test outcomes and correlate test results with patient condition(s).

15. Course Reading List and References: Textbooks:

1. Urinalysis and Body Fluids, Susan K. Strasinger and Marjorie S. Di Lorenzo, 5th ed., F.A. Davis, 2008.
2. Clinical Biochemistry and Metabolic medicine. Eighth edition: 2001.
3. Fundamentals of Urine and Body Fluid Analysis, Nancy A. Brunzel MS, 3rd Edition, 2014.
4. Kjeldsberg's Body Fluid Analysis, Jerry W Hussong and Carl R Kjeldsberg, 2015.

16. The Topics:**A. Theory Lecture: Course Schedule (2022-2023)**

Week	Topics (Chapters)	Assessment Tool
1	Introduction to body fluid course	
2	Introduction to body fluid compartments, compositions.	
3	Introduction to body fluid movement, factors affecting their volume.	Quiz-1 in lecture 2
4	Urine formation, factor affecting their volume and compositions	
5	Urinalysis	Quiz-2 in lecture 4
6	Semen formation and compositions	
7	Semen fluid analysis	Quiz-3 in lecture 6
8	Midterm exam	
9	Vaginal discharge components and formation	
10	Vaginal discharge abnormalities	Quiz-4 in lecture 9
11	Amniotic fluid analysis	
12	Amniotic fluid analysis for checking diseases and abnormalities	Quiz-5 in lecture 11
13	Saliva and Sputum Analysis	
14	General revision	Quiz-6 in lecture 13
15	Final Exam	
FINAL EXAMINATION		

B. Practical part: Body fluid analysis-Lab Schedule

Week	Topics	Activities
1	Health and safety instructions and hazards in clinical lab. Labels and laboratory reports).	No lab work
2	Describe urine specimen collection techniques and procedures. Perform physical and chemical analysis of urine specimens.	There is Lab work
3	Urinalysis	Report for Lab-2 + Quiz Lab 2
4	Urinalysis	Report for Lab-3 + Quiz Lab 3
5	Semen fluid collection and analysis.	Report for Lab-4 + Quiz Lab 4
6	Semen fluid collection and analysis.	Report for Lab-5 + Quiz Lab 5

7	Vaginal secretion analysis.	Report for Lab-6 + Quiz Lab 6
8	Amniotic fluid analysis	Report for Lab-7 + Quiz Lab 7
9	Amniotic fluid analysis	Report for Lab-8 + Quiz Lab 8
10	Saliva Analysis	Report for Lab-9 + Quiz Lab 9
11	Sputum Analysis	Report for Lab-10 + Quiz Lab 10
14	Test: All exercises	

17. Peer review: I certify that:

1. I read and verify all requirements of teaching quality assurance are respected in this course book.
2. The scientific contents are new, convenient and well organized for this stage.
3. The order of chapters is well done.
4. References are new and available for students.

That's why I signed on this course book and I take all responsibilities.

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Signature:

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