



BABCOCK UNIVERSITY

COURSE OUTLINE TEMPLATE PREPARED BY THE AVP, INSTITUTIONAL EFFECTIVENESS

SCHOOL: PUBLIC AND ALLIED HEALTH

DEPARTMENT: MEDICAL LABORATORY SCIENCE

SEMESTER /SESSION: FIRST SEMESTER/ 2017-2018

COURSE CODE AND TITLE: MLSP 507/ CHEMICAL PATHOLOGY III

NO OF UNITS: 3 CREDITS

TEACHER'S NAMES- ADEJUMO, EN; AKINLEYE, WA; OMODIALE, PE AND ADEDIJI, I
TELEPHONE NO: 07033689407; 08101207348; 0803436083 08030410475
OFFICE ADDRESSES: C101; B009; C102 B009
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DAY OF CLASS: MONDAY

VENUE FOR CLASS: F208

LECTURE HOURS: 10AM-12:50PM

(UNIVERSITY SCIENCES COMPLEX)

OUR VISION STATEMENT

A first-class Seventh-day Adventist institution, building servant leaders for a better world

OUR MISSION STATEMENT

Building leadership through Christian education; transforming lives, impacting society for positive change

To achieve our mission, we are committed to:

- Achieving excellence in our teaching, research program, and service delivery
- Imparting quality Christian education
- Instilling Christ-like character to the members of our Community

OUR CORE VALUES

- Excellence -Our Culture
- Integrity -Our Promise
- Accountability -Our Moral
- Servant Leadership -Our Strength
- Team Spirit -Our Dignity
- Autonomy and Responsibility -Our Passion
- Adventist Heritage -Our Commitment

OUR PHILOSOPHY

Babcock University's philosophy is anchored on the harmonious development of the intellectual, physical, social, and spiritual potentials of our students, inspiring stable and noble character needed for effective leadership and service in the society.

CORPORATE IMAGE STATEMENT: A center of excellence for character development and scholarship; a socially responsive, responsible, and accountable institution in matters of commitment and action

COURSE DESCRIPTION: AS DESCRIBED IN THE BULLETIN

Physiology of the kidneys, renal clearance and glomerular filtration rate. Renal plasma flow, maximal tubular excretory and reabsorptive capacity. Urea, creatinine and insulin clearance. Renal failure, azotaemia, anuria, sodium loss in renal diseases. Aminoaciduria. Kidney diseases and kidney function test. Urinalysis in health and diseases. Features of hypernatraemia and hyponatraemia. Investigation of water and electrolyte imbalance. Homeostasis in clinical chemistry. Acid-base balance.

The liver; anatomy and physiology-an overview. Biosynthesis of bilirubin, excretion of bile pigments. Jaundice-anatomical and physiological classification. Pigment excretion in jaundice. Liver diseases and liver functions test to include Congo red test for amyloids and faecal fat estimation.

Biochemistry of Neoplastic disorders. Diseases of nervous system. Basic neurochemistry, Cerebrospinal Fluid (CSF)-normal composition and changes in diseases. Diseases of Muscles.

COURSE CONTENT: The course will emphasize the physiology, biochemical functions and chemical pathology of the kidney, liver, muscle and the nervous system. It will also deal with the various laboratory investigations and diagnosis of diseases of the aforementioned organs and system, including neoplastic disorders.

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

1. Demonstrate God's purpose for our peculiar roles and talents for the cooperate good / use of the body of Christ.
2. Explain the physiology, biochemical functions and chemical pathology of the kidney, liver, muscle and the nervous systems.
3. State the principles, test methods and reference values of various Laboratory investigations used in the diagnosis of diseases associated with the aforementioned organs.
4. Discuss the methodology of various Laboratory investigations employed in the diagnosis of diseases associated with the aforementioned organs.
5. Carry out the common laboratory investigations and function tests essential for the diagnosis of these diseases.

REQUIRED TEXTBOOKS/JOURNALS:

- 1) A new short textbook of chemical pathology, 5th edition. D.,N. Baron,; J.T. Whicher; K.E. Lee.
- 2) Clinical biochemistry and metabolic medicine. 8th edition.martin .A.Crook. Hodder and Stoughton Ltd.
- 3) Fundamentals of clinical chemistry. 6th edition. By Teitz; Edited by Carl. A Burtis, Edward. R. Ashwood, David. E. Brune
- 4) District Laboratory Practice in Tropical Countries (Part 1). 2nd edition . Cheesbrough .M. Cambribridge University press.
- 5) Medical laboratory science, Theory and Practice.1st edition. Kolhatkar. A.Tata; Ochei. J McGraw-hill Publishers.
- 6) Principles of Biochemistry (3rd edition). Donald j. Voet; Judith G. Voet; and Charlotte W. Pratt.WS

COURSE REQUIREMENTS:

CLASS ATTENDANCE: - “Every student is required to attend classes regularly and punctually, unless ill or prevented by some recognized emergency. Students who absent themselves from class for more than three weeks during the semester shall merit an F grade. Authorized leave of absence from campus does not excuse the student from classes, or relieve the student of the required course work’ (*BU Academic Bulletin 2012-2015 p.13*).

PARTICIPATION: -Students are to actively engage in topic discussion and sharing of ideas in class.

TARDINESS/CONDUCT OF STUDENTS IN CLASS: - Lateness to class is unacceptable; students are not allowed to operate their cell phones, iPods and other electronic mobile gadgets during classes, except with the permission of the teacher. Eating and chewing off bubble gums and drinking (water exempted) is also not allowed except with the permission of the teacher. Very importantly, students are required to dress in compliance with the university dress code and wear their identity cards while in class.

SHORT DEVOTIONALS/PRAYER: - Spiritual nurture is a part of whole person development, and team spirit is our strength; thus, every student is required to participate in the devotional exercise and prayer in class.

SUBMISSION OF ASSIGNMENT: All assignments whether as individual or group work **must** be turned in before the set deadline.

LATE ASSIGNMENTS: Assignments could be turned in earlier, but not later than the set deadline .

GUIDELINE FOR WRITTEN WORK:

- i. All quiz, assignments and mid semester answer scripts must bear your Matriculation number **ONLY** as means of identification. Names are not allowed.
- ii. Always include the course title, course code, and date of submission on your scripts.
- iii. Follow any other provided instructions .

ACADEMIC INTEGRITY/HONESTY: “Babcock University has a zero tolerance for any form of academic dishonesty. Morally and spiritually, the institution is committed to scholastic integrity. Consequently, both students and staff are to maintain high, ethical Christian levels of honesty. Transparent honest behavior is expected of every student in all spheres of life. Academic dishonesty include such things as plagiarism, unauthorized use of notes or textbooks on quizzes and examinations, copying or spying the test or paper of another student (formal or take-home), talking to another student during examinations. Academic matter would automatically result in a failing grade for the examination, and suspension, or outright dismissal from the university. Academic dishonesty issues are referred to SPEAM (Senate Panel on Examination and Academic Misconduct) who investigates and makes recommendations to Senate. Penalties for examination and academic misconduct are spelt out in the *student’s handbook* and in other regulations as published from time to time” (*BU Academic Bulletin 2012-2015 p.18*).

GRIEVANCE PROCEDURE

“Students who believe that their academic rights have been infringed upon or that they have been unjustly treated with respect to their academic program are entitled to a fair and impartial consideration of their cases. They should do the following to effect a solution:

1. Present their case to the teacher(s) concerned
2. If necessary, discuss the problem with the Head of Department
3. If agreement is not reached at this level, submit the matter to the School Dean
4. Finally, ask for a review of the case by the Grievance Committee
5. A fee is charged for remarking of scripts. If a student’s grievance is upheld after an external examiner has remarked the script, the grade would be credited to the student. The lecturer will be given a letter of reprimand and will be asked to refund the fees to the student. If the student’s grievance is not sustained, the student will be given a letter of reprimand and the original grade retained” (*BU Academic Bulletin 2012-2015 p.18*).

TEACHING/LEARNING METHODOLOGIES: We will employ different strategies for teaching. However, we would promote interactive strategies, and there integration of faith and BU core values in the learning process.

COURSE ASSESSMENT/EVALUATION

Continuous Assessment:

Class Attendance:	5% }	} = 40%
Quizzes & Tests:	10% }	
Assignments:	10% }	
Mid-Semester Exam:	15% }	
Final Semester Exam:	60%	

GRADE SCALE

Currently, the 5-pointgrading system adopted by the University Senate translates as follows:

Grades	Marks- Quality	Range Points	Definition
A	80-100	5.00	Superior
B	60-79	4.00	Above Average
C	50-59	3.00	Average
D	45-49	2.00	Below Average
E	40-44	1.00	Pass
F	0-39	0.00	Fail

INCOMPLETE GRADE: An incomplete grade may only be assigned to a student upon request, due to an emergency situation that occurred within that semester, which prevented completion of an/some assignments, quizzes, or examination. Such a student would complete a contract form, obtainable from the Registrar, after agreement with the teacher. The form must be signed by the teacher, the student, the HOD, the dean, the Registrar, and the Senior Vice President (SVP) before contract begins. The original copy of the incomplete form will be sent to the Registrar with copies to the teacher, the student, the HOD, the dean, and the SVP. An incomplete grade (I) reverts to the existing grade if contract is not completed by the end of the following semester (including summer semester, except for examinations), (*BU Academic Bulletin 2012-2015 p. 20*).

FURTHER READINGS:

STUDENTS WITH DISABILITY

“Babcock University seeks to provide a conducive environment for optimal living and learning experience. While the university is working towards facilities that accommodate persons with

disabilities, provisions will be made for students with disabilities under the following conditions. Students with disabilities are to:

- a. Report to Student Support Services for assessment, and obtain a clearance/recommendation at the commencement of the semester or as soon as disabling incidence occurs
- b. Show the clearance/recommendations to relevant university officials at the commencement of the semester or as soon as disabling incidence occurs
- c. Maintain ongoing contact with Student Support Services” (*BU Academic Bulletin 2012-2015 p. 20*).

COURSE OUTLINE FOR MLSP 507-2017/2018 SESSION

DATE	TOPIC	CLASS ACTIVITIES	ASSIGNMENTS DUE
Monday, Sept. 4, 2017	Discussion of course outline; Physiology and functions of the kidney: The process of Urine formation, renal clearance and glomerular filtration rate. Renal plasma flow, maximal tubular excretory and re absorptive capacity and urea/creatinine and insulin clearance Adediji, I.O	1 hour Practical session: Clearance tests (urea and creatinine clearance)	Write on eGFR with special emphasis on MDRD and CKD-EPI. Submission deadline: 14/09/2017
Monday, Sept. 11, 2017	Urinalysis in health and diseases. Adediji, I.O	Interactive class session involving questions and answers that border on the clinical significance of the different biochemical parameters in urine	
Monday, Sept. 18, 2017	Pathological conditions of the Kidney: Renal failure, azotaemia, anuria, sodium loss in renal disease. Aminoaciduria, other kidney diseases. Omodiale, P.E	Interactive class session	
Monday, Sept. 25, 2017	Kidney function tests: **Lecture and practical session 1. Omodiale, P.E	1 hour Practical session: Renal function tests.	
Monday, Oct. 2, 2017	The Liver: anatomy, physiology and functions. Akinleye, W.A	1 hour Practical session: Liver function test	Write briefly on the use of dyes for liver assessment. Submission deadline: 12/10/2017
Monday, Oct. 9, 2017	Diseases of Nervous system and Basic neurochemistry, CSF-normal composition and changes in diseases. **Lecture and practical session II Adejumo, E.N	1 hour Practical session: CSF Glucose, Protein & Globulin estimation.	Submission of report on Practical session: CSF Glucose, Protein & Globulin estimation for discussion in next class. Submission deadline: Oct. 14, 2017

Monday, Oct.16, 2017	MID SEMESTER EXAMINATION		
Monday, Oct.23, 2017	Biosynthesis of bilirubin excretion of bile pigments. Jaundice-anatomical and physiological classification. Pigment excretion in jaundice. - Adediji, I.O	1 hour Practical session: Estimation of plasma bilirubin	Write on the different clinical lab methods employed in the assay of plasma bilirubin (stating clearly the principles of these procedures) Submission deadline: 02/11/2017
Monday, Oct.30, 2017	Diseases of the muscle. - Adediji, I.O	Interactive practical session involving power point presentation, questions and answers that border on the topic of discussion.	
Monday, Nov.6, 2017	Biochemistry of Neoplastic disorders -Adejumo, EN	-QUIZ -Discussion on assay of biochemical markers of neoplastic disorders: Experience from BUTH LAB.	Briefly discuss the assay methods of any 2 named biochemical markers of neoplastic disorders carried out in BUTH LAB Submission deadline: Nov, 15, 2017
Monday, Nov.13, 2017	Role of Homeostasis in clinical chemistry and importance of Acid- base balance. Omodiale, P.E	Interactive class session 1 hour Practical demonstration: acid-base titration	
Monday, Nov.20, 2017	Liver diseases and liver functions tests to include feacal fat estimation. **Lecture and practical session III -Akinleye, WA	1 hour Practical session: Liver function tests.	
Monday, Nov.27, 2017	REVISION		
Monday, Dec.4, 2017	FIRST SEMESTER EXAMINATIONS IN PROGRESS; BEST WISHES		

NOTE: IT IS COMPULSORY FOR EACH STUDENT TO PURCHASE AT LEAST ONE OF THE RECOMMENDED TEXTBOOKS.