THOMAS ADEWUMI UNIVERSITY COURSE OUTLINE		
Faculty	Computing and Applied Sciences	
Department	Biological Sciences	
Course Title	**NUCLEIC ACIDS**	
Year of Study	3	
Course Code	BCH 311	
Credit Hours	2	
Contact Hours	30	
Mode of Delivery	Classroom Lectures	
Mode of Assessment		**Weight %**
Continuous Assessment Final Examination		40% 60%
Total		100 %
Course Lecturers	**ACHO M.A.**	
Course Description	The course is expected to expose the students to the basics of the occurrence, isolation, characterization, and structure of nucleic acids as well as protein biosynthesis. The lecturer will also teach the students purines and pyrimidines metabolism, abnormalities in nucleic acid metabolism.	
Course objective	This course would enable the understanding of the following: 1. Occurrence, isolation, characterization, and structure of nucleic acids 2. Genome organization and biosynthesis of proteins. 3. Metabolism of purines and pyrimidines, nucleosides and nucleotides. 4. Abnormalities in nucleic acid metabolism.	

Learning Outcomes	By the end of the course, student will be able to explain the following: 1. Occurrence, isolation, characterization, and structure of nucleic acids 2. Genome organization and biosynthesis of proteins. 3. Metabolism of purines and pyrimidines, nucleosides and nucleotides. 4. Abnormalities in nucleic acid metabolism.	
Teaching and Learning	The class will meet for two hours each week. Class time will be used for a combination of lectures and Tutorial sessions	
Detailed Course Content	Occurrence, isolation, characterization, and structure of nucleic acids. Genome organization and biosynthesis of proteins. Metabolism of purines and pyrimidines, nucleosides and nucleotides. Abnormalities in nucleic acid metabolism. Xeroderma pigmentation and skin cancer.	
Course content sequencing		
Weeks	**Detailed Course Outline**	**Allocated Time**
Week 1-2	Occurrence and isolation of nucleic acids	4 hours
Week 3-4	Characterization and structure of nucleic acids	4 hours
Week 5-7	Genome organization Biosynthesis of proteins.	6 hours
Week 8-9	Metabolism of purines and pyrimidines Metabolism of nucleosides and nucleotides	4 hours
Week 10	Abnormalities in nucleic acid metabolism. Xeroderma pigmentation and skin cancer	2 hours
After Week 12	Examinations	

Recommended Reading Material

1. David, L., Nelson, D.L., Cox, M.M., Stiedemann, L., McGlynn Jr, M.E. and Fay, M.R., 2000. Lehninger principles of biochemistry.
2. Rodwell, V.W., 2015. *Harper's illustrated biochemistry*. McGraw-Hill Education.

3. Vasudevan, D.M., Sreekumari, S. and Vaidyanathan, K., 2019. *Textbook of biochemistry for medical students*. Jaypee brothers' Medical publishers.
4. Naik, P. (2011). *Essentials of Biochemistry (for Medical Students)*. JP Medical Ltd.

Course Code: BCH 311

Course Title: Nucleic Acids

Preamble: Biochemistry is the study of biological and structural functions of biomolecules and their metabolism.

A. Specific Course Objectives/Learning Outcomes

This course would enable the understanding of the following

1. Occurrence, isolation, characterization, and structure of nucleic acids
2. Genome organization and biosynthesis of proteins.
3. Metabolism of purines and pyrimidines, nucleosides and nucleotides.
4. Abnormalities in nucleic acid metabolism.

Learning Activities/Course Delivery Methods
Lectures: Detailed content of course are taught in class

Course Content: Occurrence, isolation, characterization, and structure of nucleic acids. Genome organization and biosynthesis of proteins. Metabolism of purines and pyrimidines, nucleosides and nucleotides. Abnormalities in nucleic acid metabolism. Xeroderma pigmentation and skin cancer.