



EDO UNIVERSITY IYAMHO 
Department of Medical Laboratory Science
MLS 307 Medical Physics

Instructor: *Mr. Uwaifo Ferdinand*, email: uwaifo.ferdinand@edouniversity.edu.ng

Lectures: Thursday, 8am – 12.10 pm, LT5, phone: (+234) 8061324564

Office hours: Wednesday, 2.30 to 3.30 PM (just before class), Office: department of medical laboratory science Floor Rm 6

General overview of lecture: The course introduces some fundamental concepts in Kinematical and mathematical problems—circulation of pulse, blood pressure and volume changes. The heart and blood surface tension effect. Temperature and heat flow/electricity, electrocardiograms, general radiation linear energy transfer and radiation measurement, radiation damage-detection and safety, X-ray generation and application radioisotopes production, use and disposal.

Prerequisite: The students are expected to have a strong background in the fundamentals of kinematics, temperature and radiation. Some knowledge of radioisotopes, surface tension and pressure.

Learning outcomes: At the completion of this course, students are expected to:

- i. to better understand the heart and blood surface tension,
- ii. to gain experience with common kinematical and mathematical problems,
- iii. to understand the concept of heat flow and temperature,
- iv. to understand the topics of electrocardiograms, general radiation linear energy transfer and radiation measurement,
- v. to gain an appreciation for X-ray generation and application radioisotopes production, use and disposal.

Assignments: We expect to have 3 homework assignments throughout the course in addition to a Mid-Term Test and a Final Exam. Term papers are given at the beginning of the class and submission will be on the due date. Home works in the form of individual assignments, and group assignments are organized and structured as preparation for the midterm and final exam, and are meant to be a studying material for both exams.

Grading: We will assign 10% of this class grade to homeworks, 20% for the mid-term test and 70% for the final exam. The Final exam is comprehensive.

Textbook: The recommended textbook for this class are as stated:

Title: *Introduction to Automata Theory, Languages, and Computation*

Authors: John E. Hopcroft, Rajeev Motwani, Jeffrey D. Ullman

Publisher: Addison-Wesley, 3rd Edition

Year: 2006

Title: *Languages and Machines*

Author(s): Thomas A. Sudkamp

Publisher: Pearson Education, Inc., Third Edition

ISBN: 0-321-32221-5.

Year: 2006