Instructor: **Petronilla Muthoni, PhD**

E-mail: **pmuriithi@jkuat.ac.ke**

ICS 2210: SYSTEMS ANALYSIS & DESIGN

Rationale

The aim of this course is to enable learners to gain an understanding of the principles of systems analysis and equip them with the skills to analyze business requirements and design solutions to meet business needs.

Course Description

This course covers fundamental issues and principles of systems analysis and design. The course looks at the value of systems analysis and design, the components of information systems, developing information systems, systems analysis methods, data modeling, systems design methods, database design, user interface design, and implementation strategies.

Learning outcomes

At the end of this course the students should be able to:

1. Demonstrate an understanding of the fundamental principles, concepts, and practices of Systems Analysis and Design.
2. Carry out a structured analysis of business systems requirements.
3. Design system solutions that satisfy business needs.
4. Demonstrate an understanding of systems modeling – use-case modeling, data modeling, and process modeling.

Course Text

1. Systems Analysis & Design Methods, by Jeffrey L. Whitten and Lonnie D. Bentley and Kevin C. Dittman. McGraw-Hill Irwin.

Recommended Reading

2. Systems Analysis and Design, 5th Edition by Roberta M. Roth, Alan Dennis and Barbara Haley Wixom, 2015, John Wiley & Sons, Inc.

3. System Analysis and Design by Kendall and Kendall. Pearson Education

Teaching Methodology

A series of lectures, group discussions and practical lab exercises will be used to study and internalize the concepts. Students will make frequent use of Case Studies in understanding the concepts and practices of Systems Analysis and Design.

Methods of evaluation

Assignments & Lab Exercises	30%
Exam	70%
Total	**100%**

Content & Class Schedule

Week	Topics	Class Activity	References
1&2	Introduction An Overview of IS Development	Lecture and Class Discussions	Course text chapter 1
3	Project Initiation: Project identification and feasibility analysis	Lecture, Group Discussions and Lab Exercises	Course text chapter 2
4	Project selection and management	Lecture, Group Discussions and	Course text chapter 3

		Lab Exercises	
5	Determining the requirements	Lecture, Class Discussions and Lab Exercises	Course text chapter 4
6	Use Case Analysis	Lecture, Class Discussions and Lab Exercises	Course text chapter 4
7 &8	Process Modeling	Lecture, Class Discussions and Lab Exercises	Course text chapter 5
9	Specifying Processes	Lecture, Class Discussions and Lab Exercises	Course text chapter 5
10	Data Modeling	Lecture, Class Discussions and Lab Exercises	Course text chapter 6
11	Transitioning into the Design	Lecture, Class Discussions and Lab Exercises	Course text chapter 7
12	Designing the UI	Lecture and Lab Exercises	Course text chapter 9
13	Moving into Implementation Transitioning to the New System	Lecture, Class Discussions and Lab Exercises	Course text chapter 12 & 13
13	Revision Week		
	Final Exam		