**CIT 3154 : SYSTEM ANALYSIS AND DESIGN**

**Lecturer : Stephen Mageto**

**Contact Hours:** 45

**Pre-requisite** Introduction to Computer Systems

**Purpose of the Course**

The course enables the students understand systems, manage systems projects and design systems.

**Expected Learning Outcomes:**

By the end of the course the student should be able to:

* Plan, analyze, design, and implement an information system using the Systems Development Life Cycle model to solve current business problems.
* Understand different types of systems.
* Know the objectives and characteristics of a system.
* Understand the basic ethics and security aspects for information systems.

**Course Content:**

Introduction to the general system concepts; elements of a system, system characteristics, methodologies, general stages in system development, automated tools for system development, system complexity and sub-systems. System project identification and selection; identifying potential system development projects, classifying and ranking system projects, selecting system projects for development. Feasibility study of the system. Analysis; system requirement determination, system requirement structuring, and alternative, generation & selection. Design; objectives of design, user interfaces & dialogues, input & output, file organization, database & components, procedures & programs, finding design specifications, and processing & system security. System implementation; types of installation, types of testing, and system documentation. Maintenance; major activities that occur within maintenance, and factors affecting the cost of maintenance.

**Mode of Delivery:**

* Lectures
* Tutorials
* Independent study
* Group discussions

**Course Assessment**

Type Weighting (%)

Examination 70

Continuous Assessment 30

Total 100

**Core Reading Material**

1. Joseph V., Joey G. and Jeff H.: Essentials of System Analysis and Design: International Version 4th Edition, Pearson Higher EducationPublishing Company, 2009.
2. Shelly, Cashman and Rosenblatt: System Analysis and Design 7th Edition, Course Technology, 2008.

**Recommended Reading Material**

1. Whitten J. L. and Bentley L. D.: System Analysis and Design Methods; McGraw-Hill Publishing Company, 2007.
2. Marakas G.: System Analysis and Design, An Active Approach; McGraw-Hill Publishing Company, 2005.
3. Pressman R. S.: Sofware Engineering, Apractitioner’s Approach; McGraw-Hill Publishing Company, 2004.
4. Bennett S., McRobb S., and Farmer R.: Object-Oriented Systems Analysis and Design using UML; McGraw-Hill Publishing Company, 2006.