

# SCHOOL OF SCIENCE AND TECHNOLOGY

# SEMESTER: Summer 2015

# COURSE: MIS6050 - DATABASE DEVELOPMENT TECHNOLOGY

# LECTURER : L. Mutanu Mwaura

## TIME/DAYS: Tue/Thur 5:40- 9:00PM

## VENUE: Lab 3

## CREDIT: 3 Units

## OFFICE HOURS: Tue/Thur-8:00am-9:00am, 3:00pm-5pm

## CONTACT: email: [lmutanu@usiu.ac.ke](mailto:lmutanu@usiu.ac.ke) or Tel: +254-20-3606165

# COURSE RATIONALE

This course offers a case-based, problem-solving approach and innovative technology to make learning database management system skills both meaningful and memorable for students. This course is designed to teach student the architecture (logical and Physical) structure of Database Management System. It also focuses on the administration of a DBMS including creation, management, maintenance, and operation of a database management system.

# DESCRIPTION

# Course covers relational database technology and focuses on design of database applications to solve business problems Database systems, design techniques and their use in organizations. It makes use of case studies to illustrate database systems use for strategic and operational decision making. Emerging technologies and their applications will be covered. Students will get hands-on experience with state-of-the-art commercial relational and object-oriented database technology and learn to use SQL.

## 1.1 Prerequisite: MIS6020

# COURSE LEARNING OUTCOMES

# 1. Create a RDBMS and an OODBMS using common database application tools;

# 2. Develop an enterprise data model from an organization's fundamental business rules

# 3. Apply normalization techniques

# 4. Discuss the tasks of a Data and database administrator

# 5. Perform Data mining analysis on data using common knowledge analysis tools

# COURSE CONTENT

1. The Database Environment
2. The Database Development Process
3. Database Models
4. ER Modelling
5. Enhanced ER Modelling
6. Normalization
7. Mid Semester Exam
8. Transaction management and concurrency control
9. Object Oriented Databases
10. Client/Server and Databases
11. Data and Database Administration
12. Data warehousing and Data mining Concepts
13. Class Project
14. Final Exam

# TEACHING APPROACHES

The course will be conducted through lectures, illustrations using computers, and practical labs exercises. Students are required to participate in group discussion, hands-on lab exercises and presentation to reinforce their understanding of the concepts learnt and their application to common data structures in the industry

# COURSE TEXT & OTHER READINGS

* Modern Database Management 9th Edition – by Hoffer, McFadden, and Prescott, Published by Addison Wesley, 2009

1. KEY INSTITUTIONAL ACADEMIC POLICIES

* Plagiarism will lead to disqualification of the work in question
* Cases of cheating will result to an automatic F
* You will get an F if you miss more than 7 classes
* There will be no make ups without approval from the Dean
* Mobile phones should be switched OFF during class session.
* Computers should only be used for approved classroom activities during class sessions.
* Students who come 10min after class has started will not be allowed into the classroom.

# COURSE EVALUATION

## Assignments & Lab Exercises 30%

## Quizzes 20%

## Mid-Semester Exam 20%

## Final Exam 30%

**Total 100%**

1. **USIU GRADING SYSTEM**

|  |  |
| --- | --- |
| A 90 – 100  A- 87 - 89  B+ 84 - 86  B 80 - 83  B- 77 - 79  C+ 74 - 76 | C 70 – 73  C- 67 – 69  D+ 64 - 66  D 62 - 63  D- 60 - 61  F 0 – 59 |