



## I. COURSE DESCRIPTION:

In this course students will learn to use the basic to intermediate features of Microsoft Access . Students will learn to use functions, menus and toolbars, and, create, enter and edit database records. Students will also be introduced to basic SQL commands using an access database.

This course will also provide an in depth understanding of the logistics of database design. Through practical applications students will learn to design tables, queries, reports in addition to understanding and creating relationships between numerous tables.

Practical “hands-on” applications will be utilized to incorporate basic database concepts. A sound understanding of this material is required in order to develop and maintain an online database in the following semester.

## II. LEARNING OUTCOMES AND ELEMENTS OF THE PERFORMANCE

Upon successful completion of this course, the student will demonstrate the ability to:

### 1. Describe and Explain Database Concepts

#### Potential Elements of the Performance:

- Review and discuss common database applications
- Discuss database concepts and design
- Differentiate among one-to-one, one-to-many, and many-to-many relationships
- Define database, tables, records and fields
- Discuss Access and how it will interface with GIS
- Review Access Screen Layouts and Toolbars

## 2. **Create Tables, Queries and Basic Reports**

### Potential Elements of the Performance:

- Create and enter data to a simple table
- Explain , define and create Queries
- Run Queries
- Using Text data in the Criteria section
- Using Numbers and Wildcards in the criteria section
- Using Comparison Operators
- Sorting data in a query
- Creating and use Parameter Queries
- Create and use Calculation queries

## 3. **Working with Forms and Multiple Tables**

### Potential Elements of the Performance:

- Create forms to enter data to a table
- Create additional tables
- Create and Use Advanced Forms to enter view data
- Create a customized Form
- Join tables
- Link tables using unique keys
- Indexing table items

## 4. **Developing Reports**

### Potential Elements of the Performance:

- Create a simple Report
- Create Group Reports Using the Report Wizard
- Create Customized Reports
- Formatting the Report
- Using Calculations in a report
- Running Queries into reports

## 5. **An Introduction To SQL**

### Potential Elements of the Performance

- Using the Select Statement
- Create Single Table Queries
- Retrieve data using simple/compound conditions.
- Create Parameter Queries
- Using Sort Functions
- Using Built-In Functions Count, Sum, Distinct
- Using Grouping Functions GROUP BY , HAVING
- Query Multiple Tables
- Use queries to Add, Delete and Change records

## 6. **Other Database Technologies**

### Potential Elements of the Performance

- Describe SQL Server Functionality
- Use tools to create a database and tables
- Create constraints to protect data.
- Use various tools to generate queries
- Describe Desktop Oracle and it's general functionality
- Create tables and generate queries.

## III. **TOPICS:**

1. Describe and explain database concepts
2. Create Tables, Queries and basic reports
3. Working with forms and multiple tables
4. Develop Reports
5. Introduction to SQL
6. Other Database Technologies

**IV. REQUIRED RESOURCES/TEXTS/MATERIALS:****Textbook:**

Title: Microsoft Office Access 2010  
 Authors: Lisa Friedrichsen  
 Publisher: Thomson.  
 ISBN-10: 0538748265 ISBN-13: 9780538748261

**V. EVALUATION PROCESS/GRADING SYSTEM:**

The mark for this course will be arrived at as follows:

Tests	( 2 )	@ 20%	40%
Practical Assignments	( 8 )	@ 5 %	40%
Projects	( 1 )	@ 20 %	20%
		Total	100%

Minor modifications to the above percentages may be necessary. The professor reserves the right to adjust the mark up or down 5% based on attendance, participation, leadership, creativity and whether there is an improving trend.

The professor reserves the right to adjust the number of tests, practical tests and quizzes based on unforeseen circumstances. The students will be given sufficient notice to any changes and the reasons thereof.

Successful completion of this course is greatly improved with a disciplined approach and consistent attendance to both the lab and lecture / theory classes. Students must complete and pass both the test and assignment portion of the course in order to pass the entire courses.

All Assignments must be completed satisfactorily to complete the course. Late hand in penalties will be 5% per day. Assignments will not be accepted past one week late unless there are extenuating and legitimate circumstances. It is not acceptable to miss classes and / or labs without a reasonable explanation.

There will also be a lab exercise each and every week that will be due during that lab period. In the event that it cannot be completed during lab time, you will be allowed

to complete it as a homework exercise and demonstrate it the following lab with no penalty.

### **ATTENDANCE:**

Absenteeism will affect a student's ability to succeed in this course. Absences due to medical or other unavoidable circumstances should be discussed with the professor. Students are required to be in class on time and attendance will be taken within the first five minutes of class. A missed class will result in a penalty in your marks unless you have discussed your absence with the professor as described above. The penalty depends on course hours and will be applied as follows:

<b>Course Hours</b>	<b>Deduction</b>
5 hrs/week (75 hrs)	1% per hour
4 hrs/week (60 hrs)	1.5% per hour
3 hrs/week (45 hrs)	2% per hour
2 hrs/week (30 hrs)	3% per hour

### **The following grades will be assigned to students:**

<b>Grade</b>	<b><u>Definition</u></b>	<i>Grade Point Equivalent</i>
A+	90 – 100%	4.00
A	80 – 89%	3.00
B	70 - 79%	2.00
C	60 - 69%	1.00
D	50 – 59%	0.00
F (Fail)	49% and below	
CR (Credit)	Credit for diploma requirements has been awarded.	
S	Satisfactory achievement in field /clinical placement or non-graded subject area.	
U	Unsatisfactory achievement in field/clinical placement or non-graded subject area.	
X	A temporary grade limited to situations with extenuating circumstances giving a student additional time to complete the requirements for a course.	
NR	Grade not reported to Registrar's office.	
W	Student has withdrawn from the course without academic penalty.	

**VI. SPECIAL NOTES:**Communication:

The professor reserves the right to use tools other than ***D2L/LMS***, such as Microsoft Outlook, for the primary channel of communication.

**VII. COURSE OUTLINE ADDENDUM:**

The provisions contained in the addendum located on the portal form part of this course outline.