

I. COURSE DESCRIPTION:

In this course students will learn to use the basic to intermediate features of Access .

Students will learn functions and concepts, use menus and toolbars, create enter and edit database records. Students will also be introduced to basic SQL concepts 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.

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 structures.

Potential Elements of the Performance:

- Define database and tables
- Discuss database concepts and design
- Explain field types and record layouts
- Explain Single vs. Relational database
- Describe Key Fields and Indexing
- Discuss Access and how it will be used to interface with GIS
- Review Access Screen Layouts and Toolbars
- Discuss Linking and Joining Tables
- Explain Referential Integrity

2. Define and Create Database Structures & Tables

Potential Elements of the Performance:

- Define database and tables
- Discuss database concepts and design
- Explain field types and record layouts
- Explain Single vs. Relational database
- Describe Key Fields and Indexing
- Discuss Access and how it will be used to interface with GIS

- Review Access Screen Layouts and Toolbars
- Discuss Linking and Joining Tables
- Explain Referential Integrity

3. **Working with Multiple Tables**

Potential Elements of the Performance:

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

4. **Creating Queries and basic reports**

Potential Elements of the Performance:

- Explain and define Query
- Create new queries
- Display selected fields in a query
- Running 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
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5. **Working with and using 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

6. 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
Join Tables
Using Queries to Add, Delete, and Change records

III. TOPICS:

1. Describe and explain database structures
2. Define and Create Database Structures & Tables
3. Working with Multiple Tables
4. Creating Queries and basic reports
5. Working with and using Reports
6. Introduction to SQL

IV. REQUIRED RESOURCES/TEXTS/MATERIALS:

- Microsoft Access 2003 Comprehensive Concepts & Techniques
ISBN 1-4188-4363-6
- Instructor Handouts
- Internet Resources

V. EVALUATION PROCESS/GRADING SYSTEM:

| | | | |
|-----------------------|-------|--------|------|
| Test | (1) | @ 30% | 30% |
| Practical Assignments | (8) | @ 5 % | 40% |
| Projects | (2) | @ 15 % | 30% |
| Total | | | 100% |

The following semester grades will be assigned to students:

| Grade | <u>Definition</u> | <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. | |

UPGRADING OF INCOMPLETES:

When a student's course work is incomplete or final grade is below 50% There is the possibility of upgrading to a pass when the student meets all of the following criteria:

- 1 The student 's attendance has been satisfactory.
- 2 An overall average of at least 40% has been achieved by semester's end on tests and practical assignments.
- 3 The student has made reasonable efforts to participate in class and maintain the recommended schedule for assigned activities.

The nature of the upgrading requirements will be determined by the instructor and may involve re-testing and/or additional lab assignments.

ATTENDANCE:

Absenteeism will affect the student's ability to succeed in the course. Absences due to medical or other unavoidable circumstances should be discussed with the instructor. The instructor reserves the right to deduct 1% of the final mark for each class missed up to a maximum of 10%. Poor attendance will also affect the upgrading process if a student receives a mark below 50%.

VI. SPECIAL NOTES:

Special Needs:

If you are a student with special needs (e.g. physical limitations, visual impairments, hearing impairments, or learning disabilities), you are encouraged to discuss required accommodations with your professor and/or the Special Needs office. Visit Room E1101 or call Extension 2493 so that support services can be arranged for you.

Retention of Course Outlines:

It is the responsibility of the student to retain all course outlines for possible future use in acquiring advanced standing at other postsecondary institutions.

Plagiarism:

Students should refer to the definition of "academic dishonesty" in *Student Rights and Responsibilities*. Students who engage in "academic dishonesty" will receive an automatic failure for that submission and/or such other penalty, up to and including expulsion from the course/program, as may be decided by the professor/dean. In order to protect students from inadvertent plagiarism, to protect the copyright of the material referenced, and to credit the author of the material, it is the policy of the department to employ a documentation format for referencing source material.

Course Outline Amendments:

The professor reserves the right to change the information contained in this course outline depending on the needs of the learner and the availability of resources.

Substitute course information is available in the Registrar's office.

VII. PRIOR LEARNING ASSESSMENT:

Students who wish to apply for advanced credit in the course should consult the professor. Credit for prior learning will be given upon successful completion of a challenge exam or portfolio.

VIII. DIRECT CREDIT TRANSFERS:

Students who wish to apply for direct credit transfer (advanced standing) should obtain a direct credit transfer form from the Dean's secretary. Students will be required to provide a transcript and course outline related to the course in question.