

# CSE 1114 (Approved): Introduction to databases using MS Access

## Course Description

Database concepts and techniques for efficient/effective data handling, computational analysis and decision support.

**Transcript Abbreviation:** DBIntroWithAccess

**Grading Plan:** Letter Grade

**Course Deliveries:** Classroom

**Course Levels:** Undergrad

**Student Ranks:** Freshman, Sophomore

**Course Offerings:** Autumn, Spring, May + Summer

**Flex Scheduled Course:** Never

**Course Frequency:** Every Year

**Course Length:** 14 Week

**Credits:** 1.5

**Repeatable:** No

**Time Distribution:** 1.0 hr Lec, 1.0 hr Lab

**Expected out-of-class hours per week:** 2.5

**Graded Component:** Lecture

**Credit by Examination:** No

**Admission Condition:** No

**Off Campus:** Never

**Campus Locations:** Columbus

**Prerequisites and Co-requisites:**

**Exclusions:** Not open to students with credit for CSE 1111 or 1112 or 2111 or CSE 101 or CSE 105 or CSE 200.

**Cross-Listings:**

**Course Rationale:** GIS requested a database course specifically for their majors; and for other students

interested in an introductory relational database course.

**The course is required for this unit's degrees, majors, and/or minors:** No

**The course is a GEC:** No

**The course is an elective (for this or other units) or is a service course for other units:** Yes

**Subject/CIP Code:** 14.0901

**Subsidy Level:** Baccalaureate Course

## General Information

Not intended for CIS or CSE majors. Not intended for engineering majors.
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## Course Goals

Be familiar with concepts of relational databases.
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Be familiar with solving problems using MS Access Query tools including selection queries, sorts, aggregation, calculations, inner/outer joins, and situations with datasets containing many-to-many relationships using multiple queries.
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Be familiar with using MS Access to create data tables, reports, and forms.
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Be competent using macros.
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Be exposed to SQL.
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Be exposed to tools that facilitate lifelong learning of technology.

## Course Topics

Topic	Lec	Rec	Lab	Cli	IS	Sem	FE	Wor
Relational database management systems	1.0		1.0					
Table Design, including primary/foreign keys, and referential data integrity	3.0		3.0					
Table Relationships (inner and outer joins)	3.0		3.0					
Use the query tool to find/organize information	3.0		3.0					
Access Macros	1.0		1.0					
SQL	1.0							
Forms and Reports	2.0		2.0					

## Representative Assignments

Lab 1 Introduction to Access
Lab 2 Database Design
Lab 3 Simple Database Queries
Lab 4 Advanced Database Queries
Lab 5 Inner Joins
Lab 6 Advanced Inner Joins
Lab 7 Outer Joins
Lab 8 Data Integrity
Lab 9 Advanced Outer Joins
Lab 10 Forms and Reports
Lab 11 Macros
Lab 12 Putting it all together

## Grades

Aspect	Percent
Homework Assignments	15%
Lab Assignments	25%
Midterm Exam	20%
Class Attendance and Participation	10%
Final Exam	30%

## ABET-EAC Criterion 3 Outcomes

Course Contribution	College Outcome
a	An ability to apply knowledge of mathematics, science, and engineering.
b	An ability to design and conduct experiments, as well as to analyze and interpret data.
c	An ability to design a system, component, or process to meet desired needs.
d	An ability to function on multi-disciplinary teams.
e	An ability to identify, formulate, and solve engineering problems.
f	An understanding of professional and ethical responsibility.

Course Contribution		College Outcome
	g	An ability to communicate effectively.
	h	The broad education necessary to understand the impact of engineering solutions in a global and societal context.
	i	A recognition of the need for, and an ability to engage in life-long learning.
	j	A knowledge of contemporary issues.
	k	An ability to use the techniques, skills, and modern engineering tools necessary for engineering practice.

**Prepared by:** Kathryn Reeves