

Introduction to Databases

IT 240-701

Winter 2014-15

General Course Information:

This course will introduce students to the design, implementation and use of desktop databases. Major topics include: modeling using ER diagrams, creating and maintaining a database using a PC-based application, composing and using queries in Structured Query Language, creating and customizing forms and reports, and integrating databases with other sources of data and applications.

Learning domain description

IT 240 Introduction to Databases is included in the Liberal Studies program as a course with credit in the Scientific Inquiry domain. Courses in the Scientific Inquiry domain are designed to provide students with an opportunity to learn the methods of modern science and its impact on the world around us. Courses are designed to help students develop a more complete perspective about science and the scientific process, including: an understanding of the major principles guiding modern scientific thought; a comprehension of the varying approaches and aspects of science; an appreciation of the connection among the sciences; the fundamental role of mathematics in practicing science; an awareness of the roles and limitations of theories and models in interpreting, understanding, and predicting natural phenomena; and a realization of how these theories and models change or are supplanted as our knowledge increases.

Learning outcomes

1. Students will understand the major principles guiding modern scientific thought. Students will demonstrate a mastery of the science content knowledge of their SID courses.
2. Students will know that science, technology, and math serve as mechanisms for inquiry into the nature of the universe. Students will:
 - a. identify questions that can be answered through scientific investigations;
 - b. design and conduct a scientific investigation to test a scientific hypothesis;
 - c. use appropriate tools and techniques together, analyze, and interpret data to support or refute a scientific hypothesis;
 - d. develop descriptions, explanations, predictions, and models using evidence;
 - e. describe relationships between evidence and explanations using critical and logical thinking;
 - f. recognize and analyze alternative explanations and predictions;
 - g. communicate scientific procedures and explanations;
 - h. use mathematics in all aspects of scientific inquiry.
3. Students will understand and appreciate the interrelationships among science, technology and math. Students will:
 - a. use technology and mathematics to identify a problem or design a solution to a problem;
 - b. give examples of how science and technology inform and influence each other.

4. Students will understand and appreciate the role of science in society and in their lives. Students will:
 - a. Provide examples of how science and technology impact our lives, and how social needs and concerns impact our development of technology and scientific investigation;
 - b. develop positive attitudes towards science, technology, and mathematics;
 - c. establish an ongoing experiential/service-learning interest in science, technology, and mathematics.
5. Students will understand the nature of science, technology, and mathematics. Students will:
 - a. provide examples of the abuse of science, including the representation of unfalsifiable claims as science and other forms of pseudoscience;
 - b. explain the strengths and limits of scientific inquiry;
 - c. explain the difference between evidence and inference, and the provisional nature of scientific explanations by providing examples of how our understanding of the workings of the world has changed in the past;
 - d. explain the difference between probability and certainty, and describe what is meant by uncertainty in the context of science, technology, and mathematics.

How learning outcomes will be met

By the end of this course, students will learn:

- **What a database is and why it is needed.**
- **How to use Microsoft Access 2010 database applications to perform DBMS functions and the application generator to create and store forms, reports, and queries.**
- **What the relational model is including relations, keys, dependencies, and normalization.**
- **Write and utilize queries using Structured Query Language (SQL).**
- **Design a database using Entity-Relationship modeling.**
- **Applications of database processing systems.**

Writing Expectations

Writing is integral for communicating ideas and progress in science, mathematics and technology. The form of writing in these disciplines is different from most other fields and includes, for example, mathematical equations, computer code, figures and graphs, lab reports and journals. Courses in the SI domain must include a writing component where that component takes on the form appropriate for that course (eg, lab reports, technical reports, etc.)

How Writing Expectations Will Be Met

Throughout the quarter, writing is emphasized through several database design assignments and the final project. Students will write information related to designing a database schema, detailed ER diagrams, and other aspects of documenting a database creation project from start to finish. Students will write a reflection paper at the end of the semester describing why a database is important for storing information related to their chosen dataset.

PREREQUISITE(S): **NONE**

Meeting Day and Time: **Tuesday 6:00-9:15 PM**

Location: **LEVAN 00302 at Lincoln Park Campus**

Instruction Method: **Lecture, Discussion, Lab**

Course Management System: **d2l.depaul.edu**

Textbook:



Database Concepts, 6th Edition

By David M. Kroenke, David J. Auer

Prentice Hall, 2013. ISBN-13: 978-1-1118-2591-1, ISBN-10: 1-1118-2591-2.

eTextbook: Database Concepts, CourseSmart eTextbook, 6th Edition ISBN-13: 978-0-13-274443-0

[Publisher's Web Site](#)

Software: Microsoft Access 2010

Available in all DePaul University computer labs and free download to your local PC from DePaul [MSDNAA](#) library as long as you are enrolled in at least one for-credit CDM course.

Instructions to Download:

1. Activate your CDM account here <https://accountactivate.cdm.depaul.edu/>
 2. Go to the [MSDNAA website](#)
 3. Select " Login" and use your Campus Connect account.
 4. **YOU DO NOT NEED TO REGISTER.**
 5. If you are having Problems please make sure that your account is [activated](#)
 6. **DO NOT USE YOUR EMAIL OR STUDENT ID AS THE USERNAME.**
- If there is an error or problem with MSDNAA contact msdnaa@cdm.depaul.edu.
 - Problems with your CSTCIS account please email LabSupport@cdm.depaul.edu
 - When reporting problems please include a screenshot whenever possible or copy and paste whatever error message you are receiving. Please include your student ID number whenever contacting MSDNAA or LabSupport.
 - You can attempt to download this software twice. After two unsuccessful tries, you will have to request additional installs via the Support Wizard.
 - The cd-key / product serial number is included in the Purchase Confirmation email you receive and the packing slip webpage that displays after you begin the download.
 - This key is only good for one installation.

Important Dates:

Classes begin on: **Tuesday, January 6, 2015**

Last day to add Winter Quarter classes: **Friday, January 9, 2015**

Midterm Exam (tentative): **Tuesday, February 10, 2015**

Last Day to drop Winter Quarter classes with 100% refund : **Friday, January 16, 2015**

Last day to withdraw* from class with grade of 'W' (no refund): **Friday, February 20, 2015**

Final Project Due (tentative): **Tuesday, March 10, 2015**

Instructor Information:

Margarita Uk

Office Hours: **Through skype** - Monday 5:00 – 6:30 PM, Tuesday after class (by appointment), and various other times by appointment (email me).

Phone: 773-679-6312

Email: muk1@cdm.depaul.edu

Grading:

| | |
|--|------------|
| Homework Assignments | 35% |
| Participation/Discussion Forums | 5% |
| Midterm Exam | 20% |
| Project | 20% |
| Final Exam | 20% |

- The lowest assignment grade will be dropped.
- All assignment requirements and information will be posted on D2L.
- **Late submissions will not be accepted.**
- Make-up exams will not be given except under extreme circumstances approved by me. If there is an extreme emergency please contact me **before** the exam.

Scale:

| | |
|-----------|---------------|
| A | 93-100 |
| A- | 90-92 |
| B+ | 87-89 |
| B | 83-86 |
| B- | 80-82 |
| C+ | 77-79 |
| C | 73-76 |
| C- | 70-72 |
| D+ | 67-79 |
| D | 60-66 |
| F | 0-59 |

School policies:

Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If a change occurs, it will be thoroughly addressed during class, posted under Announcements in D2L or COLWeb and sent via email.

Online Course Evaluations

Evaluations are a way for students to provide valuable feedback regarding their instructor and the course. Detailed feedback will enable the instructor to continuously tailor teaching methods and course content to meet the learning goals of the course and the academic needs of the students. They are a requirement of the course and are key to continue to provide you with the highest quality of teaching. The evaluations are anonymous; the instructor and administration do not track who entered what responses. A program is used to check if the student completed the evaluations, but the evaluation is completely separate from the student's identity. Since 100% participation is our goal, students are sent periodic reminders over three weeks. Students do not receive reminders once they complete the evaluation. Students complete the evaluation online in [CampusConnect](#).

Academic Integrity and Plagiarism

This course will be subject to the university's academic integrity policy. More information can be found at <http://academicintegrity.depaul.edu/> If you have any questions be sure to consult with your professor.

Academic Policies

All students are required to manage their class schedules each term in accordance with the deadlines for enrolling and withdrawing as indicated in the [University Academic Calendar](#). Information on enrollment, withdrawal, grading and incompletes can be found at <http://www.cdm.depaul.edu/Current%20Students/Pages/PoliciesandProcedures.aspx>.

Students with Disabilities

Students who feel they may need an accommodation based on the impact of a disability should contact the instructor privately to discuss their specific needs. All discussions will remain confidential.

To ensure that you receive the most appropriate accommodation based on your needs, contact the instructor as early as possible in the quarter (preferably within the first week of class), and make sure that you have contacted the Center for Students with Disabilities (CSD) at:

Lewis Center 1420, 25 East Jackson Blvd.

Phone number: (312)362-8002

Fax: (312)362-6544

TTY: (773)325.7296