INLS 523

INLS 523_02W Database System I (Online)

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Acknowledgements

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Course Description

INLS 523: Database Systems I: Introduction to Databases (3 credits)
Prerequisite:
Undergraduates: INLS 161 (formerly 261) or equivalent.
Graduates entering SILS in Summer/Fall 2013 (under the new curriculum): Satisfactory completion of the SILS Information Technology Competency Requirement OR INLS 161. Graduate students who entered SILS prior to Summer/Fall 2013 (under the old curriculum) INLS 461 or equivalent.

Design and implementation of database systems. Semantic modeling, relational database theory, including normalization, query construction, and SQL.

This course will introduce the basic concepts and applications of relational database management systems, including semantic modeling and relational database theory. Topics include: user requirements and specifications, semantic data modeling, the relational model, SQL, normalization and data quality, and emerging technologies.

Course Outline

Startup
Introduction and Database Concepts
Entity-Relationship Models
Relational Theory and Concepts
SQL
Good Design
Functional Dependencies and Normalization Data Quality
Wrapping up and Looking ahead

Syllabus Contents

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Learning Objectives

- Understand the basic concepts of databases, with emphasis on the relational model
- Gain experience with both the theoretical and practical aspects of database design and implementation.
- Develop proficiency with entity-relationship modeling.
- Be able to weigh, discuss, and justify database design decisions.
- Learn how to use SQL to create, manipulate and query databases
- Apply practical techniques for improving database design quality
- Gain an understanding of important ideas for databases in the future

Policies on Academic Integrity and Diversity

Chapel Hill has had a student-administered honor system and judicial system for over 100 years. Because academic honesty and the development and nurturing of trust and trustworthiness are important to all of us as individuals, and are encouraged and promoted by the honor system, this is a most significant University tradition. More information is available at http://studentconduct.unc.edu/honor-system

The UNC Honor Code is in effect for all work in this course. Section II. B. of the "Instrument of Student Judicial Governance" gives examples of actions that constitute academic dishonesty:
https://studentconduct.unc.edu/sites/studentconduct.unc.edu/files/documents/Instrument.pdf

Students often ask what is okay to talk about with other students and what is not. There are some specific guidelines for this course.

- I do encourage you to help each other learn the course material – your fellow students can often be a great resource for learning. However, you should not discuss the details of a solution to an ongoing assignment with other students, and should never copy or share answers for an assignment with other students. It is okay to talk about course material with other students, but you should not discuss solutions to pending assignments.
- All work you submit should be your own.
- You may give and receive assistance regarding the use of hardware and software. For example, you may ask or answer a question such as "how do I [fill in the blank] in SQLite?"). A question such as "Should I have a separate table to represent cats and their information?" should be addressed to me.
- Individual homework assignments are to be done individually. You may consult the course materials, your notes, and even other print or web sources. (Keep in mind, however, that what you find in other sources may not be consistent with what I want you to do.) You may not consult your classmates or other people; all questions should be addressed to me.
- You must sign (check) the honor statement when you submit each assignment. This confirms that you and the work conforms to the Honor Code.

In support of the University's diversity goals and the mission of the School of Information and Library Science, SILS embraces diversity as an ethical and societal value. We broadly define diversity to include race, gender, national origin, ethnicity, religion, social class, age, sexual orientation and physical and learning ability. As an academic community committed to preparing our graduates to be leaders in an increasingly multicultural and global society we strive to:

- Ensure inclusive leadership, policies, and practices;
- Integrate diversity into the curriculum and research;
- Foster a mutually respectful intellectual environment in which diverse opinions are valued;
- Recruit traditionally underrepresented groups of students, faculty and staff; and
- Participate in outreach to underserved groups in the State.

The statement represents a commitment of resources to the development and maintenance of an academic environment that is open, representative, reflective and committed to the concepts of equity and fairness.

Grading Policies

The following grade scale will be used AS A GUIDELINE (subject to any curve) for undergraduate students:

Grad Grade	Range	Definitions*
A	90-100	Mastery of course content at the <u>highest level of attainment</u> that can reasonably be expected of students at a given stage of development. The A grade states clearly that the students have shown such <u>outstanding promise</u> in the aspect of the discipline under study that he/she may be strongly encouraged to continue.
B	80-89	<u>Strong performance</u> demonstrating a high level of attainment for a student at a given stage of development. The B grade states that the student has shown solid promise in the aspect of the discipline under study.
C	70-79	A <u>totally acceptable</u> performance demonstrating an adequate level of attainment for a student at a given stage of development. The C grade states that, while not yet showing unusual promise, the student may continue to study in the discipline with reasonable hope of intellectual development.
D	60-69	A <u>marginal performance</u> in the required exercises demonstrating a minimal passing level of attainment. A student has given no evidence of prospective growth in the discipline; an accumulation of D grades should be taken to mean that the student would be well advised not to continue in the academic field.
F	59 or Below	For whatever reason, an <u>unacceptable performance</u>. The F grade indicates that the student's performance in the required exercises has revealed almost no understanding of the course content. A grade of F should warrant an advisor's questioning whether the student may suitably register for further study in the discipline before remedial work is undertaken.

*Definitions are from: http://registrar.unc.edu/academic-services/grades/explanation-of-grading-system/(underlining is my emphasis)

The following grade scale will be used AS A GUIDELINE (subject to any curve) for graduate students:

Grad Grade	Range	Definitions*
H	95-100	High Pass
P	80-94	Pass
L	79-79	Low Pass
F	69 or Below	Fail

*Definitions are from: http://registrar.unc.edu/academic-services/grades/explanation-of-grading-system/

Due Dates and Late Work
Each assignment has a due date and time and includes instructions for submission. A late penalty of 5% per day will be applied unless prior arrangements have been made with the instructor. Assignments submitted more than 5 days after the due date will receive no credit and will not be graded.

Requests for Extensions
If you have a real problem submitting an assignment on time, please contact me before the due date. Getting a late start on an assignment does not count as a real problem. Any request for an extension must be made, preferably by email, at least 24 hours prior to the due date. If an emergency arises that prevents you from contacting me in advance, you must do so as soon as possible.

Grading Components

- Graded exercises, 5% of final grade
- Discussion contributions, 5% of final grade
- Tests, 30% of final grade
- Assignments, 40% of final grade
- Project, 20% of final grade

The Assignment Overview provides additional information about the work for this course

Course Communication

Course announcements. Announcements will be posted on Sakai. Announcements may include information about the week's work, or other timely information.

Messages. I may use the message tool to send individual messages to you; I may also copy the message to your email address. You can also use the tool to send a message to me.

Email. Email is the best way to contact me. I try to reply to student emails within 48 hours, there are times that it may take me 2-3 days to reply. Therefore, it is important that you get started on assignments early, so there is time for me to respond to any questions you may have. I cannot guarantee that I will be able to answer last-minute questions.

Sakai

All enrolled students should have access to the UNC Sakai site for this course: http://sakai.unc.edu/ We will use Sakai for almost all course activities.

Course Materials
All materials can be found in Sakai. The course syllabus, schedule, and information about tools and other resources will be there at the beginning of the semester.

Materials for each week are located in the Modules section of the Sakai site. I recommend that you work through each week's materials in the order they are listed. Unit materials, including videos and slides, exercises, and discussion topics will be published Tuesday mornings. Once published, they will be available for you to study through the end of the semester.

Discussion Forum
We will use the Sakai discussion forum for a variety of interactions and exchanges. I will start some topics, for example, to pose questions or puzzles for you to discuss. You can also start topics, for example, to start a discussion about current issues or news involving databases, or asking a question of general interest about course content of technology.

The Discussion Overview provides additional information about the discussions for this course.

Assignments
All Graded Exercises, Assignments, and Project Deliverables must be submitted using the Sakai Assignments tool. In my experience, Sakai is a reliable method for submitting assignments. It is the responsibility of each student to make sure they have access to Sakai and can submit assignments when they are due.

If for some reason you are unable to submit an assignment to Sakai, as a last resort you may email it to me along with a note about the problem you encountered. Then, as soon as you are able to, it is your responsibility to submit the exact same assignment to Sakai. The email serves as a record that you tried to submit the assignment on time, but to receive credit, your assignment must be uploaded to Sakai.

Drop Box

You each have a drop box in Sakai that is accessible only to you and me. You may store work in progress here. If you have a question about an assignment, and it would be helpful for me to see your work, you may store the draft in your drop box, and refer to it in your emailed question. I will look at only that file to respond to your question.

Do NOT submit homework by putting it into your drop box; all assignments should be submitted in the assignment.

Tests

Tests will be administered using the Tests & Quizzes Tool. Each of the 5 tests covers material from 1 major topic area:

1. Database Concepts

2. Entity-Relationship Models

3. Relational Concepts and Mapping

4. SQL

5. Design, Functional Dependencies, and Normalization.

Tests will be published Monday and must be completed by Wednesday. You may take the test at any time during that period, but once you have started, you must complete it in one sitting. To help your planning, I will post the approximate amount of time I expect each test to require, but remember that this is only a rough estimate – everyone works at a different pace.