INLS 523 (Section 003)
Database Systems I
Fall 2020

Class Format: **Remote, synchronous class meetings via Zoom**

Class Sessions: Tuesdays and Thursdays, 9:45 – 11:00am

Zoom link: available in Sakai

Instructor: Dr. Robert Capra
Office: Manning 210
Office Hours: see Sakai site for Zoom links to "drop-in" office hours
also, by appointment
Email: r<lastname> at unc dot edu

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Textbook: Elmasri & Navathe. *Fundamentals of Database Systems, Seventh Edition,* Addison-Wesley.
(the Sixth edition is okay and used copies are okay)

Course Webpage: UNC Sakai web site for INLS 523_003

Grade Weighting:

In-class participation	10%
Exercises	15%
Homework	40%
Midterm exam	10%
Project	10%
Final exam	15%

1. Fall 2020 Welcome and Notes

As we start this semester, the coronavirus pandemic is affecting many aspects of our lives. Our section of INLS 523 (Section 003) will be taught using the remote + synchronous format using Zoom for our class meetings. My goal for this semester is for us to have a rich, supportive, interactive learning community. It will not be exactly like a face-to-face class, but Zoom provides us with some interesting (and I hope fun!) options for interactive learning. I also want us to get to know each other as a class, so we will do some activities designed to help us not only learn about databases, but also to build learning relationships.

I understand that this is a challenging time for many people – I have designed the class to allow for flexibility and adjustment as needed. If you face personal challenges this semester, I encourage you to be in contact with me and I will be happy to talk through options (e.g., for turning in an assignment late, etc.).

I'm looking forward to this semester with you all. Wear a mask, stay safe and stay healthy!

All best,

- Rob Capra
  August 9, 2020

2. Class format – Remote + Synchronous

The class format for this section of INLS 523 (Fall 2020, Section 003) is remote + synchronous. The idea of the remote + synchronous mode is to provide the benefits of a "live" class while we participate at a distance. As such, **attendance and participation in the class Zoom sessions is an expected part of this course**. To help foster interactivity and community building aspects of class, I also expect that most of the time, most students will participate with their **video on**. If you are looking for an asynchronous course, there is a completely "online" asynchronous section of INLS 523 taught by another instructor. You will need a UNC Zoom account and access to a high-speed Internet connection to participate in this course.

3. Zoom lectures will be recorded

While attendance at the Zoom class sessions is expected, I understand that there may be times that you must miss class or that your Internet may be out. In addition, taking notes while participating in a Zoom class is a different experience than when sitting in a live classroom. Based on this, I plan to use the Zoom recording feature to record our class sessions and make them available for at least a week after class. If storage space allows, I will try to keep them posted for the entire semester. The idea here is to provide the videos as a resource to help you study and learn the course material. After the semester is over, I plan to delete the recordings.

I understand that some people may have privacy concerns about being recorded. If this is a significant concern for you, please let me know during the first week of classes and we can discuss options.

To respect the privacy of your classmates and to foster an environment where students feel comfortable engaging in class, by remaining registered in the class, you agree to the following:

- I understand that the Zoom meetings for INLS 523, Section 003, Fall 2020 will be recorded. The recordings will be made available to members of the class for the purposes of learning and reviewing course material.
- I will only use the recordings for my own personal use in learning and reviewing the course material.
- Furthermore, I agree not to send links to the recordings, share them, or re-post them to any other Web site or other persons.

4. Course Description and Prerequisites

From the SILS course description:

> INLS 523: Database Systems I: Introduction to Databases (3 credits)
> 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.

- User requirements and specifications
- Semantic data modeling
- Relational model
- SQL
- Normalization and data quality
- Relation topics and emerging technologies

5. Course Objectives

- Develop a general understanding of databases, and specific understanding of the relational database model.
- Gain experience with both the theoretical and practical aspects of database design and implementation.
- Be able to weigh, discuss, and justify database design decisions.
- Learn about concepts involved in database operation
- Gain an understanding of important ideas for databases in the future.

6. Computing Requirements

You will need to use several software packages in this course.

- **Zoom + high-speed Internet connection:** Due to the coronavirus, this section of INLS 523 is being conducted using the remote + synchronous format using the Zoom conferencing system. To participate in class, you will need a UNC Zoom account and a high-speed Internet connection.
- **UNC VPN:** To access the UNC network, you may need to install UNC's VPN client. See help.unc.edu for details.
- **MariaDB**: For this course, we will use a database system called MariaDB that is hosted on a SILS server. In class, we will discuss options for installing software on your Mac, PC, or Linux computer that will allow you to connect to the SILS MariaDB server to access your database.
- **Diagramming tools**: You will need to use a diagramming tool to create your E/R diagrams and database models. No specific tool is required. However, your diagrams must look professional and use good formatting (the ER diagrams in the textbook are good examples). I have used Visio and Powerpoint, but there are many online tools available (e.g. Google Drawings, Gliffy, LucidChart).
- **PDF**: You will need the ability to save Word processing files and diagrams as PDF files. Most current word processors support saving to PDF. You will also need a tool such as Acrobat Reader that will allow you to open and view PDF files.
- **In-class exercises**: We will do in-class exercises that will require computer use.

7. Grades

Your grade will be based on in-class participation, exercises, homework, a project, and a midterm and final exam. These will be weighted as shown on the table listed under "Grade Weighting" on the first page.

- **Participation**: Participation is especially important in a remote + synchronous class using Zoom.
  - Students are expected to regularly attend and actively participate in the "live" class.
  - Your participation grade will be based on regular class attendance, being prepared for class, being fully and actively engaged during class, and courteous behavior in class. Specifically:
    - Turn your video on (unless it negatively impacts your internet connection). Having our video on helps us get to know one another and helps create a sense of community. I understand that not everyone may be able to have their video on 100% of the time, but please aim for being on video as much as possible.
    - Asking questions – this can be done in several ways: typing a question into the Zoom chat, using the Zoom "Raise Hand" feature, or unmuting yourself and asking a question verbally.
    - Responding to questions asked by the instructor – depending on the question, this may involve: using the Zoom thumbs-up/down or polling feature, typing a response in the Zoom chat, or unmuting yourself to give a verbal response.
    - Actively engaging in class activities and exercises. Many of class exercises will involve working in pairs or small groups in Zoom breakout rooms.
- **Exercises**: During most class periods, there will be one or more in-class exercises to give you hands-on experience applying concepts we discuss in class. You will often work on these exercises in pairs or small groups in Zoom breakout rooms. In-class exercises will often include a component that will be turned in via Sakai.
- **Homework**: In my experience, developing proficiency in database concepts requires practice. As such, this course includes homework assignments designed to give you practice applying the concepts that are discussed in class. Homework assignments are to be completed individually.
- **Database Project**: Later in the semester, students will work on an assignment to design and implement a database project. Based on a provided description of the database requirements, students will create: 1) a completed model and design, and 2) a final implemented database, loaded with data, and 3) a demonstration of the database using a set of queries.
- **Exams**: There will be a mid-term exam and a comprehensive final exam.

8. Grading Policies

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

Grade Range	Definition*
A 90-100%	Mastery of course content at the highest level of attainment that can reasonably be expected of students at a given stage of development. The A grade states clearly that the students have shown such outstanding promise in the aspect of the discipline under study that he/she may be strongly encouraged to continue.
B 80-89.9%	Strong performance 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 70-79.9%	A totally acceptable 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 60-69.9%	A marginal performance 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 0-59.9%	For whatever reason, an unacceptable performance. 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:

Grade Range	Definition*
H 95-99%	High Pass
P 80-94.9%	Pass
L 70-79.9%	Low Pass
F 0-69.9%	Fail

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

These scales will be used as a GUIDELINE ONLY. The final grade scale may differ.

Due Dates and Late Work
Each assignment will have a due date and time and will include instructions for submission. A late penalty of 10% per day may be applied **unless prior arrangements have been made with the instructor**. Assignments submitted more than 5 days after the due date may receive no credit and may not be graded.

Requests for Extensions and Absences
Any request for an extension must be made, preferably by email, at least 24 hours prior to the due date. Written documentation is required for illness. If a serious illness prevents you from taking any of the tests, send your instructor an e-mail message, or a friend with a note, describing your condition before the scheduled test.

Statute of Limitations
Any questions or complaints regarding the grading of an assignment or test must be raised within one week after the score or graded assignment is made available (not when you pick it up).

9. Web Site and Course Communication (Sakai)

Sakai
All enrolled students should have access to the UNC Sakai site for this course:

http://sakai.unc.edu/

We will use Sakai for administrative aspects of the course. For example, the Sakai site will contain the course syllabus, schedule, reading assignments, lecture slides, exercises, homework assignments, and other useful information.

- **Course Announcements**: I will often use the Sakai messaging feature to send announcements to the class. Usually these messages will also be sent via email to each student's email address of record. However, it is the responsibility of every student to check the Sakai site regularly for announcements and messages. The Sakai site is a reliable source for announcements and messages from the instructor. If something the instructor says in class conflicts with information posted by the instructor on Sakai, then the information posted on by the instructor on Sakai takes precedence. Verbal instructions are easily mis-interpreted, and they do not leave a documentation trail.
- **Assignments**: In order for you to receive credit for an assignment, it must be submitted using the Sakai "Assignments" section. In my experience, Sakai is a reliable method to submit assignments. It is the responsibility of each student to make sure they have access to Sakai and can submit assignments when they are due. You should also verify that each assignment you submit has uploaded correctly.
  If for some reason you are unable to submit an assignment to Sakai, as a last resort you may email it to the instructor 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 Saka**i. 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.
- **Grades**: I will use the Sakai "Gradebook" to record your course grades.

Email

Email can be an effective means for you to contact me regarding quick and simple class-related communication. If you have a detailed question about an assignment or class concept, I encourage you meet with me during either my Zoom drop-in office hours or to set up an appointment to meet with me via Zoom. Note that I receive a large amount of email and while I try to reply to student emails within 24 hours, there are times that it may take me a few days to reply to email. You may get an answer faster by talking to me after class – I will often stay on the class Zoom session for 5 to 10 minutes after class if students have questions.

10.Honor Code

The UNC Honor Code is in effect for all work in this course. The "Instrument of Student Judicial Governance" gives examples of actions that constitute academic dishonesty:

http://instrument.unc.edu/instrument.text.html#academicdishonesty

Student often ask what is okay to talk about with other students and what is not. 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 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 detailed solutions to pending assignments. **All work you submit should be your own**. One way to help insure this is that if you do discuss course material with other students, do not take any written notes.

11.Special Accommodations

If any student needs special accommodations, please contact the instructor during the first week of classes.