

# Database Design for Information Systems

Spring 2020

## Catalog Description

This course serves as a general introduction to database systems for database designers; we will discuss the full database system life cycle but will focus on data modeling and database design. Specific topics to be covered include:

- Introduction to Database Systems
- The Entity-Relationship Model
- Entity-Relationship Mapping
- The Relational Model
- SQL for Database Implementation
- Functional Dependencies and Normalization

## Logistics

**Day and Time:** Wednesday 5:45pm – 9:00pm

**Location:** Online Zoom Live Meetings

**Course Website:** <https://d2l.depaul.edu>

**Drop dates:** 04.13.2020 without financial penalty  
05.15.2020 with financial penalty

## Instructor

**Name:** Rami M. Salahieh

**Office Hours:** Wednesday 5:00pm – 5:30pm & 9:00pm to 10:00pm Via Zoom or Phone

I am available during office hours in person, by phone, or by e-mail. Since students may be present in person during those hours, it is possible that there will be some delay before I respond to e-mail, and phone calls. When you call, please leave a message that indicates the number you can be reached at and gives the best time to return your call.

**Email:** [ramidepaul@gmail.com](mailto:ramidepaul@gmail.com)

**Phone:** 219.201.2925 (Cell Via WhatsApp) Please make Appt. via email before calling. No text please.

## Learning Outcomes

Students will be able to:

- Analyze business requirements for a new database
- Develop a logical model using Entity-Relationship Diagrams
- Develop a physical model for implementation in Oracle
- Execute SQL queries against the database

## Text

**Required text:** *Database Design using Entity-Relationship Diagrams (Second Edition)*, by Sikha Bagui and Richard Earp, ISBN 1493861765 or 978-1439861769.

**Recommended text:** *Fundamentals of Database Systems* by Ramez Elmasri and Shamkant B. Navathe, ISBN 0133970779 or 978-0133970777.

**Database Systems: Design, Implementation, & Management**, 13th Edition, Carlos Coronel; Steven Morris, ISBN-10: 1-337-62790-9 or ISBN-13: 978-1-337-62790-0

## Assignments and Grading

### 1. Homework Assignments [40 percent of the course grade]

There will be homework assignments given most weeks; assignments will be posted on the course web site and will be due before the next class unless otherwise noted. Details of the submission process will be discussed in class; it is your responsibility to verify that your submitted files are readable, submitted on time, and in the correct locations. All submissions must be made through the course web site; emailed submissions will not be accepted. Grades and comments will be returned through the course web site. No late assignments will be accepted.

### 2. Midterm Exam [25 percent of your course grade]

### 3. Comprehensive Final Exam [30 percent of the course grade]

### 4. Participation [5 percent of course grade, Online Discussions and Attending Zoom Meetings]

If you do not take both the midterm and final exams, you will automatically receive a grade of F for the course. Furthermore, everyone must take the midterm and final exams at the scheduled times – as a rule, no make-up exams will be given. If you wish to petition for a make-up exam, you must contact me in advance and provide written documentation.

### Letter Grades

A	95-100	C	73-76
A-	90-94	C-	70-72
B+	87-89	D+	67-69
B	83-86	D	63-66
B-	80-82	D-	60-62
C+	77-79	F	0-59

## Email Communication

Please begin the subject line of any email to me with “IS 451” so that I can easily identify your messages. I will reply to email messages within one business day after the day I receive them, therefore questions that are only received by me on an assignment’s due date are not guaranteed replies before the assignment is due. Please plan accordingly and begin the assignments early enough to ask questions

and receive answers. If you are having problems, send me a detailed description of the problems you are having; I will guide you in locating and solving your problems yourself, rather than simply solve your problems for you. For general questions, please consult the course syllabus, course announcements, and course discussion forum on the course web site for answers before emailing me. Please do not use the comment field of the assignment submission system to send me questions.

### Electronic Devices in the Classroom

In order to not distract your fellow students, please turn off and put away all electronic devices not used for course work during class. Laptops, tablets, etc. that are used exclusively for note-taking or other course-related activities are allowed. Please refrain from emailing, texting, game playing, web browsing, and other activities not related to course work during class.

If you bring a cell phone to class, it must be off or set to a silent mode. Should you need to answer a call during class, students must leave the room in an undistruptive manner.

### Changes to Syllabus

This syllabus is subject to change as necessary during the quarter. If that occurs, reasons for the change and options available to students will be thoroughly addressed on the course D2L site. Changes are not made lightly as this syllabus is considered a contract between instructor and student.

### Incomplete and FX Grades:

Grades of Incomplete are given only in cases of medical emergency or other highly unusual emergency situations. Please note that University guidelines require that you must be earning a passing grade at the time you request an incomplete grade. You should have completed most of the course, with at most one or two major forms of evaluation missing. Incompletes revert to an F if they are not resolved within one quarter. DePaul CDM policy also is that all incompletes must be requested by the student using an online form. See CDM grading policies at

<http://www.cdm.depaul.edu/Current%20Students/Pages/Grading-Policies.aspx>

An FX grade is defined as: "Student stopped academic activity before the end of the sixth week (or the equivalent of the first 60%) of the term. Students are advised to contact DePaul Central to initiate the FX to a WA. If the FX is not changed to a WA, it will be factored into the student's GPA in the same way an F would be."

### 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

Students should be fully aware of the strong consequences resulting in stealing the work of others for papers or presentations i.e. plagiarism. Please consult the Code of Student Responsibility for more information. When proven, plagiarism can result in an automatic failure of the course and possible expulsion from DePaul.

You may always discuss the course material with other students, and you may also discuss assignments at a general level. However, when completing your assignments, you must work individually and neither share your solutions with other students nor consult other students' solutions. Any assignment you submit must be entirely your own individual work.

### Dean of Students Resources

The Dean of Students Office (DOS) helps students in navigating the university, particularly during difficult situations, such as personal, financial, medical, and/or family crises. Absence Notifications to faculty, personal or medical Late Withdrawals, and Community Resource Referrals, support students both in and outside of the classroom. Additionally, we have resources and programs to support health and wellness, violence prevention, substance abuse and drug prevention, and LGBTQA student services. DOS is committed to your success as a DePaul student. Please visit DOS at <http://studentaffairs.depaul.edu/dos/>.

### Students with Disabilities

DePaul's Center for Students with Disabilities (CSD) coordinates DePaul University's provision of accommodations and other services to students with documented disabilities in accordance with the Americans with Disabilities Act and Section 504 of the Rehabilitation Act. CSD regularly works with students diagnosed with a range of disabilities such as learning disabilities, AD/HD, autism spectrum, medical conditions, chronic illness, mental health disorders, and physical and sensory impairments, amongst others. All CSD programs and services are free of charge with the exception of a modest fee for students requesting weekly clinician services. Students are encouraged to contact CSD to initiate the enrollment process well before beginning your first term at DePaul. This will enable students to be well organized from the onset of the term and assist success. Please consult <http://studentaffairs.depaul.edu/csd/> for more information.

## Class Schedule

This is our Class Schedule

<i>Date</i>	<i>Topics</i>	<i>Chapter Readings</i>	<i>Assignments</i>
Week 1: April 1	Week 1 Lecture	Ch1 & Ch2	HW 1 out
Week 2: April 8	Week 2 Lecture	Ch3 & Ch4	HW 2 out
Week 3: April 15	Week 3 Lecture	Ch5 & Ch6	HW 3 out HW 1 due
Week 4: April 22	Week 4 Lecture	Ch6 & Ch7	HW 4 out HW 2 due
Week 5: April 29	Midterm Review <u>Midterm Exam Online</u>		HW 5 out Midterm Exam Due May 1 HW 3 due
Week 6: May 6	Week 5 Lecture	Ch7, Ch8, & Ch9	HW 6 out HW 4 due
Week 7: May 13	Week 6 Lecture	Ch8 & Ch9	HW 7 out (Extra Credit) HW 5 due
Week 8: May 20	Week 7 Lecture	Ch9 & Ch10	HW 6 due
Week 9: May 27	Week 8 Lecture	Ch3 & Ch10	
Week 10: June 3	Week 9 Lecture	Ch10	HW 7 due (Extra Credit)
Week 11: June 10	<u>Final Exam Online</u>		Final Exam Due June 10