Point Loma Nazarene University

ISS 4014 Database Systems and Web Integration

Spring 2020 (4 Credit Hours)

Time and Place: Monday, Wednesday, Friday 12:15 - 1:20 pm

PLNU Campus - RS 265

Instructor: Mike Leih (619) 248-3008

mleih@pointloma.edu office: Rohr Science 240

Office Hours:	Monday	1:30 - 3:30 pm or by appointment
	Tuesday	By appointment
	Wednesday	1:30 - 3:30 pm or by appointment
	Thursday	By appointment
	Friday	1:30 - 3:30 pm or by appointment

Students are welcome to contact me via e-mail and schedule an appointment at any time as I am available. Appointments can be face to face in my office, on the phone or via a video conference call. I will keep office hours as often as I can, but off campus appointment my require me to unavailable. It is always best to arrange a time and location with me prior to a meeting.

Changes to Course and Syllabus: The syllabus and course schedule presented here is subject to change based on the learning needs of the students as determined by the instructor. Changes will be announced in class or through e-mail. Students are responsible for checking their PLNU e-mail and reviewing due dates in canvas on a regular basis to ensure they are aware of changes.

Text:

Database Systems – Desing, Implementation and Management 13e

Carlos Coronel and Steven Morris

ISBN: 978-1-337-62790-0

Needed Supplies:

Access to a laptop computer (preferably running windows or a mac with a windows virtual environment) with at least 8Gb of RAM and 50Gb of free storage space, standard office software, and the ability to install software on your computer. You are required to bring your computer to class to more easily start in class assignments. You should bring your textbook to each class sessions. We will be using information from the textbook each week as part of in class assignments. Students must also have MS Word, MS Excel and MS Visio installed or available. Installation or availability of MS Access is recommended.

Catalog Description:

An introduction to database management systems covering data models (including relational, network, hierarchical, and object oriented), relational databases, query languages, relational database design, transaction processing, distributed databases, and physical database design. Students will see examples from both business and science. They will become familiar with analysis tools and gain experience accessing databases using Python scripts and web-based gateways. Students will also design web interfaces for data bases.

Course Learning Outcomes:

- Students will be able to explain the importance of database design.
- Students will be able to explain the main components of database systems.
- Students will be able to explain data modeling and why data models are important.
- Students will be able to explain relational model components and how tables relate within the database.
- Students will be able to create ER Diagrams and define the components within the ER Diagram.

- Students will be able to define the characteristics of good primary keys and foreign keys with in a relational table.
- Students will be able to write basic and advanced SQL statements to create tables, insert table records, select database information and delete table records and tables.
- Students will be able to create database triggers and stored procedures.
- Students will be able to create a sound database design using the SDLC.
- Students will be able to explain database locking rules and concurrency control systems.
- Students will be able to explain data warehousing and OLAP concepts.
- Students will be able to explain concepts about big data analytics and NoSQL.
- Students will be able to write simple HTML/PHP to access database tables from web/php server and display the information on a web page.

Course Organization:

Reading: The assigned reading each week should be completed before class. Lecture, class discussion and class activities will be based on the assumption that the reading has been completed before the class were the topic is being discussed.

Chapter Quizzes: Quizzes are open book and will focus on having read and understood the reading assignment. Quizzes will be taken online using Canvas before class and will be available a week before they are due. Each quiz will have 10 questions and students will have 8 minutes to complete the quiz. Each quiz is due before we discuss the topic in class. This is to encourage students to complete the reading prior to class discussion. Missed quizzes will receive zero points and there will be no make-up for missed quizzes. Quiz questions are randomly pulled from a large dataset and students are able to take the quiz as many time as they would like before the quiz due date and time. Only the latest quiz score will be recorded.

Chapter Questions: After reading a given chapter, students should submit one or more questions they have regarding the chapter before 6am on the due date (typically before the chapter is discussed in class). Questions posted after the due date will receive zero points.

Chapter Activities and Homework: Each chapter, students will be assigned a series in class activities and problems to begin during class time and then completed before the next class sessions. Activities and assignments will be based on in-class discussion and various problem solving tasks to reinforce the learnings covered in the weekly readings.

Case Problems (Teams): Some chapters will have additional case problems beyond those assigned as activities and homework. These problems will be worked on and submitted as teams.

Web Integration Project (Teams): Teams will create a web based project that will update and extract data from a database and display that data on a web form or other application interface.

Exams: Exams will be given in class. Exams will cover the material up to the exam. The final exam will cover all material throughout the course. The exams will be closed book and closed note and will include multiple choice, short answer, and problem solving questions. **If you will miss an exam for a school function, you must make arrangements ahead of time to take it during an alternative time. If you ever miss an exam without giving the instructor prior notice, there is a good chance you will receive a zero unless, of course, there was clearly an emergency**

E-mail and Messages:

Students are expected to regularly use their PLNU e-mail. The instructor will periodically send you information and updates via e-mail and/or canvas. Students must activate their PLNU e-mail account a week prior to the first class session if you are not currently using it.

Activity Point Distribution: (Note: Points will likely be adjusted throughout the semester to meet the learning objectives of the course. The value of the final exam will be adjusted to 25% of the total value of course)

Activity	**Points**	**Percent**
Chapter Questions and Survey	70	6%
Chapter Quizzes	130	12%
Chapter Homework	390	35%
Team Cases	60	5%
Team Integration Project	60	5%
Exams	100	9%
Final Exams	290	26%
Total	**1100**	**100%**

Grading Scale:

	A	B	C	D
+		[87,90)	[77,80)	[67,70)
	[92,100)	[82,87)	[72,77)	[62,67)
-	[90,92)	[80,82)	[70,72)	[60,62)

Credit Hour Information: Distribution of Student Learning Hours

In the interest of providing sufficient time to accomplish the stated course learning outcomes, this class meets the PLNU credit hour policy for a 4-unit class delivered over 15 weeks. Specific details about how the class meets the credit hour requirements can be provided upon request. It is anticipated that you will spend a minimum of 37.5 participation hours per credit hour in your course. The estimated time expectations for this course are shown below:

Activity	**Hours**
Chapter Reading and Online Quizzes	39
In-Class Discussion and Activities	42
Chapter Assignments	39
Team Cases	6
Team Project	16
Exams Preparation	8
TOTAL	**150**

Late Homework/Classwork:

Online chapter quizzes and chapter questions are not accepted late. If you fail to take the chapter quiz or post a chapter question before the due date/time, you will receive a zero points. Other assignments can be submitted late but will receive a 10% point deduction for each day late (24 hour period after the due date/time). Late assignments will not be accepted more than four calendar days late. No assignment will be accepted after the last day of class.

University Mission:

Point Loma Nazarene University exists to provide higher education in a vital Christian community where minds are engaged and challenged, character is modeled and formed, and service becomes an expression of faith. Being of Wesleyan heritage, we aspire to be a learning community where grace is foundational, truth is pursued, and holiness is a way of life.

Department Mission:

The Mathematical, Information, and Computer Sciences department at Point Loma Nazarene University is committed to maintaining a curriculum that provides its students with the tools to be productive, the passion to continue learning, and Christian perspectives to provide a basis for making sound value judgments.

Attendance:

Attendance is expected at each class session. In the event of an absence you are responsible for the material covered in class and the assignments given that day.

Regular and punctual attendance at all classes is considered essential to optimum academic achievement. If the student is absent from more than 10 percent of class meetings, the faculty member can file a written report which may result in de-enrollment. If the absences exceed 20 percent, the student may be de-enrolled without notice until the university drop date or, after that date, receive the appropriate grade for their work and participation. See the Undergraduate Academic Catalog Class Attendance.

https://catalog.pointloma.edu/content.php?catoid=35&navoid=2136#Class_Attendance

Class Enrollment:

It is the student's responsibility to maintain his/her class schedule. Should the need arise to drop this course (personal emergencies, poor performance, etc.), the student has the responsibility to

follow through (provided the drop date meets the stated calendar deadline established by the university), not the instructor. Simply ceasing to attend this course or failing to follow through to arrange for a change of registration (drop/add) may easily result in a grade of F on the official transcript.

Academic Accommodations:

While all students are expected to meet the minimum standards for completion of this course as established by the instructor, students with disabilities may require academic adjustments, modifications or auxiliary aids/services. At Point Loma Nazarene University (PLNU), these students are requested to register with the Disability Resource Center (DRC), located in the Bond Academic Center. (DRC@pointloma.edu or 619-849-2486). The DRC's policies and procedures for assisting such students in the development of an appropriate academic adjustment plan (AP) allows PLNU to comply with Section 504 of the Rehabilitation Act and the Americans with Disabilities Act. Section 504 (a) prohibits discrimination against students with special needs and guarantees all qualified students equal access to and benefits of PLNU programs and activities. After the student files the required documentation, the DRC, in conjunction with the student, will develop an AP to meet that student's specific learning needs. The DRC will thereafter email the student's AP to all faculty who teach courses in which the student is enrolled each semester. The AP must be implemented in all such courses.

If students do not wish to avail themselves of some or all of the elements of their AP in a particular course, it is the responsibility of those students to notify their professor in that course. PLNU highly recommends that DRC students speak with their professors during the first two weeks of each semester about the applicability of their AP in that particular course and/or if they do not desire to take advantage of some or all of the elements of their AP in that course.

Academic Honesty:

Students should demonstrate academic honesty by doing original work and by giving appropriate credit to the ideas of others. Academic dishonesty is the act of presenting information, ideas, and/or concepts as one's own when in reality they are the results of another person's creativity and effort. A faculty member who believes a situation involving academic dishonesty has been detected may assign a failing grade for that assignment or examination, or, depending on the seriousness of the offense, for the course. Faculty should follow and students may appeal using the procedure in the university Catalog. See Academic Honesty for definitions of kinds of academic dishonesty and for further policy information.

https://catalog.pointloma.edu/content.php?catoid=35&navoid=2136#Academic_Honesty

The author's solutions to questions and problems might be found on the Internet (or other sources) for free or for purchase. The clear use of the author's solution (or the solution not developed by the student) for a single question or problem on an assignment will, at minimum,

result in a zero for the entire assignment or up to a failing grade in the course on first offense. The student will receive a failing grade in the course on the second offense.

Final Exam: Date and Time:

The final exam date and time is set by the university at the beginning of the semester and may not be changed by the instructor. This schedule can be found on the university website and in the course calendar. No requests for early examinations will be approved. Only in the case that a student is required to take three exams during the same day of finals week, is an instructor authorized to consider changing the exam date and time for that particular student.

Copyright Protected Materials:

Point Loma Nazarene University, as a non-profit educational institution, is entitled by law to use materials protected by the US Copyright Act for classroom education. Any use of those materials outside the class may violate the law.

Course Schedule:

Date	Details	Due date
Wed Jan 15, 2020		
	Technology Survey	due by 12:10pm
Fri Jan 17, 2020		
	Chapter 01 Questions - Due 6 am before class	due by 6am
	Chapter 01 Quiz	due by 12:15pm
Wed Jan 22, 2020		
	Chapter 01 Activities and Homework	due by 6am
	Chapter 02 Questions - Due 6 am before class	due by 6am
	Chapter 02 Quiz	due by 12:15pm
Wed Jan 29, 2020		
	Chapter 02 Activities and Homework	due by 6am
	Chapter 03 Questions - Due 6 am before class	due by 6am
	Chapter 03 Quiz	due by 12:15pm
Wed Feb 5, 2020		

	Chapter 03 Activities and Homework	due by 6am
	Chapter 04 + 05 Questions - Due 6 am before class	due by 6am
	Chapter 04 + 05 Quiz	due by 12:15pm
Wed Feb 12, 2020		
	Chapter 04 + 05 Activities and Homework	due by 6am
	Chapter 04 Team Case	due by 6am
	Chapter 06 Questions - Due 6 am before class	due by 6am
	Chapter 06 Quiz	due by 12:15pm
Mon Feb 17, 2020		
	Chapter 06 Activities and Homework	due by 6am
	Exam 1	due by 1:20pm
Wed Feb 19, 2020		
	Chapter 07 Questions - Due 6 am before class	due by 6am
	Chapter 07 Quiz	due by 12:15pm
	Chapter 07 Database Set-up Video - Extra Credit!	due by 12:15pm
Wed Feb 26, 2020		
	Chapter 07 Activities and Homework	due by 6am
	Chapter 08 Questions - Due 6 am before class	due by 6am
	Chapter 08 Quiz	due by 12:15pm
Wed Mar 4, 2020		
	Chapter 08 Activities and Homework	due by 6am
	Chapter 08 Team Case	due by 6am
	Chapter 10 Questions - Due 6 am before class	due by 6am
	Chapter 10 Quiz	due by 12:15pm
Fri Mar 6, 2020		
	Mid-Course Survey	due by 12:15pm
Wed Mar 18, 2020		
	Chapter 10 Activities and Homework	due by 6am
	Chapter 14 Questions - Due 6 am before class	due by 6am

	Chapter 14 Quiz	due by 12:15pm
Wed Mar 25, 2020		
	Chapter 14 Activities and Homework	due by 6am
	Chapter 15 Questions - Due 6 am before class	due by 6am
	Chapter 15 Quiz	due by 12:15pm
Mon Mar 30, 2020		
	Chapter 15 Activities and Homework	due by 6am
	Exam 2	due by 1:20pm
Wed Apr 1, 2020		
	Cloud Technology Questions - Due 6 am before class	due by 6am
	Cloud Reading Quiz	due by 12:15pm
Wed Apr 8, 2020		
	Cloud Technologies Activities and Homework	due by 6am
	HTML Questions - Due 6 am before class	due by 6am
	HTML Reading Quiz	due by 12:15pm
Mon Apr 20, 2020		
	HTML Fan Page	due by 6am
	PHP Questions - Due 6 am before class	due by 6am
	PHP Reading Quiz	due by 12:15pm
Mon Apr 27, 2020		
	PHP Fan Page	due by 6am
	Website Project	due by 6am
Fri May 1, 2020		
	Official Course Evaluation	due by 11:59pm
Fri May 8, 2020		
	Final Exam Part 1 - Closed Book	due by 1pm
	Final Exam Part 2 - Open Book	due by 1pm
	Final Exam Part 2 - Practice	due by 1pm