Point Loma Nazarene University
ISS 414 Database Systems and Web Integration
Spring 2018 - 4 Credit Hours

Time and Place: Mon, Wed, Fri – 1:30pm to 2:35pm
RCL 101

Instructor: Mike Leih (619) 849-3008
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Office Hours:

Monday	2:45 – 4:00 or by appointment
Tuesday	By appointment
Wednesday	2:45 – 4:00 or by appointment
Thursday	By appointment
Friday	2:45 – 4:00 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.

Changes to Course and Syllabus: The syllabus and course schedule presented here is subject to change based on the learning leads 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 12e
Carlos Coronel and Steven Morris
ISBN: 978-1-305-62748-2

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 25Gb of free storage space, 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 and MS Excel installed. Installation 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 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 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 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.

Final Exam and 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.**

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.

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	65	6%
Chapter Quizzes	130	11%
Chapter Homework	390	34%
Team Cases	120	10%
Team Integration Project	60	5%
Exams	100	9%
Final Exams	290	25%
Total	**1155**	**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 7 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	12
Team Project	10
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 five 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 Attendance Policy in the in the Undergraduate Academic Catalog.

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:
If you have a diagnosed disability, please contact PLNU's Disability Resource Center (DRC) within the first two weeks of class to demonstrate need and to register for accommodation by phone at 619-849-2486 or by e-mail at DRC@pointloma.edu. See Disability Resource Center for additional information. For more details see the PLNU catalog under Academic Accommodations. Students with learning disabilities who may need accommodations should discuss options with the instructor during the first two weeks of class.

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 the catalog for definitions of kinds of academic dishonesty and for further policy information.

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:

Wk	Week Of	Chap.	Mon	Wed	Fri
1	1/8/2018	1	Syllabus Overview Review and Load course software	CH01 Quiz (Before class) Lecture CH01 - Review Questions	CH01 - Problems.
2	1/15/2018	2	No Class	CH02 Quiz (Before Class) Lecuter CH02 - Review Questions	Lecture CH02 - Review Question CH02 - Problems.
3	1/22/2018	3	CH02 - Problems	CH03 Quiz (Before Class) Lecture CH03 - Review Questions	Lecutre CH03 - Review Questions CH03 Problems.
4	1/29/2018	4	CH03 - Problems	CH04 Quiz (Before Class) Lecture CH04 - Review Questions	CH04 - Problems. CH04 - Cases (Teams).
5	2/5/2018	5	CH04 - Cases (Teams)	CH05 Quiz (Before Class) Lecture CH05 - Review Questions	CH05 - Problems. CH05 - Cases (Teams).
6	2/12/2018	6	CH05 - Cases (Teams)	CH06 Quiz (Before Class) Lecture CH06 - Review Questions	Lecutre CH06 - Review Question CH06 - Problems.
7	2/19/2018	7	Exam 1	CH07 Quiz (Before Class) Lecture CH07 - Review Questions	CH07 - Problems CH08 - Cases (Teams)
8	2/26/2018	8	CH07 - Problems CH07 - Cases (Teams)	CH08 Quiz (Before Class) Lecture CH08 - Review Questions	CH08 - Problems CH08 - Cases (Teams)
9	3/5/2018		Spring Break		
10	3/12/2018	10	CH08 - Cases (Teams)	CH010 Quiz (Before Class) Lecture CH10 - Review Questions	CH10 - Problems
11	3/19/2018	14	CH10 - Problems	CH014 Quiz (Before Class) Lecture CH14 - Review Question	CH14 - Problems
12	3/26/2018	14	CH14 - Problems Hadoop - NoSQL	Hadoop - NoSQL	No Class
13	4/2/2018	15	No Class	CH015 Quiz (Before Class) Lecture CH15 - Review Question	CH15 - Problems
14	4/9/2018	Web 1	Exam 2	HTML Quiz (Before Class) Lecutre HTML	HTML - Problems
15	4/16/2018	Web 2	HTML - Problems	PHP Quiz (Before Class) Lecutre PHP	PHP - Problems
16	4/23/2018	Web 3	PHP - Problems PHP / Database Project (Teams)	PHP / Database Projects (Teams)	PHP / Database Projects (Teams)
17	4/30/2018		Final Exam (Monday - 1:30 - 4:00)		