

Course Syllabus

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Point Loma Nazarene University

ISS 4014 Database Systems and Web Integration

Spring 2024 (4 Credit Hours)

Time and Place: Monday, Wednesday, Friday 10:55 - 12:05 am

PLNU Campus - RS 395

Final Exam: Friday, May 3, 10:30 am

Instructor: Mike Leih (619) 248-3008

mleih@pointloma.edu

office: Rohr Science 240

Office Hours:	Monday	9:30 am to 10:45 am
	Tuesday	10:45 am to 12:15 pm
	Thursday	10:45 am to 12:15 pm
	Friday	9:30 am to 10:45 am

Students are welcome to contact me via e-mail and schedule an appointment whenever 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 appointments may require me to be 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 – Design, 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 Mac with a Windows virtual environment) with at least 8Gb of RAM and 50Gb of free storage space, Microsoft Office software, the XAMPP server installed, and the ability to install software on your computer. You must bring your computer to class to start in-class assignments more easily. You should bring your textbook to each class session. We will use 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.

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 databases.

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 within 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 servers 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 where 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 times as they would like before the quiz's due date and time. The highest 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 6 am 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: In each chapter, students will be assigned a series of class activities and problems to begin during class time and completed before the next class session. Activities and assignments will be based on in-class discussions 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 a 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. Exams may require the use of Honorlock and screen recording to ensure students do not share exam solutions or communicate with others or artificial intelligence during the exam.**

Final Exam: Date and Time: The final exam is scheduled for Friday of finals week at 10:30 am. It will be cumulative for the entire course and contain questions similar to those on both the exams and chapter reading quizzes.

Successful completion of this class requires taking the final examination on its scheduled day. The final examination schedule is posted on the Traditional Undergraduate Records: Final Exam Schedules site. If you find yourself scheduled for three (3) or more final examinations on the same day, you are authorized to contact each professor to arrange a different time for one of those exams. However, unless you have three (3) or more exams on the same day, no requests for alternative final examinations will be granted.

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 they are not currently using it.

Activity Point Distribution: Note: Points may be adjusted throughout the semester to meet the learning objectives of the course.

Activity	Points	Percent
Chapter Questions and Survey	60	6%
Chapter Quizzes	120	11%
Chapter Homework	385	36%
Team Cases	60	6%
Team Integration Project	60	6%
Exams	100	9%
Final Exams	290	27%
Total	1075	100%

Grading Scale:

The grading scale for the course, in percentages of the maximum points, is:

A	92.50 - 100%	C	72.50 - 77.49%
A-	90.00 - 92.49%	C-	70.00 - 72.49%
B+	87.50 - 89.99%	D+	67.50 - 69.99%
B	82.50 - 87.49%	D	62.50 - 66.49%
B-	80.00 - 82.49%	D-	60.00 - 62.49%
C+	77.50 - 79.99%	F	0 - 59.99%

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, chapter questions, assignments, and labs 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 zero points. Assignments and labs are not accepted late unless by official university accommodation at the instructor's discretion. No assignment will be accepted after the last day of class.

University Mission:

To Teach ~ To Shape ~ To Send

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.

Institutional Learning Outcomes:

1. Learning, Informed by our Faith in Christ - Students will acquire knowledge of human cultures and the physical and natural world while developing skills and habits of the mind that foster lifelong learning.
2. Growing, In a Christ-Centered Faith Community - Students will develop a deeper and more informed understanding of others as they negotiate complex professional, environmental and social contexts.
3. Serving, In a Context of Christian Faith - Students will serve locally and/or globally in vocational and social settings.

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.

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:

PLNU is committed to providing equal opportunity for participation in all its programs, services, and activities. Students with disabilities may request course-related accommodations by contacting the Educational Access Center (EAC), located in the Bond Academic Center (EAC@pointloma.edu or 619-849-2486). Once a student's eligibility for accommodation has been determined, the EAC will issue an academic accommodation plan ("AP") to all faculty who teach courses in which the student is enrolled each semester.

PLNU highly recommends that students speak with their professors during the first two weeks of each semester/term about the implementation of their AP in that particular course and/or if they do not wish to utilize some or all of the elements of their AP in that course.

Students who need accommodations for a disability should contact the EAC as early as possible (i.e., ideally before the beginning of the semester) to ensure appropriate accommodations can be provided. It is the student's responsibility to make the first contact with the EAC.

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 Policies in the Graduate and Professional Studies Catalog for definitions of kinds of academic dishonesty and further policy information.

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) as determined by the instructor, not provided to you by the instructor or through in-class videos 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 the first offense. The student will receive a failing grade in the course on the second offense.

Artificial Intelligence (AI) Policy:

You can use Artificial Intelligence (AI) tools (e.g, ChatGPT, iA Writer, Marmot, Botowski) to generate ideas. Still, you are not allowed to use AI tools to generate content (text, video, audio, images) that will

end up in any work submitted to be graded for this course unless explicitly called for in the assignment instructions. If you have any doubts about using AI, please gain permission from the instructor.





State Authorization:











State authorization is a formal determination by a state that Point Loma Nazarene University is approved to conduct activities regulated by that state. In certain states outside California, Point Loma Nazarene University is not authorized to enroll online (distance education) students. If a student moves to another state after admission to the program and/or enrollment in an online course, continuation within the program and/or course will depend on whether Point Loma Nazarene University is authorized to offer distance education courses in that state. It is the student's responsibility to notify the institution of any change in his or her physical location. Refer to the map on [State Authorization](#) (<https://www.pointloma.edu/offices/office-institutional-effectiveness-research/disclosures>) to view which states allow online (distance education) outside of California.













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









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Course Summary:




Date	Details	Due
	 Chapter 01 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992661	due by 6am
Fri Jan 12, 2024	 Software Installation Verification https://canvas.pointloma.edu/courses/72322/assignments/992787	due by 6am
	 Chapter 01 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992662	due by 10am (1 student)
	 Chapter 01 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992662	due by 10am

Date	Details	Due
Fri Jan 19, 2024	 Chapter 01 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992768	due by 6am
Fri Jan 19, 2024	 Chapter 02 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992761	due by 6am
Fri Jan 19, 2024	 Chapter 02 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992752	due by 10am
Fri Jan 26, 2024	 Chapter 02 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992769	due by 6am
Fri Jan 26, 2024	 Chapter 03 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992762	due by 6am
Fri Jan 26, 2024	 Chapter 03 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992739	due by 10am
Fri Feb 2, 2024	 Chapter 03 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992770	due by 6am
Fri Feb 2, 2024	 Chapter 04 + 05 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992763	due by 6am
Fri Feb 2, 2024	 Chapter 04 + 05 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992738	due by 10am
Fri Feb 9, 2024	 Chapter 04 + 05 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992771	due by 6am
Fri Feb 9, 2024	 Chapter 04 Team Case https://canvas.pointloma.edu/courses/72322/assignments/992772	due by 6am
Fri Feb 9, 2024	 Chapter 06 Questions - Due 6 am before class	due by 6am

Date	Details	Due
	https://canvas.pointloma.edu/courses/72322/assignments/992764	
	 Chapter 06 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992742	due by 10am
Wed Feb 14, 2024	 Exam 1 https://canvas.pointloma.edu/courses/72322/assignments/992740	due by 12:05pm
	 Chapter 06 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992773	due by 6am
Fri Feb 16, 2024	 Chapter 07 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992760	due by 6am
	 Chapter 07 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992730	due by 10am
	 Chapter 07 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992774	due by 6am
Fri Feb 23, 2024	 Chapter 08 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992759	due by 6am
	 Chapter 08 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992747	due by 10am
Fri Mar 1, 2024	 Chapter 08 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992775	due by 6am
	 Chapter 08 Team Case https://canvas.pointloma.edu/courses/72322/assignments/992776	due by 6am
	 Chapter 10 Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992758	due by 6am
	 Chapter 10 Quiz	due by 10am

Date	Details	Due
	https://canvas.pointloma.edu/courses/72322/assignments/992741	
	 Mid-Course Survey https://canvas.pointloma.edu/courses/72322/assignments/992736	due by 12:15pm
	 Chapter 10 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992777	due by 6am
	 Chapter 10 Locking Lab https://canvas.pointloma.edu/courses/72322/assignments/992778	due by 6am
Fri Mar 15, 2024	 Chapter 14 Questions - Due 6am before class https://canvas.pointloma.edu/courses/72322/assignments/992757	due by 6am
	 Chapter 14 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992748	due by 10am
	 Chapter 14 Activities and Homework https://canvas.pointloma.edu/courses/72322/assignments/992779	due by 6am
Fri Mar 22, 2024	 Chapter 15 Questions - Due 6am before class https://canvas.pointloma.edu/courses/72322/assignments/992756	due by 6am
	 Chapter 15 Quiz https://canvas.pointloma.edu/courses/72322/assignments/992753	due by 10am
	 Exam 2 - Open Book Practice Questions https://canvas.pointloma.edu/courses/72322/assignments/992732	due by 10:55am
Wed Mar 27, 2024	 Exam 2 - Closed Book https://canvas.pointloma.edu/courses/72322/assignments/992749	due by 12:05pm
	 Exam 2 - Open Book https://canvas.pointloma.edu/courses/72322/assignments/992731	due by 12:05pm
Wed Apr 3, 2024	 Chapter 15 Activities and Homework	due by 6am

Date	Details	Due
	https://canvas.pointloma.edu/courses/72322/assignments/992780	
	 AWS MySQL Database Lab https://canvas.pointloma.edu/courses/72322/assignments/992766	due by 6am
	 AWS Registration Verification Image https://canvas.pointloma.edu/courses/72322/assignments/992767	due by 6am
Fri Apr 5, 2024	 HTML Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992755	due by 6am
	 HTML Reading Quiz https://canvas.pointloma.edu/courses/72322/assignments/992746	due by 10am
	 AWS Lightsail Website Hosting https://canvas.pointloma.edu/courses/72322/assignments/992765	due by 6am
	 HTML Fan Page https://canvas.pointloma.edu/courses/72322/assignments/992782	due by 6am
Fri Apr 12, 2024	 PHP Questions - Due 6 am before class https://canvas.pointloma.edu/courses/72322/assignments/992754	due by 6am
	 PHP Reading Quiz https://canvas.pointloma.edu/courses/72322/assignments/992743	due by 10am
	 PHP Fan Page https://canvas.pointloma.edu/courses/72322/assignments/992785	due by 6am
Fri Apr 19, 2024	 Website Project https://canvas.pointloma.edu/courses/72322/assignments/992788	due by 6am
	 Official Course Evaluation https://canvas.pointloma.edu/courses/72322/assignments/992784	due by 11:59pm
Fri May 3, 2024	 Final Exam Part 2 - Practice https://canvas.pointloma.edu/courses/72322/assignments/992744	due by 10:30am

Date	Details	Due
	 Final Exam Part 1 - Closed Book (https://canvas.pointloma.edu/courses/72322/assignments/992750)	due by 1pm
	 Final Exam Part 2 - Open Book (https://canvas.pointloma.edu/courses/72322/assignments/992733)	due by 1pm
	 Individual Web Project Point Adjustment (https://canvas.pointloma.edu/courses/72322/assignments/992783)	