INFO 5717   Dynamic WWW Structures

Contact Information

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*Use the Blackboard Learn (https://learn.unt.edu/) Discussions and Course Messages tools for all course-related communication.

Course Description

This course introduces Web database systems. It focuses on issues relating to design and implementation of database-driven Web systems. Students will develop thorough theoretical understanding of such systems and related issues, and obtain hands-on experience on building dynamic Web applications such as online survey systems and other applications for libraries, museums, bookstores, and/or other information organizations.

Course Goals & Objectives

This is a Web programming and data science course. Upon completion of this course, students should have achieved following objectives:

1) Master principles of Web database systems and procedures of Web database system design;
2) Identify applications of Web database system in the fields of Data Science and Information Science
3) Convert conceptual database models to operational Web database systems;
4) Understand and apply PHP and MySQL to collect, organize, process, and retrieve data;
5) Generate professional documentation on data processing and Web database systems.

To achieve the above learning objectives, students are expected to study 12 – 15 hours per week for this course.

Recommended Preparatory Courses

Students should have good knowledge on database design, the Internet, and Website authoring using HTML. **If not, students should talk with the instructor prior to registration.** Please consider taking the following two courses:

> INFO 5707: Data Modeling for Information Professionals
> INFO 5814: Website Content Development and Maintenance

For online students registering in 001 section, prior programming experience is required!

Students are welcomed to make an appointment with Dr. Chen at any time to discuss course related questions. Please send her an email even via the above course website course messages if you need an appointment so that she can schedule individual meetings for all visiting students.

The TA will be available on her office hours to answer your questions. You can send her an email to make an appointment.

Section 002 students including all international students are required to attend face-to-face (F2F) meetings scheduled on **Thursday 9:00 am– 11:30 am in Discovery Park room D212** on dates indicated in Table 2 at the end of this syllabus.

Students taking online sections (001, 005, and 007) need to be approved by the instructor prior to registration. This course will not hold online lecturing, but the TA will provide online sessions to answer your question regarding the course content and assignments. The QA sessions are listed at the end of Table 2.

Textbook

> Welling, Luck & Thomson, Laura. (2008). *PHP and MySQL Web Development:* Developer's Library. Fourth Edition. Sams Publishing, Indianapolis, Indiana. ISBN: 0672329166 (Available at Amazon.com).

This course will also use online materials including research papers, web pages, and video materials where applicable.

The contents of the course are organized into **10 lessons.** Please reference **Table 1**. Lessons and Readings.

International Students Holding F-1 Visa

International students who hold F-1 Visa must choose 002 section for this course.

Assessment

A student's grade is composed of the following:
  Class participation (5%)
  Assignments (30%)
  Quiz (20%)
  Project One (20%)
  Term Project (25%)

The UNT scale for grading is as follows:
  A = 90- 100;
  B = 80-89;
  C = 70- 79;
  D = 60-69;
  F = 59 and below

Class participation (5%)

Student in this class will work with the instructor, the TA, research assistants in the Intelligent Information Access Lab, and other students on their Project One and Term Project. F2F or online meetings will be scheduled accordingly during the semester. The meetings can be small scale and scheduled through negotiation. Students are expected to respond promptly and actively participate in these meetings. No-response to emails or absence from scheduled meetings without approval from the instructor in advance will receive a lower class participation score or zero score in class participation. Section 002 students MUST attend F2F class meetings as scheduled in Table 2

Assignments (30%)

The class will have **THREE** assignments. The assignments are designed to help students understand important concepts and gain hands-on experience in Web database design and implementation. Assignments should be typewritten and diagrams should be drawn using graphics software packages.

Turn in your assignments by submitting them to the drop boxes setup in the class website by the date specified in **Table 2. Study Schedule and Due Dates**.

Quiz (20%)

There will be 10 quizzes for this course. Each quiz will include 5-10 multiple-choice questions covering content of each lesson. The duration for each question in the quiz is 2 minutes. The quiz will be released at the class Website. Students can take the quiz anytime at home during the day that the quiz questions are available. The day that the quiz questions are available is specified in **Table 2. Study Schedule and Due Dates**.

Project One: Date Collecting, Organizing, Cleaning, and Uploading (20%): (System 10% and Report 10%)

Students are required to complete two projects in this class. Project One is an individual project. The purpose is to learn basic and important skills on data collecting (collect data

from digital sources or others), organizing (design the database table to hold collected data), cleaning (process raw data to meet the needs of database storage), and uploading (design web interface and write PHP program so data can be added to the database interactively and/or automatically). The instructor will design and assign topics to each student. Students are required to work on this project individually. The specific requirements and/or grading details about this project will be discussed and distributed in class.

Term Project (25%) (Presentation: 5%; System 10%, and Final Report: 10%)

The purpose of the term project is to cultivate team collaboration in designing and developing Web database systems and data analytics. Students working on similar topics for their Project One will be teamed together for the term project. A project team should include 4 to 5 people. The team project will combine data from tables of team members to form a larger database, refine interfaces, add management functions, and perform information access and analysis. The specific requirements and/or grading details about the presentation, the system, and the final team project report will be discussed and distributed in class.

Late Submission

Students are expected to submit assignments and projects on time. The due dates are Thursdays 11:59pm of the week specified in Table 2. Study Schedule and Due Dates. If an extenuating circumstance such as a medically diagnosed illness or family emergency arises, which prevents you from submitting your assignments, you should contact the instructor and the TA as soon as possible before the due date. **Late work without the permission of the instructor will receive a grade with a 10% penalty (or 10 points out of 100) per day after the due date.** A student who is having trouble with assignments is strongly encouraged to contact the instructor and the TA as early as possible for personal advising.

Incomplete

The UNT Graduate Catalog (http://catalog.unt.edu/index.php?catoid=16) describes and explains grading policies. A grade of Incomplete (I) will be given only for a justifiable reason and only if the student is passing the course. The student is responsible for meeting with the instructor to request an incomplete and discuss requirements for completing the course. If an incomplete is not removed within the time frame agreed to by instructor and student, the instructor may assign a grade of F.

Withdrawal

The UNT Graduate Catalog (http://catalog.unt.edu/index.php?catoid=16) describes and explains withdrawal policies and deadlines. The UNT semester course schedule lists specific deadlines regarding withdrawal. A grade of Withdraw (W) or Withdraw-Failing (WF) will be given depending on a student's attendance record and grade earned. Please note that a student who simply stops attending class and does not file a withdrawal form may receive an F.

Academic Integrity

UNT has established a new policy on academic integrity, which can be found at the Provost office website: http://vpaa.unt.edu/academic-integrity.htm. Specifically, UNT policy 18.1.16 (http://policy.unt.edu/sites/default/files/untpolicy/pdf/7-Student_Affairs-Academic_Integrity.pdf) defines the categories of academic dishonesty, including cheating, plagiarism, forgery, fabrication facilitating academic dishonesty, and sabotage. Also, it authorizes the instructor to determination that academic dishonesty has occurred. "A finding by an instructor that academic dishonesty occurred may be considered grounds for more serious academic penalties, up to and including failure in the course."

Penalties on Academic Dishonesty

- **First Time Violation.** The instructor will follow UNT procedure (http://facultysuccess.unt.edu/sites/default/files/u6/single-violation-procedure-flowchart_9_25_13.pdf) and report the case to UNT Office for Academic Integrity (AIO). Student will receive "0" for the assignment/project that he/she performs academic dishonesty;
- **Second Time Violation.** The instructor will follow UNT procedure on multiple violation (http://facultysuccess.unt.edu/sites/default/files/u6/multiple-violations-procedure-flowchart_edits_9-19-13.pdf) and report the case to UNT AIO. Student will receive "F" for this course.

Americans with Disabilities Act Compliance Statement

The Department of Library and Information Sciences, University of North Texas is committed to full academic access for all qualified students, including those with disabilities. In keeping with this commitment and in order to facilitate equality of educational access, faculty members in the Department will make reasonable accommodations for qualified students with a disability, such as appropriate adjustments to the classroom environment and the teaching, testing, or learning methodologies when doing so does not fundamentally alter the course.

If you have a disability, it is your responsibility to obtain verifying information from the Office of Disability Accommodation (ODA) and to inform me of your need for an accommodation. Requests for accommodation must be given to me no later than the first week of classes for students registered with the ODA as of the beginning of the current semester. If you register with the ODA after the first week of classes, your accommodation requests will be considered after this deadline.

Grades assigned before an accommodation is provided will not be changed. Information about how to obtain academic accommodations can be found in UNT Policy 18.1.14, at www.unt.edu/oda, and by visiting the ODA in Room 321 of the University Union. You also may call the ODA at 940.565.4323.

See Next Pages for:

Table 1. Lessons and Readings
Table 2. Study Schedule and Due Dates

Table 1. Lessons and Readings

Lessons	Topics	Readings
Lesson 1	Introduction to database-driven web systems and Data Science	Class notes
Lesson 2	HTML and PHP basics, data collection	Chapter 1, readings
Lesson 3	PHP file operations, arrays and string manipulation	Chapter 2, 3, 4
Lesson 4	Web database system design and development, getting data into database	Specified readings Chapter 8
Lesson 5	SQL and MySQL basics,	Chapters 9, 10
Lesson 6	Dynamic web pages, simple and complex, interactive data uploading and manipulation	Chapter 11, readings
Lesson 7	Advanced PHP functions and web programing skills	Chapter 5,6,7, 26
Lesson 8	Database security and implementation	Chapter 15, 16, 17, 18, 23
Lesson 9	Real-world database-driven Web systems	Chapters 25, 28, Readings
Lesson 10	Summary, new developments, and advice for future study	

About Online Sessions and Meetings

The instructor and the TA will hold FOUR Online QA Sessions for 001 Section students on the nights of Sept. 14, October 5, October 12, and October 26. We will start at 7:30pm and finish when all questions are discussed.

Three online meetings on November 2 (Project One presentation by selected students. All students should attend), November 16 (Lesson 10 and Term project progress report), and December 14 (Final term project report) should be attended by all students. We will have the online meetings 7:30 pm – 9:30pm on these days.

Table 2. Study Schedule and Due Dates
(Assignments and Project One will due on Thursday midnight of the specified week.
Quizzes will be available online from 8:00 am on Wednesday to 8:00 am on Thursday of
specified week. Term project final report will due on December 14 midnight)

Academic Week	Dates	Face to Face Meeting Date	Study Focus	Assignment/Project/Survey/Quiz Due
1	August 28 – September 2	August 31	Syllabus, Lesson 1	Class Survey (not graded)
2	September 3 – 9	September 7	Lesson 2	Quiz 1
3	September 10 – 16	September 14	Lesson 3	Quiz 2
4	September 17 – 23	No Meeting	Lessons 1-3	Assignment One Quiz 3
5	September 24 – 30	September 28	Lesson 4-5	
6	October 1 – 7	October 5	Lesson 6	Assignment Two Quiz 4
7	October 8 –14	October 12	Lesson 7	Quiz 5
8	October 15 – 21	No Meeting	Lessons 1-7	Assignment Three Quiz 6
9	October 22 – 28	October 26	Lesson 8	**Project One** Quiz 7
10	October 29 – November 4	November 2 (Online for all students) Each team meets with the instructor	Lesson 9	Quiz 8
11	November 5 – 11	Continued so that each team can meet with the instructor		**Term Project 1st Deliverable**
12	November 12 – 18	November 16 (Online for all students)	Lesson 10	Quiz 9
13	November 19 – 25	No Meeting	Review, Thanksgiving	
14	November 27 – December 2	Meeting with your team	Work on Term Project	Quiz 10
15	December 3 – 9	Meeting with your team	Work on Team Project	
16	December 14	Online Term Project Presentation for all students	Term Project Final Report Due at December 14 Midnight	