

Database Web Development

ITP 300 (3 Units)



Objective

Students will learn how to build dynamic, database-driven web sites. The course will teach how to structure website content in databases, how to retrieve and manipulate data to display on website.

Concepts

Students must first learn the basics of relational database management systems (RDBMS) and how to design and implement dbs. They will then learn the Structured Query Language (SQL) for communicating with databases. And students will learn and use the PHP scripting language to make SQL calls to databases and to flow those results into pages. They will also use PHP to create data interfaces, as well as to create basic conditional routines and other constructs that allow for dynamic sites. Students will use both MySQL Workbench and MySQL database platforms.

Prerequisites ITP 301 or intermediate knowledge of HTML, CSS, and JavaScript.

Instructor Zune Nguyen

Contact tridungn@usc.edu

Office Hours See course website

Lecture and Lab Thursday 11am - 1:50pm, KAP 107

Website <http://uscitp.com/>

Textbooks None

Grading

The following percentage breakdown will be used in determining the grade for the course.

Assignments	30%
Attendance, Participation, Labs	15%
Midterm Exam	20%
Final Project	35%

Total	100%
-------	------

Grading Scale

The following shows the grading scale to be used to determine the letter grade.

A	93% or up
A-	90% - 92.99%
B+	87% - 89.99%
B	83% - 86.99%
B-	80% - 82.99%
C+	77% - 79.99%
C	73% - 76.99%
C-	70% - 72.99%
D+	67% - 69.99%
D	65% - 66.99%
F	64.99% or below

Policies

Exams

No make-up exams (except for documented medical or family emergencies) will be offered.

Attendance

An attendance sheet will be circulated each lecture. You must sign in to receive attendance credit. You can miss **one** lecture without affecting your grade.

Labs

Labs must be demonstrated to TAs before leaving lab session. No late lab submissions are accepted.

Late Assignments

10% per day penalty is applied for late assignments. No submissions are accepted 4 days after due date.

Incomplete and Missing Grades

Excerpts for this section have been taken from the University Grading Handbook, located at <http://www.usc.edu/dept/ARR/grades/gradinghandbook/index.html>. Please see the link for more details on this and any other grading concerns.

A grade of Missing Grade (MG) “should only be assigned in unique or unusual situations... for those cases in which a student does not complete work for the course before the semester ends. All missing grades must be resolved by the instructor through the Correction of Grade Process. One calendar year is allowed to resolve a MG. If an MG is not resolved [within] one year the grade is changed to [Unofficial Withdrawal] UW and will be calculated into the grade point average a zero grade points.

A grade of Incomplete (IN) “is assigned when work is not completed because of documented illness or other ‘emergency’ **occurring after the twelfth week** of the semester (or 12th week equivalency for any course scheduled for less than 15 weeks).”

Students with Disabilities

Any student requesting academic accommodations based on a disability is required to register with Disability Services and Programs (DSP) each semester. A letter of verification for approved accommodations can be obtained from DSP. Please be sure the letter is delivered to your course instructor (or TA) as early in the semester as possible. If you need accommodations for an exam, the form needs to be given to the instructor at least two weeks before the exam.

DSP is located in STU 301 and is open from 8:30am to 5:00pm, Monday through Friday. Contact info: 213-740-0776 (Phone), 213-740-6948 (TDD only), 213-740-8216 (FAX), ability@usc.edu, http://sait.usc.edu/academicsupport/centerprograms/dsp/home_index.html.

Statement on Academic Conduct and Support Systems

Academic Conduct

Plagiarism – presenting someone else’s ideas as your own, either verbatim or recast in your own words – is a serious academic offense with serious consequences. Please familiarize yourself with the discussion of plagiarism in *SCampus* in Section 11, *Behavior Violating University Standards* <https://scampus.usc.edu/1100-behavior-violating-university-standards-and-appropriate-sanctions/>. Other forms of academic dishonesty are equally unacceptable. See additional information in *SCampus* and university policies on scientific misconduct, <http://policy.usc.edu/scientific-misconduct/>.

Discrimination, sexual assault, and harassment are not tolerated by the university. You are encouraged to report any incidents to the *Office of Equity and Diversity* <http://equity.usc.edu/> or to the *Department of Public Safety* <http://capsnet.usc.edu/department/department-public-safety/online-forms/contact-us>. This is important for the safety whole USC community. Another member of the university community – such as a friend, classmate, advisor, or faculty member – can help initiate the report, or can initiate the report on behalf of another person. *The Center for Women and Men*

<http://www.usc.edu/student-affairs/cwm/> provides 24/7 confidential support, and the sexual assault resource center webpage sarc@usc.edu describes reporting options and other resources.

Support Systems

A number of USC's schools provide support for students who need help with scholarly writing. Check with your advisor or program staff to find out more. Students whose primary language is not English should check with the *American Language Institute* <http://dornsife.usc.edu/ali>, which sponsors courses and workshops specifically for international graduate students. *The Office of Disability Services and Programs* http://sait.usc.edu/academicssupport/centerprograms/dsp/home_index.html provides certification for students with disabilities and helps arrange the relevant accommodations. If an officially declared emergency makes travel to campus infeasible, *USC Emergency Information* <http://emergency.usc.edu/> will provide safety and other updates, including ways in which instruction will be continued by means of blackboard, teleconferencing, and other technology.

Database Web Development

ITP 300 (3 Units)

Course Outline

Subject to change throughout the semester

Week	Lecture	Lab due	Assignment due
1	Course Overview Web Servers Content Workflow	L1: cPanel, Student Pages, MySQL Workbench	
2	Database Basics Designing Databases	L2: Simple Database Design	
3	Intro to SQL Retrieving data from DB	L3: SQL SELECT Statements	A1: Database Design and Implementation
4	Data manipulation in SQL	L4: PHPStorm	A2: Simple SQL Statements
5	Data from multiple tables Intro to PHP and PHPStorm PHP Form Variables, Superglobals, Date & Time Functions	L5: PHP Page	A3: Full SQL Statements
6	MySQLi Object Search, search results, delete	L6: Search & Search Results Pages	A4: Multi-table SQL Statements
7	Full Drill-Down Pages Pagination	L7: Insert, Edit, Detail Pages	A5: Search, Search Results, Delete Pages
8	Include, Require Sessions, Cookies	L8: Simple Authentication	A6: Full Drill-Down with pagination
9	Hashing Membership System Sending emails from PHP	L9: Email Generation	
10	Midterm Exam		A7: Full Authentication Pages
11	AJAX Security		A8: Final Project Proposals

12	REST APIs		A9: AJAX Pages, Prepared Statements
13	MVC Laravel	L10: Laravel	A10: REST API Page A11: Final Project Database Design & Implementation
14	No Lecture - Thanksgiving Break		
15	NodeJS NoSQL Databases	L11: NodeJS, MongoDB	
16 (Finals Day)	Final Project Presentations		Final Project