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.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assignments</td>
<td>30%</td>
</tr>
<tr>
<td>Attendance, Participation, Labs</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
</tr>
<tr>
<td>Final Project</td>
<td>35%</td>
</tr>
</tbody>
</table>
Grading Scale

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

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93% or up</td>
</tr>
<tr>
<td>A-</td>
<td>90% - 92.99%</td>
</tr>
<tr>
<td>B+</td>
<td>87% - 89.99%</td>
</tr>
<tr>
<td>B</td>
<td>83% - 86.99%</td>
</tr>
<tr>
<td>B-</td>
<td>80% - 82.99%</td>
</tr>
<tr>
<td>C+</td>
<td>77% - 79.99%</td>
</tr>
<tr>
<td>C</td>
<td>73% - 76.99%</td>
</tr>
<tr>
<td>C-</td>
<td>70% - 72.99%</td>
</tr>
<tr>
<td>D+</td>
<td>67% - 69.99%</td>
</tr>
<tr>
<td>D</td>
<td>65% - 66.99%</td>
</tr>
<tr>
<td>F</td>
<td>64.99% or below</td>
</tr>
</tbody>
</table>

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/academicsupport/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*

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture</th>
<th>Lab due</th>
<th>Assignment due</th>
</tr>
</thead>
</table>
| 1    | Course Overview  
Web Servers  
Content Workflow | L1: cPanel, Student Pages, MySQL Workbench |                     |
| 2    | Database Basics  
Designing Databases | L2: Simple Database Design | A1: Database Design and Implementation |
| 3    | Intro to SQL  
Retrieving data from DB | L3: SQL SELECT Statements |                     |
| 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 |
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>REST APIs</td>
<td>A9: AJAX Pages, Prepared Statements</td>
</tr>
<tr>
<td>13</td>
<td>MVC, Laravel</td>
<td>L10: Laravel, A10: REST API Page</td>
</tr>
<tr>
<td>14</td>
<td>No Lecture - Thanksgiving Break</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>NodeJS, NoSQL Databases</td>
<td>L11: NodeJS, MongoDB</td>
</tr>
<tr>
<td>16</td>
<td>Final Project Presentations</td>
<td>Final Project</td>
</tr>
</tbody>
</table>