

The University of Texas at Dallas
The Naveen Jindal School of Management
MIS4312.501 – Fall 2013 – Course Syllabus

Course Information

Course Number/Section: MIS4312.501
Course Title: Mobile Web Application Development
Term: Fall 2013
Day and Time: Tuesday 7:00 PM– 9:45 PM
Classroom: JSOM 2.115

Instructor Contact Information

Professor: Thuan Nguyen
Office Location: JSOM 2.409
Office Hours: Tuesday 5:45 PM–6:45 PM
EmailAddress: For all written communication, E-Learning is required

TA: Sharath Dudipala
TA's Office Hours: Monday 10:00 AM - 12:00 PM
TA's Office Hour Location: Computer Lab - JSOM 1.211
TA's Email Address: For all written communication, E-Learning is required

Course Prerequisites

Prerequisites: Prior programming knowledge is highly recommended.

Course Descriptions

The primary objective of this course is to introduce students to the fundamental concepts and techniques of designing and developing mobile web applications. Other advanced topics that are covered during the course are UI design for mobile devices, data structures, object oriented programming, and database.

Course Learning Objectives

1. Students are introduced to the process of designing and developing mobile web applications. The discussed topics include system (or app) development life cycle (SDLC), system (or app) development methodologies, the UI (user interface) design for mobile devices, involving programming languages, and the database. The focus is on smart phones and tablets.
 2. Students will learn how to use a popular Integrated Development Environment (IDE) to create mobile web applications. Students will be able to effectively use the IDE to create projects, write application files, compile, and run their mobile web applications.
 3. Students are introduced to Git - a very popular distributed version control system (VCS) and source code management system (SCM) used by professional developers. Students will use Git to manage the source code and to deploy the mobile web application projects.
 4. Students are also introduced to a popular cloud platform: Red Hat Cloud. Students will learn how to develop mobile web application projects and then deploy them on the cloud platform to publish the app to the public.
 5. Students will develop programming skills to create mobile web applications based on the following programming languages: PHP, HTML5, CSS3, and Javascript.
 - a. Students will first acquire basic skills of programming using basic programming techniques of these programming languages.
 - b. Students will then learn more advanced topics such as object-oriented (OO) methodology and GUI design for applications used on mobile devices such as smart-phones and tablets.
 6. Students will learn the object-oriented (OO) programming with PHP.
 7. Students will learn how to use the libraries of Javascript in developing mobile web applications.
 8. Students will learn how to handle data and database in developing mobile web applications:
 - a. Introduction of general concepts of database
 - b. Introduction of PDO (PHP Data Objects) - a new powerful feature of PHP 5.4 and 5.5 to handle all database-related transactions in PHP programs
 - c. How to write PHP and Javascript programs that can work with MySQL, a popular database using PDO
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Suggested Mobile-Web-App-Development Books for Reading and Reference

For HTML5:

HTML5 for Masterminds, 2nd edition, by J D Gauchat

Publisher: CreateSpace Independent Publishing Platform

(ISBN-10: 1481138502; ISBN-13: 978-1481138505)

For CSS3:

CSS3: The Missing Manual, 3rd revised edition, by David Sawyer McFarland

Publisher: O'Reilly Media

(ISBN-10: 1449325947; ISBN-13: 978-1449325947)

For PHP:

Programming PHP, 3rd edition, by Kevin Tatroe

Publisher: O'Reilly Media

(ISBN-10: 1449392776; ISBN-13: 978-1449392772)

For Javascript

Secrets of the JavaScript Ninja, 1st edition, by John Resig & Bear Bibeault

Publisher: Manning Publications

(ISBN-10: 193398869X; ISBN-13: 978-1933988696)

For JQuery (Javascript Library)

Murach's JavaScript and jQuery, 1st edition, by Zak Ruvalcaba and Mike Murach

Publisher: Mike Murach & Associates

(ISBN-10: 1890774707; ISBN-13: 978-1890774707)

For PHP, MySQL, Javascript, and CSS

Learning PHP, MySQL, JavaScript, and CSS: A Step-by-Step Guide to Creating Dynamic Websites

2nd edition, by Robin Nixon

Publisher: O'Reilly Media

(ISBN-10: 1449319262; ISBN-13: 978-1449319267)

Required Computing Devices

1. A smart phone or tablet
2. A laptop computer

Required Software

1. XAMPP:

A free and open source cross-platform web server solution stack package, consisting mainly of the Apache HTTP Server, MySQL database, and interpreters for scripts written in the PHP and Perl programming languages.

Free download of XAMPP software package:

- Version: [XAMPP for Windows 1.8.2 PHP 5.4, 29.7.2013](#)
- Software to download: **Installer**
- Link: <http://www.apachefriends.org/en/xampp-windows.html>

2. GIT:

A very popular free and open source distributed version control system (VCS) and source code management system (SCM) used by professional developers.

Free download of GIT software:

- Version: Git for Windows (or Mac) 1.8.3 OR 1.8.4
- Link: <http://git-scm.com/downloads>

3. PhpStorm IDE: Software will be provided

4. Red Hat OpenShift Cloud: Account will be provided

ClassSchedule

The following is a tentative schedule. Should any change become necessary, it will be announced in class as well as posted in the E-Learning. It is the student's responsibility to check for changes in the schedule.

Week	Date	Topics
1	8/27/2013	Course Overview Mobile web app versus mobile native app Introduction to mobile web app development process Introduction to mobile web app development software package (HTML5, CSS3, PHP, and Javascript) Introduction to mobile web app development system environment
2	9/3/2013	System (or app) development life cycle (SDLC) System (or App) development methodologies Hands-on with PhpStorm IDE Semester Project: Kickstart App Assignment #1 is assigned
3	9/10/2013	Introduction to UX (User experience) and UI (user interface) design Introduction to Git - Code and version control system Hands-on with Red Hat Cloud platform Coding research and presentation: HTML5
4	9/17/2013	Design and develop user interface (UI) for mobile devices Coding research and presentation: CSS3 Semester Project: Phase I (planning) is due App Assignment #1m is due App Assignment #2 is assigned
5	9/24/2013	Introduction to Javascript and Javascript libraries

		Coding research and presentation: Javascript
6	10/1/2013	Javascript and Javascript libraries Coding research and presentation: Javascript Libraries Semester Project: Phase II (UI Design) is due App Assignment #2 is due App Assignment #3 is assigned
7	10/8/2013	Introduction to PHP PROs and CONs of PHP Coding research and presentation: Javascript Libraries
8	10/15/2013	Semester Project: Phase III (UI Implementation) is due Semester Project: Phase I, II, III: Review and Presentation App Assignment #3 is due
9	10/22/2013	Semester Project: Phase I, II, III: Review and Presentation App Assignment #4 is assigned
10	10/29/2013	Introduction to Object-Oriented methodology Object-Oriented programming with PHP Coding research and presentation: PHP
11	11/5/2013	Introduction to database Introduction to SQL (Structured Query Language) Basic operations to manage databases Coding research and presentation: MySQL App Assignment #4 is due App Assignment #5 is assigned

12	11/12/2013	Introduction to PDO (PHP Data Objects) Coding research and presentation: PHP and MySQL
13	11/19/2013	Introduction to AJAX Hands-on with AJAX programming App Assignment #5 is due
14	11/26/2013	FALL BREAK - THANKSGIVING BREAK
15	12/3/2013	Semester Project: Phase IV (App Implementation) is due Semester Project: Mobile Web Application demo & presentation
16	12/10/2013	Semester Project: Mobile Web Application demo & presentation Semester Project Report is due.

Grading Policy

The student's grade in the course will be based on the following items:

App Development assignments:	25%
Coding research and presentation:	25%
Semester project:	40%
Participation:	10%

The final letter grade will be determined as follows:

A+	96 - 100
A	>= 90 and < 96
A-	>= 86 and < 89

B+	>= 81 and < 85
B	>= 76 and < 80
B-	>= 70 and < 75

C+	>= 67 and < 69
C	>= 64 and < 66
C-	>= 60 and < 63

D+	>= 57 and < 59
D	>= 54 and < 56
D-	>= 50 and < 53

F	Below
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Student Conduct and Discipline

The University of Texas System and The University of Texas at Dallas have rules and regulations for the orderly and efficient conduct of their business. It is the responsibility of each student and each student organization to be knowledgeable about the rules and regulations which govern student conduct and activities. General information on student conduct and discipline is contained in the UTD publication, *A to Z Guide*, which is provided to all registered students each academic year.

The University of Texas at Dallas administers student discipline within the procedures of recognized and established due process. Procedures are defined and described in the *Rules and Regulations, Board of Regents, The University of Texas System, Part 1, Chapter VI, Section 3*, and in Title V, Rules on Student Services and Activities of the university's *Handbook of Operating Procedures*. Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations (SU 1.602, 972/883-6391).

A student at the university neither loses the rights nor escapes the responsibilities of citizenship. He or she is expected to obey federal, state, and local laws as well as the Regents' Rules, university regulations, and administrative rules. Students are subject to discipline for violating the standards of conduct whether such conduct takes place on or off campus, or whether civil or criminal penalties are also imposed for such conduct.

Academic Integrity

The faculty expects from its students a high level of responsibility and academic honesty. Because the value of an academic degree depends upon the absolute integrity of the work done by the student for that degree, it is imperative that a student demonstrate a high standard of individual honor in his or her scholastic work. Scholastic dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment or the award of a degree, and/or the submission as one's own work or material that is not one's own. As a general rule, scholastic dishonesty involves one of the following acts: cheating, plagiarism, collusion, and/or falsifying academic records. Students suspected of academic dishonesty are subject to disciplinary proceedings.

Plagiarism, especially from the web, from portions of papers for other classes, and from any other source is unacceptable and will be dealt with under the university's policy on plagiarism (see general catalog for details). This course will use the resources of turnitin.com, which searches the web for possible plagiarism and is over 90% effective.

Email Use

The University of Texas at Dallas recognizes the value and efficiency of communication between faculty/staff and students through electronic mail. At the same time, email raises some issues concerning security and the identity of each individual in an email exchange. The university encourages all official student email correspondence be sent only to a student's U.T. Dallas email address and that faculty and staff consider email from students official only if it originates from a UTD student account. This allows the university to maintain a high degree of confidence in the identity of all individual corresponding and the security of the transmitted information. UTD furnishes each student with a free email account that is to be used in all communication with university personnel.

The Department of Information Resources at U.T. Dallas provides a method for students to have their U.T. Dallas mail forwarded to other accounts.

Withdrawal from Class

The administration of this institution has set deadlines for withdrawal of any college level courses. These dates and times are published in that semester's course catalog. Administration procedures must be followed. It is the student's responsibility to handle withdrawal requirements from any class. In other words, the instructor cannot drop or withdraw any student. The student must do the proper paperwork to ensure that he/she will not receive a final grade of "F" in a course if you choose not to attend the class once you are enrolled.

Student Grievance Procedures

Procedures for student grievances are found in Title V, Rules on Student Services and Activities, of the university's *Handbook of Operating Procedures*.

In attempting to resolve any student grievance regarding grades, evaluations, or other fulfillments of academic responsibility, it is the obligation of the student first to make a serious effort to resolve the matter with the instructor, supervisor, administrator, or committee with whom the grievance originates (hereafter called "the respondent"). Individual faculty members retain primary responsibility for assigning grades and evaluations. If the matter cannot be resolved at that level, the grievance must be submitted in writing to the respondent with a copy of the respondent's School Dean. If the matter is not resolved by the written response provided by the respondent, the student may submit a written appeal to the School Dean. If the grievance is not resolved by the School Dean's decision, the student may make a written appeal to the Dean of Graduate or Undergraduate Education, and the dean will appoint and convene an Academic Appeals Panel. The decision of the Academic Appeals Panel is final. The results of the academic appeals process will be distributed to all involved parties.

Copies of these rules and regulations are available to students in the Office of the Dean of Students, where staff members are available to assist students in interpreting the rules and regulations.

Incomplete Grades

As per university policy, incomplete grades will be granted only for work unavoidably missed at the semester's end and only if 70% of the coursework has been completed. An incomplete grade must be resolved within eight (8) weeks from the first day of the subsequent long semester. If the required work to complete the course and to remove the incomplete grade is not submitted by the specified deadline, the incomplete grade is changed automatically to a grade of **F**.

Disability Services

The goal of Disability Services is to provide students with disabilities educational opportunities equal to those of their non-disabled peers. Disability Services is located in room 1.610 in the Student Union. Office hours are Monday and Thursday, 8:30 a.m. to 6:30 p.m.; Tuesday and Wednesday, 8:30 a.m. to 7:30 p.m.; and Friday, 8:30 a.m. to 5:30 p.m.

The contact information for the Office of Disability Services is:

The University of Texas at Dallas, SU22
PO Box 830688
Richardson, Texas 75083-0688
(972) 883-2098 (voice or TTY)

Essentially, the law requires that colleges and universities make those reasonable adjustments necessary to eliminate discrimination on the basis of disability. For example, it may be necessary to remove classroom prohibitions against tape recorders or animals (in the case of dog guides) for students who are blind. Occasionally an assignment requirement may be substituted (for example, a research paper versus an oral presentation for a student who is hearing impaired). Classes enrolled students with mobility impairments may have to be rescheduled in inaccessible facilities. The college or university may need to provide special services such as registration, note taking, or mobility assistance.

It is the student's responsibility to notify his or her professor of the need for such an accommodation. Disability Services provides students with letters to present to faculty members to verify that the student has a disability and needs accommodations. Individuals requiring special accommodation should contact the professor after class or during office hours.

Religious Holy Days

The University of Texas at Dallas will excuse a student from class or other required activities for the travel to and observance of a religious holy day for a religion whose places of worship are exempt from property tax under Section 11.20, Tax Code, Texas Code Annotated.

The student is encouraged to notify the instructor or activity sponsor as soon as possible regarding the absence, preferably in advance of the assignment. The student, so excused, will be allowed to take the exam or complete the assignment within a reasonable time after the absence: a period equal to the length of the absence, up to a maximum of one week. A student who notifies the instructor and

completes any missed exam or assignment may not be penalized for the absence. A student who fails to complete the exam or assignment within the prescribed period may receive a failing grade for that exam or assignment.

If a student or an instructor disagrees about the nature of the absence [i.e., for the purpose of observing a religious holy day] or if there is a similar disagreement about whether the student has been given a reasonable time to complete any missed assignments or examinations, either the student or the instructor may request a ruling from the chief executive officer of the institution, or his or her designee. The chief executive officer or designee must take into account the legislative intent of TEC 51.911(b), and the student and instructor will abide by the decision of the chief executive officer or designee.

Off-Campus Instruction and Course Activities

Off-campus, out-of-state, and foreign instruction and activities are subject to state law and University policies and procedures regarding travel and risk-related activities. Information regarding these rules and regulations may be found at

http://www.utdallas.edu/BusinessAffairs/Travel_Risk_Activities.htm.

Additional information is available from the office of the school dean.

These descriptions and timelines are subject to change at the discretion of the Professor.