

Web Application Development I

[Schedule](#), [Class Web space](#)

[Information Technology & Supply Chain Management](#)
[College of Business and Economics](#)
[Boise State University](#)

This is a preliminary syllabus. It may change during the semester

Course Description

ITM 325, Network Applications Development: Analysis, design, and implementation of on-line systems using Internet and World Wide Web standards. Topics include client-server architectural alternatives, tools and development environments, database interfaces, use of multimedia, and challenges unique to the delivery environments. Subject to resource and technology availability, students may implement projects using client-side scripting, server-side programming tools, or other distributed/cooperative processing approaches.

Prerequisites: Proficiency in at least one college-level class in a modern procedural programming language; ITM 305.

Corequisite: ITM 315

Planning note: It is required that you take this course before you take ITM 425, Web Application Development II

Meeting times and places:

- T/Th: 1:40 - 2:55 PM; B216 for Section 1
 - T/Th: 4:40 - 5:55 PM; B216 for Section 2
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Learning Objectives

The learning objectives for this course are that by the end of the semester students will:

- Understand how World-Wide Web clients (browsers) and servers interact through HTTP and other Internet and TCP/IP protocols.

- Be able to prepare and manage static Web documents using XHTML, CSS, and at least one high-level Web site development tool (any text editor, HTML-Kit).
- Be able to develop (program, test, implement, and maintain) client-side Web application programs which execute in conjunction with a browser (JavaScript).
- Be able to develop server-side Web application programs which execute in conjunction with a database server (PhP and MySQL).
- Be able to develop client-server application programs in which components execute on both the client side and one or more servers.
- Be able to develop simple XML-based applications formatted with XSL.
- Be familiar with the capabilities and limitations of at least one example Web application development environment (PHP).
- Understand programming, database, telecommunications, project management, and other important issues involved with developing Internet-enabled applications.

Assessment of these learning objectives will be done through exams, homework, project assignments.

The following chart outlines the COBE core objectives supported in this class:

Students in this class will learn or practice the following COBE Core Curriculum concepts, methods, and skills:	
1. Understand and apply analytical and disciplinary concepts and methods related to business and economics:	
xxx	1.5. Information Technology Management
	2.1. Communicate effectively: Write messages and documents that are clear, concise, and compelling
	2.2. Communicate effectively: Give oral presentations that use effective content, organization, and delivery
xxx	3. Solve problems, including unstructured problems, related to business and economics
	4. Use effective teamwork and collaboration skills
	5. Resolve ethical issues related to business and economics

Statement of Shared Values

Boise State University upholds the following values as the foundation for a civil and nurturing environment. Campus community members and all who are part of COBE are expected to adhere to the following values.

- **Academic Excellence** – engage in our own learning and participate fully in the academic community’s pursuit of knowledge.
- **Caring** – show concern for the welfare of others.
- **Citizenship** – uphold civic virtues and duties that prescribe how we ought to behave in a self-governing community by obeying laws and policies, volunteering in the community, and staying informed on issues.
- **Fairness** – expect equality, impartiality, openness and due process by demonstrating a balanced standard of justice without reference to individual bias.
- **Respect** – treat people with dignity regardless of who they are and what they believe. A respectful person is attentive, listens well, treats others with consideration and doesn’t resort to intimidation, coercion or violence to persuade.
- **Responsibility** – take charge of our choices and actions by showing accountability and not shifting blame or taking improper credit. We will pursue excellence with diligence, perseverance, and continued improvement.
- **Trustworthiness** – demonstrate honesty in our communication and conduct while managing ourselves with integrity and reliability.

Expectations for Students

You are a participant in the educational process and will be expected to share in the responsibility for making the class and your individual experience successful. The following expectations are emphasized:

Be professional: We will start class on time and end at or before the official ending time. Please do not arrive late, leave and return, or leave early from class. Turn off your cell phone, pager, or other distracting devices. Do not carry on conversations during lectures or student presentations. Do not bring children or visitors without prior permission.

Be reachable: Everyone will be expected to check their Boise State email address (e.g., SallyStudent@mail.boisestate.edu) every day. This will be your only email address used for class purposes, however you can make arrangements to forward your mail to other addresses. Blackboard will also be used and you will be expected to maintain your Blackboard email address as the same address as your Boise State address.

Be responsible: Attend every class and notify the professor if you will be unavoidably absent. Obtain class notes from another student if you miss class. Complete all assignments on time and allow for the possibility of technology availability problems--no late assignments can be accepted. If you will miss class because of a University-approved absence, turn in your assignment early. No make-up exams will be given.

Be flexible: Please understand that our computing and networking environment changes constantly, particularly in the Micron Networking and Telecommunications Teaching Laboratory (B216). We may need to adjust the schedule, the technologies used, and our planned activities at times. In trying to give you a state-of-the-art learning environment, we sometimes encounter inconveniences due to the installation and use of new software.

Be honest: High standards of student conduct and academic honesty will be expected. In addition to avoiding conduct prohibited by the Academic Dishonesty section of the BSU Student Handbook, students should make sure to perform assignments without unauthorized assistance and take care to cite references and outside sources as appropriate. In particular, students should be aware that copying ideas or material from the Internet and representing it as their own constitutes plagiarism. **The typical minimum consequence for academic dishonesty will be a failing grade in the course, with additional consequences for severe or repeated cases.** All assigned work must be considered individual assignments unless announced as group assignments, however students are welcome to help each other learn general concepts and technologies (but not specific assignment solutions). If in doubt, please ask.

Be present for all exams: Attendance on scheduled exam days is mandatory. I do not give make-up exams.

Follow lab rules: General rules for using the Micron lab are posted. It is designed as both a classroom and a lab, but will usually not be used as both at the same time. During classroom sessions the desktop workstations will normally be turned off to reduce noise and distractions. If you bring a laptop to class, you may not use it for web browsing, checking email, etc., but may use it for note taking if this is not in any way distracting to the professor or other class participants. **The default will be no computers in use during lectures.**

Grading

Grading will be on a scale of 90-100%: A; 80-89.9%: B; etc. I will **NOT** be using a +/- scale. While some adjustments and/or scaling will be done based on the actual number of homework assignments, etc., the approximate breakdown of points is expected to be:

Exam 1	80
Exam 2	80
Projects, homework, and quizzes	240
Comprehensive final exam	100
Total	500

Homework assignments may be graded using a sampling or spot-checking system.

The Student Code of Conduct, which includes information on academic dishonesty and describes the reporting and the Conduct hearing processes, can be found at: <http://www.boisestate.edu/osrr/>

Faculty

Dr. Tim Chenoweth

B213F; 426-2901; timchenoweth@boisestate.edu

Office Hours: TBD

Text, Links, and other Online Materials

Online tutorials from <http://www.w3schools.com/> will be used in conjunction with HTML, XHTML, XML, JavaScript, and other topics.

Blackboard will be used to an extent yet to be determined. You can access it at <http://blackboard.boisestate.edu>.

Links to IDEs and Utilities: [HTML-Kit](#), [phpDesigner](#), [Web Dev firefox plugin](#).

You also might want to try [Notepad++](#).

Link to [winSCP](#)

[PHP web sight](#)

For those of you who want your own PHP development environment I would suggest the [phpdev](#). It comes with PHP, Apache, MySQL, PERL, phpMyAdmin, and PHP-GTK preconfigured to run "out of the box." Makes installation much easier.

A partial list of suggested [reference manuals](#).

Additional readings and Internet-accessible resources may be introduced over the course of the semester. Depending on the project you work on and the software you use, you may need to (or want to) purchase additional books or other materials.

The class web space URL is <http://itm325.itmbsu.net>. Your account and password give you access to your own individual space on this server with a URL such as <http://itm325.itmbsu.net/jstudent> (if your name were Joe Student). Materials you transfer to this web space can be browsed by the public.

In addition to your top-level web space, you also have a subweb called secureweb whose URL follows the pattern <http://itm325.itmbsu.net/jstudent/secureweb>. This web space cannot be browsed by the public, and is only accessible to you and the system administrators. You must keep your password private and not let anyone access your private web space, which will be used for homework assignments.

Remember that your id must be preceded by itm\, for example, itm\jstudent.

If you have any problems with your account, password, web access, etc., please send email to itmlab@boisestate.edu. This will be handled by the Micron Lab Manager.

Your web space must be used only for class-related purposes. Please follow reasonable practices such as:

1. Don't use more than 5 MB without prior approval.
2. Don't give out any private URLs or your password to anyone else.
3. Don't try to access anyone else's private web space.

Color coding:	Quite firmly scheduled. Might be minor changes to documents.	Tentatively scheduled. Documents are reasonably stable. I will announce document changes in class.	Still in development. Documents still subject to change.
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<u>Date</u>	<u>Topic</u>	<u>Due Before Class</u>	<u>In-Class Activity</u>
Tues 8/23	Introduction to the class		Introductions. Review of Class Web Space . Demo HTML-kit and creating subdirectories.
Thurs 8/25	HTML and XHTML	Start HTML School and HTML5 School Start XHTML School Start HW 1	HTML and XHTML
Tues 8/30	HTML and XHTML	Try validating this XHTML document Work on HW 1	HTML and XHTML
Thurs 9/1	CSS	Start CSS School	Styled HTML document and associated style sheet (open in wordpad) Work on HW 1
Fri 9/2	HW 1 due by midnight		

Tues 9/6	The network applications development environment + CSS	Be well into CSS School , Start HW 2 and bring questions	Styled HTML document and associated style sheet (open in wordpad) Work on HW 2 .
Thurs 9/8	CSS	Read style sheet guidelines , Work on HW 2 . Try validating this CSS document used in this HTML document.	More CSS and style sheet guidelines Work on HW 2 .
Tues 9/13	Introduction to PHP	PHP intro article (Parts 1, 2, and 3) PHP school Work on HW 2	PHP Notes , PHP PP notes 1 PHP Examples
Thurs 9/15	Using PHP variables. PHP interaction with HTML forms.	Review HTML forms . Review PHP forms .	Brief exam discussion. PHP Notes , PHP PP notes 2 PHP Examples
Fri 9/16	HW 2 DUE BY MIDNIGHT.		
Tues 9/20	Controlling Script Flow	Review PHP Operators . Review PHP Conditionals . Review PHP Looping Constructs . Work on HW 3	PHP Notes , PHP PP notes 3 PHP Examples
Thurs 9/22	Exam 1: HTML, XHTML, and CSS		

Tues 9/27	PHP Functions	Review PHP functions1 and functions2 Complete list of PHP functions User defined functions	PHP Notes , PHP PP notes 4 PHP Examples Brief exam review
Thurs 9/29	Using Databases with PHP Scripts	MySQL web sight. SQL tutorial . Web page containing significant information on PHP and MySQL. I would suggest reading he following sections: Connecting to MySQL database Insert Data To MySQL Database Getting The Data Update and Delete Prepared Statements Mysqli PHP functions ODBC PHP functions SQL Injection , mysqli_real_escape vs prepared statements Link to the class PhPMyAdmin sight.	PHP Notes , PHP PP notes 9 PHP Examples Discuss HW4
Fri 9/30	HW 3 due by midnight		

Tues 10/4	Using Arrays for List Data	<p>Introduction to arrays.</p> <p>Another intro article on arrays.</p> <p>Here is more advanced info. Be sure to read both pages.</p> <p>List of PHP array functions.</p>	<p>PHP Notes, PHP PP notes 5</p> <p>PHP Examples</p>
Thurs 10/6	Using Arrays for List Data	<p>Introduction to arrays.</p> <p>Another intro article on arrays.</p> <p>Here is more advanced info. Be sure to read both pages.</p> <p>List of PHP array functions.</p>	<p>PHP Notes, Finish PHP PP notes 5</p> <p>PHP Examples</p> <p>Discuss project proposals. Here is the project description.</p>
Fri 10/7	Part 1 of HW4 due by midnight		
Tues 10/11	Matching Patterns and Working with Files	<p>A tutorial describing the basics of regular expressions.</p> <p>Regular expression discussion from php.net</p> <p>List of regular expression functions</p> <p>More examples of regular expression functions.</p>	<p>PHP Notes, PHP PP notes 6</p> <p>Regular expression library</p> <p>PHP Examples</p>
Thurs 10/13	Matching Patterns and Working with Files	<p>A tutorial describing the basics of regular expressions.</p> <p>Regular expression discussion from php.net</p> <p>List of regular expression functions</p> <p>More examples of regular expression</p>	<p>PHP Notes, PHP PP notes 6</p> <p>PHP Examples</p>

		functions.	
Fri 10/14	Part 2 of HW4 due by midnight		
Tues 10/18	Managing Multiple-Form Applications	<p>Netscape's cookie specification. PHP.net web page describing cookies. Tutorial describing how to use cookies in PHP.</p> <p>PHP.net web page describing sessions. A good article on "Managing Users with PHP Sessions and MySQL"</p>	<p>PHP Notes, PHP PP notes 8</p> <p>PHP Examples</p>
Thurs 10/20	Matching Patterns and Working with Files	<p>A description of file system functions Pdf files describing basic file manipulation. pdf 1, pdf 2, pdf 3 Additional file system function information</p>	<p>PHP Notes, PHP PP notes 7</p> <p>PHP Examples</p>
Fri 10/21	Part 3 of HW4 due by midnight Project proposals due by midnight.		
Tues 10/25	JavaScript 1	<p>JavaScript School, JS Basic Section</p>	<p>JavaScript Notes, PP Lecture Notes 1, PP Lecture Notes 2.</p> <p>Lecture Notes 1 examples, Lecture Notes 2 examples.</p>
Thurs 10/27	JavaScript 2	<p>Finish JavaScript School. Begin HTML</p>	<p>Discuss HW5. JavaScript Notes, PP Lecture Notes 2,</p>

		DOM School.	PP Lecture Notes 3. Lecture Notes 2 examples. Lecture Notes 3 examples.
Fri 10/28	Final HW4 submission due by midnight		
Mon 10/31	Revised Project proposals due by midnight.		
Tues 11/1	JavaScript 3	Finish W3C HTML DOM School. Begin HW5	JavaScript Notes , PP Lecture Notes 3 , PP Lecture Notes 4. Lecture Notes 3 examples. Lecture Notes 4 examples.
Thurs 11/3	Exam 2: PHP		
Tues 11/8	JavaScript 4	Work on HW5	JavaScript Notes , PP Lecture Notes 3 , PP Lecture Notes 4. Lecture Notes 3 examples. Lecture Notes 4 examples. Review exam 2.
Thurs 11/10	XML 1	XML School , XML Basic Section	XML Notes , PP Lecture Notes 1 , PP Lecture Notes 2 XML examples 1 , examples 2.
Mon 11/14	HW5 due by midnight		

Tues 11/15	XML 2	XSL and XSLT School. Begin working on HW6	XML Notes , Lecture Notes 2 XML examples 2 .
Thurs 11/17	XML 3	DTD School and XSD School Web site discussing DTDs Web site discussing XML Schemas	XML Notes , Lecture Notes 2 , Lecture Notes 3 XML examples 2 .
Mon 11/21-Sun 11/27 Thanksgiving Break			
Tues 11/29	DTD and XSD	DTD School and XSD School Web site discussing DTDs Web site discussing XML Schemas	Lecture Notes 3 , XSD
Thurs 12/1	XML Namespaces	Namespace School .	Lecture Notes 4
Friday 12/2	HW6 due by midnight		
Mon 12/5	Project reports due at noon. See the Project Documentation and Suggestions page.		
Tues 12/6	Project presentations Presentation Schedule	Presentation schedule (TBD).	
Thurs 12/8	Project presentations Presentation Schedule		

Thursday, 12/15

Final exam: B216
Section 1: 1:00 - 3:00 PM
Section 2: 3:30 - 5:30 PM

The final exam is closed-book and comprehensive, but with greater emphasis on material covered since the last exam.