

ITT Technical Institute

IT410

Web Technology

Onsite Course

SYLLABUS

Credit hours: 4

Contact/Instructional hours: 50 (30 Theory Hours, 20 Lab Hours)

Prerequisite(s) and/or Corequisite(s):

Prerequisites: IT203 Database Development or equivalent, IT220 Network Standards and Protocols or equivalent.

Course Description:

Selected discussion on modern Web technology and its applications. Topics include common technologies and techniques used in the development of Web-based applications (e.g., server-side and client-side programming), Web services, Web site creation, maintenance and management. Issues on Web application architecture will be discussed in reference to network infrastructure architecture.

Syllabus: Web Technology

Instructor:	_____
Office hours:	_____
Class hours:	_____

Major Instructional Areas

1. Content Management System (CMS)
2. Web server
3. Site administration
4. Content articles
5. Content sections
6. Content categories
7. Content menus
8. Third-party extensions—components, modules, plug-ins, and languages
9. CMS templates
10. Search engine optimization (SEO)
11. Blogs

Course Objectives

1. Describe an overview of the Content Management System.
2. Install and configure Joomla!.
3. Manage site administrations in Joomla!.
4. Create and organize Web content in Joomla!.
5. Create menus and navigation in Joomla!.
6. Install and manage extensions.
7. Manage articles from the backend and the frontend.
8. Use search engine optimization (SEO) techniques.
9. Create a complete Joomla! Web site from scratch.

SCANS Objectives

SCANS is an acronym for Secretary's Commission on Achieving Necessary Skills. The committee, created by the National Secretary of Labor in the early 1990s, created a list of skills and competencies that the committee feels are necessary for employees to function in a high-tech job market.

1. Acquire information.
2. Know how technological systems work and operate effectively.
3. Demonstrate competence in understanding systems.
4. Know how a system's structures relate to its goals.
5. Demonstrate competence in selecting technology, which includes determining desired outcomes and applicable constraints.
6. Demonstrate competence in applying technology to tasks.
7. Design and implement an application to solve business problems.
8. Identify appropriate technology to solve business problems.

Course Outline

Note: All graded activities, except the projects and the final exam, are listed below in the pattern of <Unit Number>.<Assignment Number>. For example, Labs: 3.2 refers to the second lab activity in Unit 3.

Unit	Activities
1—Introducing the Joomla! Content Management System	<ul style="list-style-type: none"> • Content Covered: <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E:</i> <ul style="list-style-type: none"> ○ Chapter 1, "Content Management Systems and an Introduction to Joomla!" ○ Appendix B, "Joomla! Case Studies" • Assignments: 1.1 • Labs: 1.1
2—Installing and Configuring Joomla!	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E:</i> <ul style="list-style-type: none"> ○ Chapter 2, "Downloading and Installing Joomla!" ○ Chapter 3, "Joomla! Administration Basics" ○ Appendix A, "Getting Help with Joomla!" ○ Appendix D, "Installing WampServer" • Assignments: 2.1 • Labs: 2.1 • Quizzes: 2.1
3—Managing Content	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E:</i> <ul style="list-style-type: none"> ○ Chapter 4, "Content Is King: Organizing Your Content" • Assignments: 3.1 • Labs: 3.1-3.2
4—Working with the Menu System	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E:</i> <ul style="list-style-type: none"> ○ Chapter 5, "Creating Menus and Navigation" • Assignments: 4.1 • Labs: 4.1 • Quizzes: 4.1

Unit	Activities
5—Working with Components, Modules, and Plug-ins	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E</i>: Chapter 6, "Extending Joomla!" • Assignments: 5.1 • Labs: 5.1-5.2
6—Managing Content from the Frontend and the Backend	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E</i>: Chapter 7, "Expanding Your Content: Articles and Editors" • Assignments: 6.1 • Labs: 6.1 • Quizzes: 6.1
7—Understanding Search Engine Optimization (SEO)	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E</i>: Chapter 8, "Getting Traffic to Your Site" Appendix C, "A Quick Start to SEO" • Assignments: 7.1 • Labs: 7.1
8—Creating a School Site	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E</i>: ○ Chapter 10, "Creating a School Site with Joomla!" • Assignments: 8.1 • Project I • Quizzes: 8.1
9—Creating a Restaurant Site	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E</i>: ○ Chapter 11, "Creating a Restaurant Site with Joomla!" • Assignments: 9.1 • Project II
10—Creating a Blog Site	<ul style="list-style-type: none"> • Read from <i>Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E</i>: ○ Chapter 12, "Creating a Blog with Joomla!" • Assignments: 10.1 • Project III
11—Course Review and Final Exam	<ul style="list-style-type: none"> • Final Exam

Instructional Methods

In this class, you will learn how to fully install and configure Joomla! from scratch, beginning with how to download Joomla! and how best to configure the system. You will then install the default Joomla! Web site and use that to practice creating, editing, and managing the Web site contents. With the contents of the site ready, you will learn to create and manage users and contacts so you can manage the site as an administrator. You will also learn to enable users to create their own articles and items to populate the sites. Also covered will be how to set up banner clients, news feeds, and polls to further enhance Web sites. You will learn to develop and use different menus and modules to add functionality and richness to the Web sites. Some additional features will also be covered by installing third-party extensions and plug-ins.

Through classroom activities, you will learn to identify the features of different Web sites and different Web technologies. You will be expected to complete assignments and labs in every unit.

Projects in this course will be team-based projects. You will work with one or two other students to write the content and create dynamic Web site structures. You will implement your design using Joomla! 1.5.

A final exam will assess your overall mastery of the course content.

Instructional Materials and References

Student Textbook Package

North, Barrie M. *Joomla! 1.5: A User's Guide: Building a Successful Joomla! Powered Web site, 2/E*. Upper Saddle River, NJ: Prentice Hall, 2009.

References

ITT Tech Virtual Library

Log on to the ITT Tech Virtual Library at <http://library.itt-tech.edu/> to access online books, journals, and other reference resources selected to support ITT Tech curricula.

Books

You may click "Books" or use the Library Catalog function on the home page to find the following books.

- Books 24x7
 - Harwani, Bintu. *Foundation Joomla!* New York: Friends of Ed, 2009.
 - Holzner, Steven, and Nancy Conner. *Joomla! for Dummies*. Indianapolis: Wiley Publishing, Inc., 2009.
 - Kennard, James. *Joomla! 1.5 Development Cookbook: Solve Real World Joomla! 1.5 Development Problems with over 130 Simple but Incredibly Useful Recipes*. Birmingham, UK: Packt Publishing, 2009.
 - Kramer, Jen. *Joomla! Start to Finish: How to Plan, Execute, and Maintain Your Web Site*. Indianapolis: Wiley Publishing, Inc., 2010.
 - Rahmel, Dan. *Beginning Joomla! Second Edition*. New York: Apress, 2009.
 - Shreves, Ric. *Joomla! Bible*. Indianapolis: Wiley Publishing, Inc., 2010.
 - Webb, Cory. *Beginning Joomla! Web Site Development*. Indianapolis: Wrox Press, 2009.
- NetLibrary
 - Lytras, Miltiadis D. *Technology Enhanced Learning: Best Practices*. Hershey, PA: IGI Publishing, 2008.
 - Stauffer, Todd. *How to Do Everything with Your Web 2.0 Blog*. New York: McGraw-Hill, 2008.

Periodicals

You may click "Periodicals" or use the E-Journal Lookup function on the home page to find the following periodical.

- Digital Web Magazine

Other References

The following resources may be found **outside** of the ITT Tech Virtual Library.

Web sites

- The Absolute Beginners Guide to Joomla! <http://docs.joomla.org/Beginners> (accessed 8/19/10)
Introduces beginners to Joomla! fundamentals.

- The Official Joomla! Documentation Site

<http://docs.joomla.org> (accessed 8/20/10)

Provides links to documentation for many kinds of users.

- The Official Joomla! Forum

<http://forum.joomla.org/> (accessed 8/20/10)

Discussion forums on various Joomla! topics

- The Joomla! Developers Documentation <http://docs.joomla.org/Developers> (accessed 8/20/10)
Articles, tutorials, and reference material for developers.

- The Joomla! Administrators Documentation <http://docs.joomla.org/Administrators> (accessed 8/20/10)
Information about managing sites, users, and more.

- The Joomla! Web Designers Documentation http://docs.joomla.org/Web_designers (accessed 8/20/10)
Articles, tutorials, and forums for Joomla! designers.

- The Joomla! API

<http://api.joomla.org/> (accessed 8/20/10)

Reference information on the Joomla! 1.5 API.

- Joomla! Developers Tutorials <http://developer.joomla.org/tutorials.html> (accessed 8/20/10)
Links to various Joomla! tutorials.

- Joomla! 1.5 Template Tutorials http://docs.joomla.org/Joomla!_1.5_Template_Tutorials_Project (accessed 8/20/10)
Wiki page about using Joomla! templates.

All links to Web references outside of the ITT Tech Virtual Library are always subject to change without prior notice.

Course Evaluation and Grading

Evaluation Criteria Table

The final grades will be based on the following categories:

CATEGORY	WEIGHT
Assignments	10%
Labs	30%
Project I	10%
Project II	10%
Project III	10%
Quizzes	10%
Final Exam	20%
Total	100%

Note: Students are responsible for abiding by the Plagiarism Policy.

Grade Conversion Table

The final grades will be calculated from the percentages earned in the course, as follows:

A	90–100%	4.0
B+	85–89%	3.5
B	80–84%	3.0
C+	75–79%	2.5
C	70–74%	2.0
D+	65–69%	1.5
D	60–64%	1.0
F	<60%	0.0

(End of Syllabus)