WD104 – Fundamentals of Web Scripting

Syllabus

COURSE DESCRIPTION

This course introduces students to common web scripting languages. Students will write valid scripting code and incorporate scripts into web pages. They also will learn how to use scripting languages to create dynamic web pages.

***Prerequisite**: DD170*
Clock Hours: 50 Lecture Hours | 50 Lab Hours | 50 Out-of-Class Work Hours (12.5 Hours Weekly)

Semester Credit Hours: 4

INSTRUCTOR: TBA

*(Instructors, please fill-in your name here):*_____

COURSE COMPETENCIES

In this course, students will:

Write valid code for mobile and Web devices.

- ✓ Identify and utilize techniques for validating code.
- ✓ Analyze web sites in common web browsers and mobile devices.

Use the proper syntax for common scripting languages.

- ✓ Identify scripting languages used for web site development.
- ✓ Explain “syntax” in the context of a web site.
- ✓ Compare and contrast common web scripting languages.

Create dynamic web pages using common scripting languages.

- ✓ Identify the underlying concepts of web scripting.
- ✓ Define “object-oriented programming”.
- ✓ Write scripts to add functionality to a web site.
- ✓ Embed scripts into web page code.

Analyze a web site concept to determine the scripting language(s) needed to build the site.

- ✓ Describe common web programming paradigms.
- ✓ Identify common web frameworks.
- ✓ Differentiate between server-side and client-side web applications.
- ✓ Determine the functionality that needs to be included in a web site.

Research and utilize current web technology trends.

- ✓ Show continual desire to learn new and emerging web technologies.
- ✓ Use current versions of markup and scripting languages.

INSTRUCTIONAL METHODS

- Lectures
- Discussions
- Demonstrations
- Reading Assignments
- Writing Assignments
- Homework Assignments
- Project Assignments

TEXTS, MEDIA, & RESOURCE REQUIREMENTS

Required Texts:

Wyke-Smith, C. (2010). Scriptin' with JavaScript and Ajax: A Designer's Guide. Berkeley, CA: New Riders.
ISBN: 9780321572608

Smith, D., & Negrino, T. (2012). JavaScript. Berkeley, CA: Peachpit Press.
ISBN: 9780321772978

Reading Level:

Title	Author	Publisher	Level	Method
Scriptin' with JavaScript and Ajax: A Designer's Guide.	Wyke-Smith, C.	New Riders	10.7	Flesch-Kincaid
JavaScript Visual Quick Start Guide	Smith, D., & Negrino, T.	Peachpit	5.8	Flesch-Kincaid

Required Media:

Whiteboard, Projector.

Resource Requirements:

Student Art Kit, Color Printer, Adobe Creative Suite 5 Master Collection (2010), Microsoft Word 2010 (2010), Komodo Edit

GRADES

The following represents the basis upon which your course grade will be calculated and determined:

Homework	15%
Classwork	15%
Exams	15%
Projects	55%

Computation of Grade

A =	90% to 100%	of total cumulative points
B =	80% to 89%	of total cumulative points
C =	70% to 79%	of total cumulative points
F =	Less than 70%	of total cumulative points

STUDENT: TEACHER RATIO

Maximum class capacity and student to teacher ratio for lecture and lab is 18 to 1.

COURSE OUTLINE

A unit in the course outline is defined as 25 contact hours.

UNIT 1:

➢ Housekeeping

- **Class Introductions:** Students introduce themselves to each other and to the instructor; Instructor introduces themselves to the class.
- **Syllabus Review:** Instructor goes over syllabus and explains requirements for homework, reading, assignments, and projects.
- **Classroom Expectations:** Instructor explains Policies and Procedures and expectations of the students.
- **Lab/Project/Homework Assignments:** Assignments are due upon the date specified by instructor

➢ Unit Lecture/Demonstrations

- Lecture 1
  - Lecture over: Getting Acquainted with JavaScript
  - Lecture over: Start Me Up!
- Lecture 2
  - Lecture over: JavaScript Comes of Age
  - Lecture over: JavaScript Basics
- Lecture 3
  - Lecture over: Your First Web App
- Lecture 4
  Lecture over: Recap learning outcomes

➢ Unit Lab/Assignments

- Lab Assignments
  - Assignment 1, 2, 3 and 4
    (Refer to student Lab Assignment handout for instructions)

➢ Unit Projects

- Project 1 Assigned:
  (Refer to student Project handout for instructions)

➢ Unit Homework

- Develop Thumbnails and Sketches for Project 1
- Complete Lab/Assignments
- Study materials for project application and Exam 1
- Reading Assignments
  - Reading Assignment 1, 2, 3 and 4
    (Refer to student Reading Assignment handout for instructions)
- Homework Assignments
  - Homework Assignment 1, 2, 3, 4 and 5

- *(Refer to student Designer's Homework Booklet for instructions)*

➢ Unit Peer Review

- None

➢ Unit Exam

- Issue Exam 1 to students
  - Review Exam 1 with students

UNIT 2:

➢ Unit Lecture/Demonstrations

- Lecture 1
  - Lecture over: Working With Images
  - Lecture over: Windows and Frames
- Lecture 2
  - Lecture over: Form Handling
  - Lecture over: Forms and Regular Expressions
- Lecture 3
  - Lecture over: Handling Events
  - Lecture over: Events
- Lecture 4
  Lecture over: Recap learning outcomes

➢ Unit Lab/Assignments

- Lab Assignments
  - Assignment 5, 6 and 7
    (Refer to student Lab Assignment handout for instructions)

➢ Unit Projects

- Project 2 Assigned:
  (Refer to student Project handout for instructions)

➢ Unit Homework

- Develop Thumbnails and Sketches for Project 2
- Complete Lab/Assignments
- Study materials for project application and Exam 2
- Reading Assignments
  - Reading Assignment 4, 5 and 6
    (Refer to student Reading Assignment handout for instructions)
- Homework Assignments
  - Homework Assignment 6, 7, 8, 9 and 10
  - *(Refer to student Designer's Homework Booklet for instructions)*

➢ Unit Peer Review

- Project 1

➢ Unit Exam

- Issue Exam 2 to students
  - Review Exam 2 with students

UNIT 3:

➢ Unit Lecture/Demonstrations

- Lecture 1
  - Lecture over: JavaScript and Cookies
- Lecture 2
  - Lecture over: Objects and the DOM
- Lecture 3
  - Lecture over: Making Your Pages Dynamic
  - Lecture over: Applied JavaScript
- Lecture 4
  Lecture over: Recap learning outcomes

➢ Unit Lab/Assignments

- Lab Assignments
  - Assignment 8, 9 and 10
    (Refer to student Lab Assignment handout for instructions)

➢ Unit Projects

- Project 3 Assigned:
  (Refer to student Project handout for instructions)

➢ Unit Homework

- Develop Thumbnails and Sketches for Project 3
- Complete Lab/Assignments
- Study materials for project application and Exam 3
- Reading Assignments
  - Reading Assignment 7, 8 and 9
    (Refer to student Reading Assignment handout for instructions)
- Homework Assignments
  - Homework Assignment 11, 12, 13, 14 and 15
  - *(Refer to student Designer's Homework Booklet for instructions)*

➢ Unit Peer Review

- Project 2

➢ Unit Exam

- Issue Exam 3 to students
  - Review Exam 3 with students

UNIT 4:

➢ Unit Lecture/Demonstrations

- Lecture 1
  - Lecture over: Introducing AJAX
  - Lecture over: Toolkits, Frameworks and Libraries
  - Lecture over: Frameworks
- Lecture 2
  - Lecture over: Designing with jQuery
  - Lecture over: Building on jQuery
  - Lecture over: Bookmarklets
- Lecture 3
  - Lecture over: Reinforce/Demo jQuery skills
- Lecture 4
  - Lecture over: Recap learning outcomes

➢ Unit Lab/Assignments

- Lab Assignments
  - Assignment 11, 12 and 13
    (Refer to student Lab Assignment handout for instructions)

➢ Unit Projects

- Project 4 Assigned:
  (Refer to student Project handout for instructions)

➢ Unit Homework

- Develop Thumbnails and Sketches for Project 4
- Complete Lab/Assignments
- Study materials for project application and Exam 4
- Reading Assignments
  - Reading Assignment 10, 11 and 12
    (Refer to student Reading Assignment handout for instructions)
- Homework Assignments
  - Homework Assignment 16, 17, 18 and 19
    (Refer to student Designer's Homework Booklet for instructions)

➢ Unit Peer Review

- Project 3 and Project 4

➢ Unit Exam

- Issue Exam 4 to students
  - Review Exam 4 with students

EXAMS

There are 4 unit exams for this course, each exam is worth 25 points, and consists of 25 multiple choice or true/false questions, essay questions and problem solving questions, and will cover the material covered within the unit.

LAB/ASSIGNMENTS

Each assignment is worth 10 points. Each assignment covers the material presented in class.

PROJECTS

There are 4 projects for this course, one for each unit. Each project is worth 125 points and is due on a weekly basis on the last day of the current Unit (week).