INFO 3776:
Client Side Scripting Techniques

Spring Semester 2019 – CRN 21163
5:10pm - 7:25pm Mon/Wed Meshel Hall 303

Course Syllabus and Objectives

Instructor: James W. Dittrich, M.S., M.C.I.S.
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Prerequisites

CSIS 1570: Web Graphics Programming (not yet offered), and CSIS 2605/2610 Fundamentals of Programming and Problem Solving 2/Programming and Problem Solving. Note that this particular course offering requires no previous experience with HTML5/CSS3/JavaScript.

Course Description

This course provides students with a foundation for Website development. This class will cover the technical elements of writing HTML5, CSS3, the aesthetics of successful Web page design, and techniques for maximizing web page usability. You'll learn the basics of JavaScript to enhance your web site design and learn about embedding multimedia files for greater interactivity and engagement.

Students will also examine concerns when choosing a Web host and learn how to build a Web site that is properly indexed in search engines, as well as address best practice and accessibility concerns. The course will also introduce students to the use of Web design & Web authoring tools.

Honors Contracts

Honors contracts can be made available by the instructor for this course in order to receive Honors credit. You will have the opportunity to to set your own level of learning and study material in greater depth than what is being covered in the standard curriculum. Please consult the Honors College for the forms required to set the terms of the contract. At the conclusion of the course, you should anticipate extra meetings to discuss your learning with the instructor, and present a final extra paper, project, or other assignments in order to fulfill the specific requirements of the contract. If those requirements are not met at the end of the term, you will only receive the usual credit for the standard course.

Major Instructional Areas

- Web protocols
- Domain names
- Web browsers and Web servers
- Hypertext Markup Language (HTML5)
- Images
- Extensible Hypertext Markup Language (XHTML)
- Cascading Style Sheets (CSS3)
- Tables and forms
- Web hosts & Search Engine Optimization (SEO)
- Dynamic, Database-driven Web Applications
- JavaScript and major JS libraries

Course Goals and Learning Objectives

- Define Hypertext Markup Language (HTML5), eXtensible Hypertext Markup Language (XHTML), and the standards used for Web development.
- Describe the five phases of the Web development life cycle
- Identify methods utilized to promote and market a Web site.
- Demonstrate the use of HTML5, Cascading Style Sheets (CSS3), and source code editors to insert images, create ordered, unordered, and definition lists, create text and image links, and format text using alignment, bold, different fonts, sizes and color in Web pages of a Web site.
- Create forms using Form Object, and program form fields, radio buttons, check boxes, submit and reset buttons, and groups of different but related controls.
- Implement tables by using rowspan and colspan attributes, adding background color to the rows and cells, inserting images into tables and cell, and altering spacing between and within cells using cellspacing and cellpadding attributes.
- Plan, design, implement, and create pages of a Web site using HTML5, CSS3, JavaScript, Adobe and equivalent Free and Open Source Software tools, and a plain text editor such as Notepad++ or Sublime Text 3.
- Understand how a Web-authoring tool is used to create Web pages, view and modify existing Web pages, or view and modify Web pages created by using other tools.
- Incorporate video, audio and other multimedia technologies into existing Web pages
- Increasing interactivity and usability through the use of embedded scripts, external scripts, and JavaScript frameworks such as jQuery and Bootstrap
- Understand the best practice characteristics that enhance the usability of a Website, including accessibility and ADA (Federal Section 508) compliance
- Understand the basic principles of modern, database-driven Web application development

Instructional Methods

The Web has become an integral part of our lives. Many of you may be curious about the technologies that make Websites work. This course will begin with a brief discussion on how the Internet works and will introduce key terminology involved in Web technologies and applications. The course will also explain how to use HTML5 to display content on a Web page. You will examine how to add visual elements and styles to your Web pages, which includes controlling the look of a Website by using cascading style sheets (CSS3). In addition, you will learn how to design a Web site that contains multiple pages, how to add tables to a Web site, and how to design forms. The course will

also cover fundamental issues related to practical matters, e.g., choosing a host and registering a domain name.

Classroom activities will allow you to participate on a team to identify the structure of a Web page or create a visual design. You will also be expected to complete assignments and labs each week.

The course project will encompass skills attained throughout the course covering aspects such as HTML, Semantics, CSS as well as design, layout, structure and creativity. You will implement your design using HTML5, CSS3, and JavaScript. Rubrics will be provided for each assignment/lab and the final project.

Communications between class sessions will be conducted through e-mail. Please check your email regularly.

Please see me if you are having a problem with some aspect of the course, but also keep in mind that office hours are not only a time to address problems. I'd be happy to talk with you about your areas of special interest, give general pointers, help brainstorm topics for the final project, etc.

Course Texts / Materials

Required

- Castro, E. & Hyslop, B. *HTML5 and CSS3, 8th Edition: Visual Quickstart Guide*. ISBN-13: 978-0-321-92883-2

- Negrino, T. & Smith, D., *JavaScript, 9th Edition: Visual QuickStart Guide* ISBN-13: 978-0-321-99670-1

Recommended

- Meyers, E.A. *CSS Pocket Reference, 4th Edition*. O'Reilly Media. ISBN-13: 978-1449399030
- USB 3.0 flash drive.

Other References

- The W3C Markup Validation Service: http://validator.w3.org
- W3Schools: http://www.w3schools.com/ is an excellent source for concrete examples of HTML and CSS concepts.
- Sublime Text Editor: http://www.sublimetext.com/
- Lorem Ipsum generator: http://www.lipsum.com/
- Font Squirrel Webfont generator: http://www.fontsquirrel.com/
- CSS Tricks by Chris Coyier: https://css-tricks.com/snippets/
- Bootstrap framework: http://getbootstrap.com/
- jQuery: https://jquery.com
- jQuery UI: http://jqueryui.com/
- jsDelivr CDN: http://www.jsdelivr.com/
- D3.js: https://d3js.org/
- HAML: http://haml.info/
- SASS: http://sass-lang.com/
- SQLite: https://www.sqlite.org/index.html

All Web links are always subject to change without prior notice. Search Engines are your friend.

General Course Policies and Guidelines

Course Evaluation:
Final course grades will be based on the following categories:

Category	Weight	Assessment
Class Participation and Discussion	10%	Normative
Labs / Assignments (6)	18%	Criterion
Course Project	42%	Criterion
Mid-Term Exam	15%	Criterion
Final Exam	15%	Criterion

A ***norm-referenced assessment*** is a type of evaluation that yields an estimate of the position of the assessed individual within a predefined population (as compared with others in the class)

A ***criterion-referenced assessment*** is one that provides for translating and evaluation scores into a statement about the level of mastery demonstrated by the learner when compared to specified subject matter criteria.

Grading:
The course grade will be based on the CSIS Department Scale:

- 90% will guarantee at least an “A” for the course,
- 80% will guarantee at least a “B” for the course,
- 70% will guarantee at least a “C” for the course, and
- 60% will guarantee at least a “D” for the course.

Faculty Evaluations:
Evaluations are made available online in the latter half of the Semester. Your feedback, both positive and negative, is both welcome and absolutely crucial to continuously improving this course offering.

***Important Dates for Spring 2019 Semester*:**

01/14/19 Spring Semester Begins
01/21/19 Legal holiday – University closed
01/16/19 Last day to add or change a grading option – Full Term
01/27/19 Last day to withdraw and receive a 100% refund or reduction in charges – Full Term
03/11/19 Spring Break begins
03/18/19 Spring Break ends – classes resume
03/27/19 Last day for withdrawing with a grade of "W" – Full Term
05/06/19 Final Exams Begin
05/11/19 Spring Semester Full Term Ends
08/04/19 Last day for completing an incomplete grade ("I") for Spring 2019

Tentative Weekly Calendar and Topics

Week	Topic	Readings	Assignment
1/14	Introducing the World Wide Web – Web Page Building Blocks	Castro: Intro, Ch 1-2	
1/21	***1/21: University Closed (MLK Day)*** Basic HTML Structure, the Box Model	Castro: Ch. 3	
1/28	Working with Text	Castro: Ch 4	
2/4	Working with Images & Links *Distribution of the Final Project*	Castro: Ch 5-6	Lab 1
2/11	CSS Building Blocks & Style Sheets	Castro: Ch 7-8	
2/18	CSS Styling & Selectors	Castro: Ch 9	
2/25	Formatting Text with CSS Styles	Castro: Ch 10	Lab 2
3/4	CSS Layout & Web Fonts, Usability Testing **Midterm Exam Wednesday, 3/6**	Castro: Ch 11-13	
3/11	**SPRING BREAK - University Closed**	Relax	Have Fun!
3/18	Enhancements with CSS3, Introduction to Bootstrap	Castro: Ch 14	
3/25	Lists, Using List Items as Navigation Items	Castro: Ch 15	Lab 3
4/1	Forms	Castro: Ch 16	Lab 4
4/8	Tables & Scripting, jQuery and JavaScript Frameworks	Castro: Ch 18-19	Lab 5
4/15	Video, Audio, & Other Multimedia Technologies	Castro: Ch 17	Lab 6
4/22	Testing, Debugging, and Publishing Websites Survey of Database-driven Web app development, HAML, SASS	Castro: Ch 20-21	
4/29	Project Presentations, Review		
5/6	**Final Exam May 6 (Monday) 1730-1930**		

Due Dates and Late Assignments:
An assignment (including programs and projects) is late if it is not IN MY POSSESSION (either as hardcopy or electronically) by midnight on the due date. Late assignments may be penalized at some percentage (usually 10%) per day late (the weekend counts as one day), and no credit will be given for assignments turned in after solutions have been handed out. Extenuating circumstances (such as nonfunctional labs) may be recognized if they become a chronic problem.

Students will not be penalized for late work caused by absence due to unavoidable or legitimate circumstances. Such circumstances include, but are not necessarily limited to, verified illness, participation in athletic events or other group activities sponsored by the University, serious family emergencies, subpoenas, jury duty, military service and religious observances. It is the responsibility of the student to notify the instructor of such circumstances as far in advance as possible. It is also the responsibility of the student to contact the instructor to received information related to the missed work and submission requirements.

For a course like this, keeping up with the assignments is particularly important, as current topics tend to build off of the previous topics (in other words, if you skip an assignment, you will probably still have to learn the material for the next assignment anyway). In addition, the best way to study for an exam in a programming course is to have written the related source code.

Attendance:
Class attendance is optional, except for students who are receiving VA benefits, or in situations (such as group meetings) where your absence would be detrimental to other students in a group.

However, missing class is *not* an acceptable excuse for failure to complete required material on time. Every lecture will cover material related to assignments and exams, and in general the grades in programming classes are directly related to the number of lectures attended. Material that is presented in class will not be covered again outside of class – if you miss class, it is up to you to find out what was covered and to get the notes from someone else.

Exams:
Exams will cover material presented in class and corresponding required sections in the text, and will also usually relate to material covered in the homework. Makeup exams are allowed, but only for compelling and verifiable reasons. I need to be informed as soon as possible if you need to take a makeup (ideally, *before* the exam is given), and I reserve the right to refuse if too much time has passed since the exam, or if no compelling reason is given.

Office Hours:
The best way to get help with an assignment is to stop by my office during office hours. Many problems that you might get "stuck" on for hours can be fixed with my help within a few minutes. If you are having problems with a project, be sure to bring a copy of the source code (either on your laptop, a flash drive, or a printout).

Make things easy on yourself by being proactive. The earlier that you come to me with a question, the better off you will be; if you wait until the due date to ask questions, you will be very unlikely to finish the project on time!

Email:
The best way to reach me with questions outside of office hours is email (james.dittrich+YSU@gmail.com). I will attempt to answer within 48 hours (except for holidays, weekends, and breaks). There are some things that you can do to help out:

- Include your **name** and **course number** in the subject (otherwise it might not make it through the spam filters).
- Be as **specific as possible** about the question or problem.
- If it is a problem with a project, be sure to attach it. However, depending on the type of project and where I happen to be, I may not be able to help right away (office hours are usually better for getting help with projects).
- Most assignments that you write for the class will be submitted via email. When submitting assignments by email, do the same things:
- Include your **name**, **course number**, and the **number of the assignment** in the subject.
- Attach all code/documents. If there are issues with the size/number of attachments, please use a zip utility to compress into a single file.

Academic Honesty:
Academic honesty is both expected and required. HELPING fellow students is acceptable, and is actually a very good way to learn the material (particularly with debugging projects). COPYING is NOT acceptable, *laughably* easy to detect, and will result in loss of credit for the assignment, and possibly failure of the course. Follow these guidelines:

- All work on the *design* and *basic coding* phase of a project should be your own. That is, sitting in a group writing a project or assignment together is considered to be copying (unless this is specifically allowed as part of a group project).
- **If you *receive* help** with debugging part of an assignment, then you must acknowledge that help in the documentation of that section (your grade will not be affected unless otherwise announced).
- **If you *give* help** to another student, then it is your responsibility to make sure that they fully understand the problem and solution – just giving someone code is worse than no help at all.
- Under NO circumstances should code be copied from one students file to another (it's a lot easier to detect than you might think).

The bottom line: if you are not sure how to approach a problem, or are stuck at some point, **SEE ME FIRST FOR HELP**.

Unless specified otherwise, all exams are **closed book** (this includes notes, phones, etc.). Any suspected cheating on an exam will result in failure for the course.

As outlined in The Student Code of Conduct, all forms of academic dishonesty are prohibited at Youngstown State. This includes plagiarism, the unauthorized use of tools or notes in taking tests or completing assignments, fabrication of data or information used for an assignment, working with others without permission from the instructor, and more. A student who is believed to have violated the academic integrity policy will meet with the instructor to discuss the allegations. The student may accept responsibility for the violation and any sanctions selected by the instructor, or they have the right to ask for a hearing before a hearing panel. The full Academic Integrity policy can be found in

Article V of The Student Code of Conduct, while further information on University procedures for alleged academic integrity violations can be found in Article V.

Classroom Etiquette:
Your fellow students deserve an environment without disruptions to learning. Examples include:

- Talking during lecture
- Printing in labs during lectures
- Texting/social media
- Web surfing
- Cell phone use
- Arriving at class significantly late/leaving class early
- Eating or drinking (prohibited in our labs)

On the other hand, asking *questions* during lecture is very strongly *encouraged*. If you are confused about a topic, chances are that many other people are as well!

Non-Discrimination Policy:
Youngstown State University does not discriminate on the basis of race, color, national origin, sex, sexual orientation, gender identity and/or expression, disability, age, religion or veteran/military status in its programs or activities. Please visit our accessibility website for contact information for persons designated to handle questions about this policy.

Diversity:
I am deeply committed to the following statement (from https://heterodoxacademy.org/about-us):

> "I believe that university life requires that people with diverse viewpoints and perspectives encounter each other in an environment where they feel free to speak up and challenge each other. I am concerned that many academic fields and universities currently lack sufficient viewpoint diversity. I support viewpoint diversity, mutual understanding, and constructive disagreement in my academic field, my institution, my department, and my classroom."

Incomplete Grades:
Incomplete grades are strongly discouraged. However, an incomplete grade may be assigned under the following conditions:

- The student must request in writing that an incomplete grade be assigned.
- The student's previous work in the course must have been satisfactory.
- The reason(s) must be beyond the student's control, and deemed justifiable by the instructor.

Insufficient time is NOT a justification for an incomplete. Also note that all incompletes must be made up within two months; otherwise, they automatically revert to an F.

Disability Services:
In accordance with University procedures, if you have a documented disability and require accommodations to obtain equal access in this course, please contact me privately to discuss your specific needs. You must be registered with the Center for Student Progress Disability Services,

located at Kilcawley Center 2082, and provide a letter of accommodation to verify your eligibility. You can reach CSP Disability Services at 330-941-1372.

Academic Support:
The Marion G. Resh Center for Student Progress is a resource on Campus established to help students successfully complete their university experience. Please phone (330) 941-3538 or visit the Center for assistance in tutoring or for individualized assistance with social and academic success. The main Center is located in Kilcawley West below the bookstore.

The descriptions and timelines contained in this syllabus are subject to change at the discretion of the Professor.