ADST Web Programming 10

Course Syllabus

In this course you will learn computer coding and web design. You will have an opportunity to improve your ability to think abstractly and to work within a logical framework that is outside your regular mental processes. As you learn computer programming, you will learn how to break problems down into many interrelated components. You will also focus on the principles of design, paying attention to the aesthetics of what you create.

Course Content

- design opportunities
- relationship between web structure and content, HTML, style and design, cascading style sheets (CSS), and website functionality and interactivity
- advantages/disadvantages of websites and content management systems (CMS)
- website design planning tools
- HTML text editing software, WYSIWYG HTML editors user interface (UI) and user experience (UX)
- World Wide Web Consortium (W3C) standards and responsive and optimized web design
- domain and hosting options
- copyright, Creative Commons, fair use protocols for media and content, and ethics of cultural appropriation
- accessibility and functionality in web design
- writing for the web
- principles of creative web design
- security and privacy implications
- principles of database creation and management
- career options in web development and the interpersonal skills necessary for success in this field

Curricular Competencies

Applied Design

Understanding context

- Engage in a period of research and empathetic observation

Defining

- Identify potential users, societal impacts, and other relevant contextual factors for a chosen design opportunity
- Identify criteria for success, intended impact, and any constraints or possible unintended impacts

Ideating

- Take creative risks in generating ideas and add to others' ideas in ways that enhance them
- Screen ideas against criteria and constraints
- Collaborate on idea generation and maintain an open mind about potentially viable ideas

Prototyping

- Identify and use sources of inspiration and information
- Choose a form for prototyping and develop a plan that includes key stages and resources
- Prototype, making changes to tools, materials, and procedures as needed
- Record iterations of prototyping

Testing

- Identify sources of feedback
- Develop an appropriate test of the prototype
- Conduct the test, collect and compile data, evaluate data, and decide on changes
- Iterate the prototype or abandon the design idea

Making

- Identify and use appropriate tools, technologies, materials, and processes for production
- Make a step-by-step plan for production and carry it out, making changes as needed

Sharing

- Decide on how and with whom to share their product and processes
- Demonstrate their product to potential users, providing a rationale for the selected solution, modifications, and procedures, using appropriate terminology
- Critically evaluate the success of their product, and explain how their design ideas contribute to the individual, family, community, and/or environment
- Critically reflect on their design thinking and processes, and identify new design goals

- Assess ability to work effectively both as individuals and collaboratively in a group, including ability to share and maintain an efficient cooperative work space

Applied Skills

- Demonstrate an awareness of precautionary and emergency safety procedures in both physical and digital environments
- Identify the skills needed in relation to specific projects, and develop and refine them

Applied Technologies

- Choose, adapt, and if necessary learn more about appropriate tools and technologies to use for tasks
- Evaluate impacts, including unintended negative consequences, of choices made about technology use

Learning Materials and Assessment

All assignments, resources and assessment rubrics will available at

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transformativesuccess.ca
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Content:

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01 Imaging - Necessary Proficiencies
02 HTML - HTML Skills Intro/Review Project
03 JavaScript - Introduction
04 JavaScript - Variables
05 JavaScript - Conditional Logic
06 JavaScript - Loops
07 JavaScript - Functions
08 JavaScript - Functions and User Input
09 JavaScript - Controlling a single style value with a function
10 JavaScript - Meso Project
11 JavaScript - Validate User Input Using Arrays
12 JavaScript - Inserting User input into HTML
13 JavaScript - Wellness Survey via User Input, HTML Insertion
14 JavaScript - Applied Design Collaborative Project
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Expectations

- Respect Yourself and Others
- Always demonstrate respectful behavior
- Respect Effort and Learning

- Respect your Community and the Environment
- Attend class on time