

**Beginning Web Design:
Creating a First Web Page
Instructional Design Project #3**

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Reflection Paper

Instructional design can be thought of as preparing for a photo shoot. While the explosive growth of digital camera choices has made the act of pointing and shooting much easier, it still requires reflection and planning to take professional level photos. Many teachers can walk into a classroom with an idea of what they want to teach, and then improvise. With a classroom full of faces and immediate feedback it is easy to modify instruction on the spot. However, for a photographer looking for shots that people can hang on their walls or an instructional designer creating a course that can be run without their input, it is important to keep the end goals in mind during the entire process. A plan must be thought out in advance, whether it covers course assessment or location lighting, to stay focused on the stated goals.

An online course and a photo shoot must both incorporate evaluation into the process, both formative and summative. A photographer using a digital camera can review photos as they are being taken, to decide how many more need to be shot, and will also open all the photos at the end of the shoot to see which ones should be discarded and which ones should go into the final project portfolio. He may also decide certain poses can be used as models for future photo shoots. In the same way, a designer will evaluate instruction as it is being created, and will also re-evaluate at the end of instruction to decide what didn't work, and what should be kept for future instruction. Both a photographer and an instructional designer will often seek input from outsiders, whether it is a subject matter expert, a client, or another photographer or designer.

In this course I've learned a lot about the planning and pre-evaluation that should be incorporated into any instruction. Gustafson & Branch's (2002) outlines of the various ID models that are available, particularly the product oriented models in chapter 4, are probably the most useful thing we read this semester since it acknowledges the different requirements a

designer may have in different instructional situations. I do teach face-to-face classes, but I am also designing an online version of my class and may work on a course that will be taught by other instructors. Each of these situations calls for a slightly different approach to design. Choosing a model to use in ID Project #1 and then applying it was a good chance to practice the skills I will be using in my own work.

Project #2 & #3 were more challenging because they focused more on delivering a full lesson, rather than just the plan we did in Project #1. However, requiring a deeper application of what we learned was again a way for me to practice the skills I feel will help me in developing my own courses. I really appreciated the perspective provided by Smith & Ragan (2005) on the balance required in producing any design plan. Many teachers throw around terms like “learner-centered” and “supplative learning” as if it is the only way to teach. Smith & Ragan emphasize the need to apply the relevant technique, and provide ways to analyze a learning situation to determine what might be the best way to design instruction. They also remind us that there isn't always a right answer, and that no one plan will fit every instructional situation. I think they provide a realistic and useful look at the design process.

The thing I appreciated the most in the Smith & Ragan (2005) book and the information that will most affect my future teaching is the section on instruction for different learning domains found in chapters 8-15. Being a first year teacher, I found this to be the most helpful. I've certainly read many books on learning theories and general teaching strategies but found that they are mostly applicable to teaching traditional subjects such as math or science, and in traditional settings such as high school or college.

My web design class is a professional certification course taught to adult learners and does not easily fit the mold of other academic subjects. Smith & Ragan (2005) provided useful methods for teaching many different intellectual domains, and much of the information will prove helpful to me in future classes that I teach. It even opened my eyes to

incorporating skill instruction I wasn't sure I could teach, such as problem solving and attitudes. I will definitely be including this book as a resource for the new courses I am planning and it now has a prominent place on my shelf.

References

- Gustafson, K.L., & Branch, R.M. (2002). *Survey of instructional development models (4th ed.)*. Syracuse, NY: Information Resources Publications, Syracuse University.
- Smith, P.L., & Ragan, T.J. (2004). *Instructional design (3rd ed.)*. Hoboken, NJ: John Wiley & Sons.

Part 1: Topic

1a: Learning Goal

The target audience is adults with a high school education. After instruction they will be able to create a basic HTML page, containing at least 5 different HTML elements, and open an FTP connection to upload the file to a live server.

1b: Audience

Learners will consist of women between the ages of 22-34. All have a high school education, and some have a college degree. All have enough computer experience to be comfortable checking email and logging in to an online course system.

1c: Rationale

With the growth of online learning, many potential students now expect to have the flexibility of attending an online class so they can further their education while still working and raising children. Compuskills Training Center caters to the religious population in Israel, a population that often does not have Internet at home and has less computer experience than the general population. A concern was raised that online learning might prove too difficult for this population, so it was determined that Compuskills would offer an introductory lesson consisting of the basic tasks students would have to master in order to be able to complete the web developer course online.

The course will consist of supplantive instruction methods. Students in this course are considered novices for this content area and students in previous face-to-face (F2F) classes have shown a high level of discomfort when first learning these tasks. Therefore, supplantive methods will be used to scaffold the learning for students.

The major instructional strategy used for this lesson is procedural. Students will be learning steps to follow in order to accomplish a specific task. The task has to be done according to the correct steps in order to work correctly. Students will also be shown how to

evaluate whether they've completed the steps correctly. There is some problem solving when things do not work as expected, but that is a matter of reviewing a set checklist so that also falls under the category of procedural learning, rather than problem solving.

Part2: Analysis Report

2a: Needs Analysis

Currently, training is provided for adult women who want to become certified as web developers at a computer training center. Enrollment has dropped over the past 2 years and the center's administrator would like to increase student registration for the coming academic year.

Many women who would like to take the course either live too far from the training center or have small children at home and cannot arrange their schedules around the required classes. It was determined that a significant number of these women would be interested in taking an asynchronous online class in order to receive training. Adding an online course to the current course offerings would serve to increase overall registration at the training center.

A concern was raised that students, although interested in the conveniences of an online course, might lack the necessary motivation and maturity to follow through and successfully complete the course. It was decided to offer a sample 3-hour lesson to see if it would be worth developing the entire course as an online option. If 85% of the class successfully completed the sample class it can be assumed they are ready for online learning and the entire web developer course would be converted to an online course.

2a.1: Survey

The needs analysis survey consists of 15 questions, to be filled out via Google Documents form. The survey was sent to 15 people, either current Compuskills students considering taking another class or potential students who want to sign up for the online class. All respondents are part of the target population for this course. The needs analysis survey can be viewed online at <http://tinyurl.com/idsurvey2> and the full text can be viewed in Appendix A.

2a.2: Survey Analysis

The survey was sent to 15 respondents, all of whom responded. 2/3 of respondents said they preferred a F2F class if given the choice, indicating that the online course is being taken for convenience, but is not a preference. It was noted that peer interaction and creating a feeling of community would be very important for this course and group activities should be incorporated into the class.

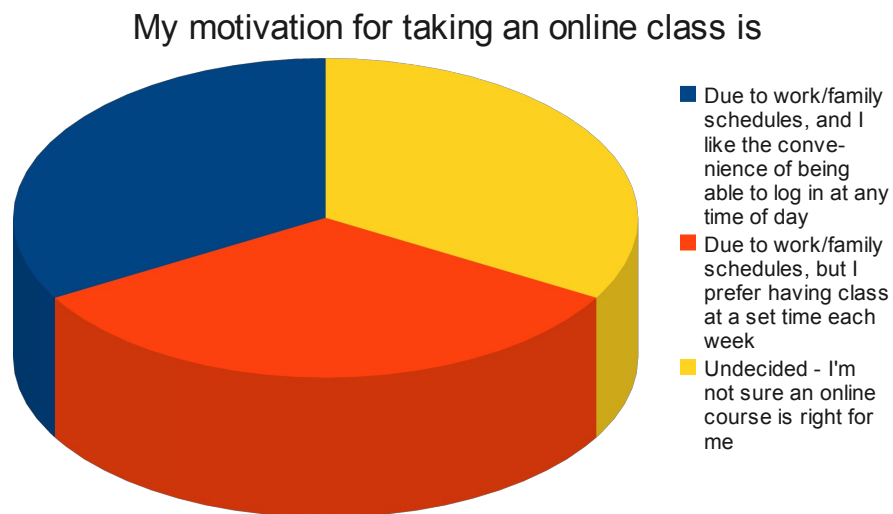
Nearly all respondents indicated that they have access to a relatively recent computer and high speed Internet at home, so hardware is not a concern. 13 out of 15 already go online several times a day, so there is no concern they will forget to check course related email or other notifications.

| Which of the following are you very comfortable doing? | % of positive responses |
|---|--------------------------------|
| Opening a webpage based on an address given in written format | 100.00% |
| Create folders to organize files | 86.67% |
| Creating Word and Excel files | 93.33% |
| Filling out a form online and submitting it | 80.00% |
| Sending attachments via email | 93.33% |
| Composing and sending emails using an online email program | 100.00% |

There was a high number who responded positively when asked about doing common activities online, such as email or reading news articles, and although there was a much smaller response for less common activities such as social networking it seemed that overall there was a high comfort level performing common tasks online.

10 respondents answered that they think an online course will require more time than a traditional course, while the other 5 thought it would be about the same. No one indicated they were interested in an online course because it would be easier, so it seems they have appropriate expectations about work load. Nearly all were nervous though about the lack of F2F interaction among students, and between students and instructors, but they said they

thought it would be OK.



There were varied responses about motivation for taking an online course, so the instructor will have to be careful to take this into account. They all indicated a high level of time management, reading ability, self motivation, and ability to follow instructions, but a lower level of enjoyment learning independently. The instructor should be careful to make sure all students feel a high level of support from the instructor, and should model everything through videos and sample projects for the students. In general, it is felt that this population expects a lot of “hand holding” in a computer class, so this needs to be carried over to the online course.

2b.1: Learning Context

The learning modules will be created by the course instructor either at his or her home or in the training center. Modules will be viewed by students at their own homes using their own equipment. All students will be required to have Windows XP or Vista installed on computers that are less than 3 years old and have a broadband Internet connection available. They will have to verify that they have Notepad, Core FTP and Firefox installed on their computers.

2b.2: Transfer Context

Learners will apply the skills they have learned in the sample class to the rest of the online web developer course. The sample lesson will focus on basic skills for online learning such as creating new documents, organizing files in folders, logging in to an online account, and uploading files. The skills they learn in the class will also be useful to them in their web development careers, once they obtain certification. They are also basic computer skills that will be useful to learners anytime they want to use a computer to create documents or to go online.

2c: Description of Learners

The learners in this class will be religious women between the ages of 24-30. All have a high school education, some have attended college classes and several have completed a BA degree. Their technology levels range from those who have little experience going online to those who are online several times a day checking email and shopping. None of the learners have any experience with HTML or WYSIWYG web page editors, but most of them have taken a graphic design course, which also teaches Adobe CS4 software. Most are married and have children and all have a part time job. While the learning they will gain in this course is important to them, it is not their only priority and for some is not the top priority.

Part 3: Planning

3a: Learning Objectives

After instruction they will be able to create a basic HTML page, containing at least 5 different HTML elements, and open an FTP connection to upload the file to a live server.

1.0 Learners will create an HTML page

1.1 Learners will open Notepad

1.2 Learners will save a new file, with the .html extension

1.3 Learners will add HTML code to the file

1.3.1 Learners will create the opening and closing html tags

1.3.2 Learners will nest opening and closing head tags within the html tags

1.3.3 Learners will nest opening and closing title tags within the head tags

1.3.4 Learners will add title text to the title tag

1.3.5 Learners will nest opening and closing body tags within the html tags,
below the head tags

1.3.6 Learners will nest opening and closing paragraph tags, within the body tags

1.3.7 Learners will compose a paragraph of text within the paragraph tags

2.0 Learners will validate HTML code

2.1 Learners will open a web browser and navigate to the URL provided

2.2 Learners will upload their files to the code validator

2.2.1 If errors are returned, learners will fix them and upload the corrected file

3.0 Learners will upload file to FTP server

3.1 Learners will be able to describe verbally what a web server is and why it is

necessary to use an FTP connection to update a website

3.2 Learners will open Core FTP, enter the server and login information provided by the instructor and initiate the connection

3.3 Learners will select the correct file and upload it to the correct target directory on the server

3.4 Learners will open Firefox and navigate to the file they've just uploaded to verify that they can view it in the browser

3b: Matrix of Objectives

| Objective Number | Bloom's Taxonomy Classification | Teaching Strategy | Type of Learning |
|------------------|---------------------------------|-------------------|------------------|
| 1.0 | Application | Supplative | Procedural |
| 1.1 | Application | Supplative | Procedural |
| 1.2 | Application | Supplative | Procedural |
| 1.3 | Application | Supplative | Procedural |
| 1.3.1 | Application | Supplative | Procedural |
| 1.3.2 | Application | Supplative | Procedural |
| 1.3.3 | Application | Supplative | Procedural |
| 1.3.4 | Application | Supplative | Procedural |
| 1.3.5 | Application | Supplative | Procedural |
| 1.3.6 | Application | Supplative | Procedural |
| 1.3.7 | Application | Generative | Conceptual |
| 2.0 | Application | Supplative | Procedural |
| 2.1 | Application | Generative | Conceptual |
| 2.2 | Application | Supplative | Procedural |
| 2.2.1 | Analysis | Generative | Problem Solving |
| 3.0 | Application | Supplative | Procedural |
| 3.1 | Comprehension | Generative | Conceptual |
| 3.2 | Application | Supplative | Conceptual |
| 3.3 | Evaluation | Supplative | Procedural |
| 3.4 | Application | Generative | Conceptual |

3c: ARCS Table

Project Goal Statement: The target audience is adults with a high school education. After instruction they will be able to create a basic HTML page, containing at least 5 different HTML elements, and open an FTP connection to upload the file to a live server.

| ATTENTION |
|---|
| A.1 Perceptual Arousal |
| <ul style="list-style-type: none">> The teacher will describe how ubiquitous the Internet is and point out how every company needs a web presence> Learners will be shown teachers examples of the file they will be asked to create |
| A2. Inquiry Arousal |
| <ul style="list-style-type: none">> The teacher will begin by asking students where the Internet is located and prompt students to think about how information is transferred via the Internet> Learners will be asked to view code for existing websites and asked to find code they can recognize> Learners will brainstorm possible uses of a website for a small company |
| A3. Variability |
| <ul style="list-style-type: none">> Examples and practice sessions will be interspersed throughout instruction> Learners will have materials to read and also videos to view |

| RELEVANCE |
|---|
| R1. Goal orientation |
| <ul style="list-style-type: none">> The teacher will present sample job postings for web developers to connect what is being taught with the practical outcome in the students' lives> Learners will be asked to show their favorite websites and discuss the features they enjoy the most, via forum discussion |
| R2. Motive matching |
| <ul style="list-style-type: none">> Learners will choose a topic of personal interest around which to build their sample web page> The teacher will explain that students will learn to write web code in a professional manner |
| R3. Familiarity |
| <ul style="list-style-type: none">> The teacher will point out similarities between notepad and Word> The teacher will explain that HTML is used to format a web page, much like Word is used to format documents |

| CONFIDENCE |
|--|
| C1. Learning requirements |
| <ul style="list-style-type: none">> The teacher will explain that the basic skills required to create an HTML file and upload it aren't that different from creating a Word document or sending an email attachment> Tasks will be modeled first by the teacher |

| |
|---|
| > Repeated practice opportunities will be provided to lower student anxiety |
| C2. Success opportunities |
| > Feedback will be provided after each tasks and after completion of the lesson |
| > Students will display mastery of the process more than once during the lesson |
| > Examples of successful projects will be shown |
| C3. Personal control |
| > Learners will be asked to verbally summarize what they've done, in order to demonstrate true mastery of content |
| > Learners will give feedback to other students, giving them the opportunity to demonstrate knowledge to peers and themselves |

| |
|--|
| SATISFACTION |
| S1. Natural consequences |
| > Learners will be given the opportunity to practice the skills and create their own web page |
| > Learners will peer review each other's projects, providing the opportunity to help other students by demonstrating their own knowledge |
| S2. Positive consequences |
| > The teacher will provide feedback to students on what they've done correctly |
| > Students will have a live web page online that they can show off after the lesson |
| S3. Equity |
| > Students will be held to high standards, which will result in a high feeling of accomplishments |
| > Tasks will be chunked, so students experience multiple successes during the lesson |
| > Students will work in pairs, which will encourage them to promote each other's success |

Part 4: Instructor Guide

Note: This instructor guide presents an outline of the steps the teacher should follow to create instructional videos for their own class. It has been determined that students prefer watching videos and reading notes that have been created by their instructor, rather than a previous instructor of a course. It adds to the feeling of community and connection with a teacher when students can see their face and hear their voice. Sample lesson materials will be provided with this guide, but it is up to each teacher to create the video clips and/or written notes that go with each step in the guide. The instructional designer will be available to help any instructor in creating the actual lessons, if it is needed.

Introduction

Gain Attention

Email all students at the beginning of the lesson module. Let them know they will have a week to complete all the tasks listed on the class website, and that it should take a total of 2-3 hours over the week to complete the entire module. Make sure they have their login info, and prompt them to contact you with any problems they may have accessing the course materials. Let them know that the course materials will be provided through a series of videos they will watch, and some of the videos will be accompanied by text they can read. All the links they need to course materials will be available on the course homepage, and provide a link to the homepage in the email.

Establish Purpose

Inform the learners of the goal of the lesson, which is to learn how to compose a basic web page and upload it to a live server, where it will be viewable in a web browser by anyone with a web connection. Explain that they will learn how to do this on their own, and by the end of class will be able to explain how a web browser retrieves a web page to display on someone's computer. Students will have a chance to practice their skills during the class, and

in further lessons if they choose to enroll in the full online course.

Stimulate Learners' Attention/Motivation

Provide a link to a sample final student project from a previous class. Let them know they will not be producing a complete website in this lesson, with images and links to other pages, but will be learning the first step in the process. Assure them that once they master the basics, the more advanced features they see on the sample site are easy to learn.

Provide Overview

Explain that there will be 3 basic steps in this week's lesson. First students will create their web page. Then they will validate the code to make sure it is written correctly, and fix any mistakes they find. Lastly, they will upload their page to the live server and view it in a web browser.

Body

Part I: Composing a web page

Recall relevant prior knowledge

Remind the students how they have created Word documents in the past and used the formatting options in the program. Have them mentally list various formatting options they've used when composing a Word document. Compare some of the features found in Word, such as underline, bold, and inserting images, to those same features commonly found in web pages.

Present information and examples

Provide a link to a sample page, like the one they will be creating during this lesson. Point out the various elements in the page that they will be learning to create. Display the HTML underlying the page and point out the HTML tags, and the way they are written between opening and closing brackets (< , >) with an open tag (<tag>) and a close tag (</tag>).

Focus Attention

Remind students that they will be creating their own page, with their own chosen content, containing these elements.

Employ Learning Strategies

Show students how they will be able to evaluate whether they've written code correctly by opening the page in a web browser and viewing the results of their work.

Provide for and Guide Practice

Direct students to open notetab on their own computers and save a new file with the .html extension. To save the file, they should create a new directory called “Website” and save the file inside that directory with the name index.html.

Have them:

- 1) Write the phrase “Hello World” in the document they created a re-save the file
- 2) Open My Documents and navigate to the place where they saved their file
- 3) Double click the file name to open it in the default web browser

Explain that they will now add some content and format it with HTML tags. Direct students to create their web pages, using the learning objectives breakdown listed in 3a.

Provide Feedback

Students will upload their pages to the course assignment area. The teacher will read over the assignments and provide feedback on quality of completion of the tasks in the procedure. Students will also write a brief (1-2 paragraphs) forum posting describing the basic elements that make up an HTML page and what each one is for, including any thoughts they had while composing their first page. Students will read over other postings in the forum and comment on at least 2 postings from other students.

Part II: Validating code

Recall relevant prior knowledge

Remind students that a code validator is like spell check – it checks your work against a pre-programmed set of rules and points out possible mistakes.

Present information and examples

Using a code validator is fairly simple. Model the process for students and show them how they know whether or not their code is correct, and how to identify errors from the report that is generated.

Employ Learning Strategies

Show students how to bookmark the code validator site so they will be able to return to it for future projects. Remind them of the pages in the book where they can look up the correct code, and provide links to HTML reference websites.

Provide for and Guide Practice

Direct students to navigate to the code validator website and to upload their HTML files, created in Part I, for validation.

Provide Feedback

The code validator website will give feedback on the accuracy of the code in the file that students upload. They will be directed to possible mistakes, which they can fix, and then they can upload the fixed files for validation. They should repeat this process until the code passes as validated.

Part III: Uploading and viewing a web page

Recall relevant prior knowledge

Explain that initiating an FTP connection is similar to logging in to a website where they have membership and that uploading a file is similar to the process of attaching a file to an email.

Present information and examples

Explain key concepts and they interact with each other: Web server, local desktop,

ISP, web browser, FTP. Model the process of connecting using CoreFTP, which all the students have installed on their computers, and selecting and uploading the HTML file.

Employ Learning Strategies

Ask students to diagram the flow of information between a desktop computer, a web server, an internet connection, and a web browser 1) when a web page is being updated (file upload) 2) when a web page is being viewed by a user (file download). Students should use a free webspiration account to create the diagram and post a link to the diagram in the homework assignment area. This will help them visualize the difference between changing a file on their local computers, and making the changes live on the actual website. It will also emphasize a basic principle of web design, which is to minimize file sizes.

Provide for and Guide Practice

Provide the login information for the student web server and direct students to upload their files to the correct directory on the server. Direct them to open the web page on the server using a web browser once it's been successfully uploaded, to make sure it looks the same as it did when they viewed it on their own computers.

Provide Feedback

Students should post a link to their uploaded web page in the class forum. They should view at least 3 other student web pages and comment on them.

Conclusion

Summarize and review

Recap the main points of the lesson and direct students to review any videos whose content they are unsure of. Provide links to any written notes they can refer to.

Transfer learning or Enhance transfer

Have students post some examples they find online of code similar to what they created in the lesson and show how the same HTML code can be used to format different

content pages. Students should comment on at least 3 other student postings.

Remotivate and Close or Provide Remediation and Closure

Let students know they've accomplished an important first step in web development, and that they can now create basic pages on any topic they'd like and be able to share them with family and friends. Have them mentally list features they've seen on web pages they like, that they'd like to learn how to do in future classes.

Assess Learning

Provide a grading rubric for student work. Students will be directed to do a self-evaluation based on the rubric, and the teacher will provide feedback in the form of comments and number grade based on the same rubric.

Provide Feedback and Remediation

Feedback will be provided by the teacher in a private area of the course site, so students only have access to their own project feedback. Students will be referred to portions of the class notes and videos relating to the parts of the rubric they had difficulty with, as well as HTML reference and tutorial websites.

Part 5: Learner Content

5a: Learning Materials

Learners will use a variety of materials during the course, all of which are digital. Due to the distance nature of the course there will be no physical handouts distributed. However, learners will be able to print up any notes provided in PDF format that they wish to view as a hard copy.

| Learning Item | Use |
|----------------------|---|
| Instructor Guide | This will be used by the class teacher as a lesson plan |
| Moodle class website | This will contain links to all the course materials |
| Class videos | Each topic will be taught via a video recording, made by the instructor. Videos will be linked to from the class website and students will be able to review them as often as necessary |
| Topic notes | Topic notes will be provided with each video and students can read them while they watch the videos, use them as a review, or print them up |

5b: Assessment Materials

| Assessment Item | Use |
|--|---|
| HTML element checklist | This will be used by students to make sure they've included all required elements. This is a formative assessment tool. |
| Grading rubric | This will be used by students as a self-assessment, and by the teacher to assess students' work and provide a grade. |
| Forum for sharing work and receiving peer feedback | This will be used by students to share their work with each other, and to assess each other's work. The instructor will facilitate all class discussions. |

5c. Technology Tool Justification

| Tool | Rationale |
|---|---|
| PC computers for all students with Windows XP | Students need a computer to access course materials, and it is much easier to handle problems that come up when everyone is using the same software |
| Moodle LMS | Moodle provides instructors with an easy way to share course materials without having to be a programmer or understand web design. It is easy to create forum discussions, assignment upload areas, and grading areas using Moodle. |
| Youtube | Course videos will be uploaded and shared via Youtube. This saves server space on the class server, and allows for easy embedding of the videos directly into the lesson pages. Additionally, a link to the class Youtube channel will be provided on the Moodle homepage so students can have direct access to the class videos for easy review. |

Part 6: Formative Evaluation Plan

6a: Expert Review

The expert who agreed to review the design for the Intro to Web Development course is Raizel Borowski, owner of Compuskills Training Center. Raizel has been teaching technology classes for nearly 20 years, including Web Design, Graphic Design, Web Programming, and other similar topics. She has been working in the field since college and keeps up with the latest technology in order to update her computer classes. She answered a series of questions, via a Google Documents survey, regarding the effectiveness of the course design.

The survey can be viewed online at <http://tinyurl.com/experteval>

6b: One-to-one Evaluation

A one-to-one evaluation will be done with one of the students who recently completed the current F2F web development class, Bracha Oberstein. Bracha will be directed to work through the lesson on the Moodle website, but not required to submit assignments. Bracha will be asked a series of questions: Are the instructions clear? Are the video tutorials easy to understand? Are you able to figure out what's expected from the assignments? Do the notes match up with what you saw in the video tutorials? What did you specifically have difficulty with? Is there a part you didn't like or had trouble understanding? What would you want to see done differently? Do you feel confident that you could use these skills again, if you took a more advanced course based on these introductory skills? Did you enjoy learning online at your own pace? Would you be able to pace yourself appropriately to complete lessons and assignments within the given time frame of a week?

6c: Small Group Evaluation

8 students from the Graphics Design class will be used for a small group evaluation of the online Web Development lesson. They have similar characteristics as the target

population for this course and have not been exposed to the material in a F2F class yet. They will be asked to follow the course materials and submit assignments. They will be evaluating the course in the same week, so they will have a chance to interact with each other on the class forums. They will be asked a series of questions: Did you feel that the instruction was at a level appropriate for your current technical skills? Was it hard to follow the lessons? Were you able to complete the entire course within the given time frame of a week. Did you feel a sense of community develop due to the interaction on the forums? Did you enjoy learning this way? Would you sign up for a full Web Development course that was taught this way? What would you like to see taught differently next time? What did you have the most difficulty with?

6d: Field Trial

A field trial will be conducted with a group of students interested in taking the full Web Development course online. After the course is completed, the instructor will review the grades earned in the field trial to see if an acceptable number of students successfully passed the course. Data will be gathered from the students regarding the effectiveness of the instruction and their success remaining motivated to complete the course, as well as their ability to complete it in time. Any necessary changes will be incorporated into the course materials.

Part 7: Formative Evaluation Report

7a: Evaluation Survey

The full expert evaluation survey can be viewed online at <http://tinyurl.com/experteval> and in Appendix D.

7b: Report of Expert Review

Instructor Guide

The reviewer felt that the instructor guide was thorough and easy to follow. She felt that anyone familiar with the content would be able to lead a class using the guide.

Student Materials

The reviewer felt that student materials were on target, appropriate for the given assignments, and easy to understand but she felt that since this particular population tends to have less experience with computers and the Internet and as a result less confidence in this area, that more support should be included in the form of links to online tutorials, reference websites, and relevant Youtube videos. It was agreed that some of the online resources given out informally in the F2F course would be included on the Moodle site and provided as optional instructional materials for students.

General Instruction

The reviewer agreed that the technology used supports the goals of the course and makes the instructional material easier to understand and more accessible to students. The course material is clear, well organized, and the assessments are an accurate reflection of student achievement. She had no additional comments about what should be changed in the course, other than providing extra resources as described in the section above.

7c: Comments on suggested changes

I agree that additional instructional materials can increase confidence in students. Many students need to review material several times, and to hear it different ways. Rather than recording several videos on the same topic to provide this diversity I will supplement with available, free video tutorials on Youtube and link to them on the Moodle site in the appropriate place. I already have several good resources used in the F2F class that can be incorporated into this course and I will find additional videos on Youtube.

Part 8. AECT Standards Grid

Professional Standards Addressed (AECT)

The following standards, developed by the Association for Educational Communications and Technology (AECT), and used in the accreditation process established by the National Council for Accreditation of Teacher Education (NCATE), are addressed to some degree in this course. The numbers of the standards correspond to the numbers next to the course tasks show on the list of assignments. Not all standards are addressed explicitly through student work.

| | Assignments meeting standard in whole or part |
|---|---|
| Standard 1: DESIGN | |
| 1.1 Instructional Systems Design (ISD) | ID Projects 1 & 2 X |
| 1.1.1 Analyzing | X ID Projects 1 |
| 1.1.2 Designing | X ID Projects 1 & 2 |
| 1.1.3 Developing | X ID Projects 1 & 2 |
| 1.1.4 Implementing | X ID Project 2 |
| 1.1.5 Evaluating | X Selected Discussion Forums; ID Project 2 |
| 1.2 Message Design | |
| 1.3 Instructional Strategies | X ID Project 2 |
| 1.4 Learner Characteristics | X ID Project 1 |
| Standard 2: DEVELOPMENT | |
| 2.0 (includes 2.0.1 to 2.0.8) | X ID Project 02 |
| 2.1 Print Technologies | X Reading Quiz; ID Projects 1 & 2 |
| 2.2 Audiovisual Technologies | |
| 2.3 Computer-Based Technologies | X (all assignments) |
| 2.4 Integrated Technologies | |
| Standard 3: UTILIZATION | |
| 3.0 (includes 3.0.1 & 3.0.2) | |
| 3.1 Media Utilization | X (all assignments) |
| 3.2 Diffusion of Innovations | |
| 3.3 Implementation and Institutionalization | ID Project 2 X |
| 3.4 Policies and Regulations | |
| Standard 4: MANAGEMENT | |
| 4.0 (includes 4.0.1 & 4.0.3) | |
| 4.1 Project Management | |
| 4.2 Resource Management | |
| 4.3 Delivery System Management | |
| 4.4 Information Management | |
| Standard 5: EVALUATION | |
| 5.1 Problem Analysis | X |

| | | |
|--|---|--------------|
| 5.2 Criterion-Referenced Measurement | X | ID Project 2 |
| 5.3 Formative and Summative Evaluation | X | ID Project 2 |
| 5.4 Long-Range Planning | | |

COURSE GOALS & OBJECTIVES

The overall goal for the course is for each student to consider and use the systematic process of instructional design to create an instructional product. To achieve this goal, students will engage in activities that promote reflective practice, emphasize realistic contexts, and employ a number of communications technologies. Following the course, students will be able to:

- Discuss the historical development of the practice of instructional design with regard to factors that led to its development and the rationale for its use
- Describe at least two reasons why instructional design models are useful
- Identify at least six instructional design models and classify them according to their use
- Compare and contrast the major elements of three theories of learning as they relate to instructional design
- Define “instructional design.”
- Define the word “systematic” as it relates to instructional design
- Define “learning” and synthesize its definition with the practice of instructional design
- Relate the design of instruction to the term “educational (or “instructional”) technology”
- Describe the major components of the instructional design process and the functions of models in the design process
- Provide a succinct summary of various learning contexts (declarative knowledge, conceptual, declarative, principle, problem-solving, cognitive, attitudinal, and psychomotor)
- Build an instructional design product that integrates major aspects of the systematic process and make this available on the web.
 - Describe the rationale for and processes associated with needs, learner, context, goal, and task analyses

Create and conduct various aspects of a front-end analysis

Identify methods and materials for communicating subject matter that are contextually relevant

- Describe the rationale for and processes associated with creating design documents (objectives, motivation, etc.)
 - Construct clear instructional goals and objectives
 - Develop a motivational design for a specific instructional task
 - Develop assessments that accurately measure performance objectives
- Select and implement instructional strategies for selected learning tasks
 - Select appropriate media tools that support instructional design decisions
- Describe the rationale and processes associated with the formative evaluation of instructional products
 - Create a plan for formative evaluation
- Identify and use technology resources to enable and empower learners with diverse backgrounds, characteristics, and abilities.
- Apply state and national content standards to the development of instructional products
- Meet selected professional standards developed by the Association for Educational Communications and Technology
- Use various technological tools for instructional and professional communication

AECT STANDARDS (Applicable to EDTECH 503)

1.0 Design

1.1 Instructional Systems Design

1.1.a Utilize and implement design principles which specify optimal conditions for learning.

1.1.b Identify a variety of instructional systems design models and apply at least one model.

1.1.1 Analyzing

1.1.1.a Write appropriate objectives for specific content and outcome levels.

1.1.1.b Analyze instructional tasks, content, and context.

1.1.2 Designing

1.1.2.a Create a plan for a topic of a content area (e.g., a thematic unit, a text chapter, an interdisciplinary unit) to demonstrate application of the principles of macro-level design.

1.1.2.b Create instructional plans (micro-level design) that address the needs of all learners, including appropriate accommodations for learners with special needs.

1.1.2.d Incorporate contemporary instructional technology processes in the development of interactive lessons that promote student learning.

1.1.3 Developing

1.1.3.a Produce instructional materials which require the use of multiple media (e.g., computers, video, projection).

1.1.3.b Demonstrate personal skill development with at least one: computer authoring application, video tool, or electronic communication application.

1.1.4 Implementing

1.1.4.a Use instructional plans and materials which they have produced in contextualized instructional settings (e.g., practica, field experiences, training) that address the needs of all learners, including appropriate accommodations for learners with special needs.

1.1.5 Evaluating

1.1.5.a Utilize a variety of assessment measures to determine the adequacy of learning and instruction.

1.1.5.b Demonstrate the use of formative and summative evaluation within practice and contextualized field experiences.

1.1.5.c Demonstrate congruency among goals/objectives, instructional strategies, and assessment measures.

1.3 Instructional Strategies

1.3.a Select instructional strategies appropriate for a variety of learner characteristics and learning situations.

1.3.b Identify at least one instructional model and demonstrate appropriate contextualized application within practice and field experiences.

1.3.c Analyze their selection of instructional strategies and/or models as influenced by the learning situation, nature of the specific content, and type of learner objective.

1.3.d Select motivational strategies appropriate for the target learners, task, and learning situation.

1.4 Learner Characteristics

1.4.a Identify a broad range of observed and hypothetical learner characteristics for their particular area(s) of preparation.

1.4.b Describe and/or document specific learner characteristics which influence the selection of instructional strategies.

1.4.c Describe and/or document specific learner characteristics which influence the implementation of instructional strategies.

2.0 Development

2.0.1 Select appropriate media to produce effective learning environments using technology resources.

2.0.2 Use appropriate analog and digital productivity tools to develop instructional and professional products.

2.0.3 Apply instructional design principles to select appropriate technological tools for the development of instructional and professional products.

2.0.4 Apply appropriate learning and psychological theories to the selection of appropriate technological tools and to the development of instructional and professional products.

2.0.5 Apply appropriate evaluation strategies and techniques for assessing effectiveness of instructional and professional products.

2.0.6 Use the results of evaluation methods and techniques to revise and update instructional and professional products.

2.0.7 Contribute to a professional portfolio by developing and selecting a variety of productions for inclusion in the portfolio.

2.1 Print Technologies

2.1.3 Use presentation application software to produce presentations and supplementary materials for instructional and professional purposes.

2.1.4 Produce instructional and professional products using various aspects of integrated application programs.

2.3 Computer-Based Technologies

2.3.2 Design, produce, and use digital information with computer-based technologies.

3.0 Utilization

3.1 Media Utilization

3.1.1 Identify key factors in selecting and using technologies appropriate for learning situations specified in the instructional design process.

3.1.2 Use educational communications and instructional technology (SMETS) resources in a variety of learning contexts.

3.3 Implementation and Institutionalization

3.3.1 Use appropriate instructional materials and strategies in various learning contexts.

3.3.2 Identify and apply techniques for integrating SMETS innovations in various learning contexts.

3.3.3 Identify strategies to maintain use after initial adoption.

4.0 Management

(none specifically addressed in 503)

5.0 Evaluation

5.1 Problem Analysis

5.1.1 Identify and apply problem analysis skills in appropriate school media and educational technology (SMET) contexts (e.g., conduct needs assessments, identify and define problems, identify constraints, identify resources, define learner characteristics, define goals and objectives in instructional systems design, media development and utilization, program management, and evaluation).

5.2 Criterion-referenced Measurement

5.2.1 Develop and apply criterion-referenced measures in a variety of SMET contexts.

5.3 Formative and Summative Evaluation

5.3.1 Develop and apply formative and summative evaluation strategies in a variety of SMET contexts.

SMET = School Media & Educational Technologies

Appendix A: Needs Analysis Survey

Needs Analysis Survey - ID Project #2

This will help determine the need for the instruction that will be designed as part of this project. Data will be simulated for the purpose of including a report in the project plan.

Given the choice, would you prefer to attend a face-to-face class or an online class?

- ☐ Face-to-face
- ☐ Online
- ☐ No preference

How old is your home computer?

- ☐ Under 1 year
- ☐ 1-3 years old
- ☐ 3-5 years old
- ☐ Over 5 years old

What type of Internet connection do you have at home?

- ☐ No Internet connection
- ☐ Phone modem
- ☐ ADSL/Cable

How often do you currently go online at home?

- ☐ Several times a day
- ☐ Once a day
- ☐ 3-5 times a week
- ☐ Less than 3 times a week

How often would you be able to log in to communicate with instructors and classmates?

- ☐ On a daily basis
- ☐ 2-4 times a week

- ☐ Once a week
- ☐ Less than once a week

Have you ever installed software by yourself from a CD on your home computer?

- ☐ Yes
- ☐ No
- ☐ Don't know

Which of the following are you very comfortable doing?

- Opening a web page based on an address given in written format
- Create folders to organize files
- Creating Word and Excel files
- Filling out a form online and submitting it
- Sending attachments via email
- Composing and sending emails using an online email program

Which statement do you MOST agree with?

- ☐ An online course will require more work and study time than a face-to-face course
- ☐ An online course will require the same work and study time as a face-to-face course
- ☐ An online course will require less work and study time than a face-to-face course

Which statement describes you the best?

- ☐ I am comfortable being physically separated from my instructor and classmates and enjoy communicating electronically
- ☐ I am a little nervous about it but will probably be fine
- ☐ It makes me very nervous not to have face-to-face contact with my instructor and classmates

My motivation for taking an online class is

- ☐ Due to work/family schedules, and I like the convenience of being able to log in at any time of day
- ☐ Due to work/family schedules, but I prefer having class at a set time each week
- ☐ Undecided - I'm not sure an online course is right for me

How would you rate yourself on the following:

Self motivation

1 2 3 4 5

Not at all ☐ ☐ ☐ ☐ ☐ Very high

Time management

1 2 3 4 5

Not so good ☐ ☐ ☐ ☐ ☐ Very good

Ability to follow instructions

1 2 3 4 5

Not so good ☐ ☐ ☐ ☐ ☐ Very good

Reading ability

1 2 3 4 5

Low ☐ ☐ ☐ ☐ ☐ High

Enjoys learning independently

1 2 3 4 5

Not at all ☐ ☐ ☐ ☐ ☐ Very much

Appendix B: HTML elements checklist

Make sure you've added each of the following HTML elements to your web page. This is the same checklist the instructor will use to evaluate your work.

1. Opening and closing html tags
2. Opening and closing head tags, nested within the html tags
3. Opening and closing title tags, nested within the head tags
4. Title text within the title tag
5. Opening and closing body tags, nested within the html tags below the head tags
6. Opening and closing paragraph tags, nested within the body tags
7. A paragraph of text within the paragraph tags

Appendix C: Grading Rubric

| | Excellent 90% - 100% | Adequate 60% - 89% | Insufficient 0% - 59% |
|-----------------|---|---|---|
| HTML elements | All elements are included in the file and display correctly - each open tag has an equivalent closing tag | Most elements are included in the file and display correctly, OR all elements are included but some lack equivalent closing tag | Less than 4 of the 7 required elements are included, OR not all elements display correctly, OR at least 4 elements lack a closing tag |
| Code Validation | All elements validate correctly | Validation produces not more than 3 errors | More than 3 errors are found upon validation |
| File upload | The file can be found at the correct URL | The file can be found online, but is either not named correctly or is located in the wrong directory | The file cannot be found online |
| Forum #1 | A thoughtful, complete posting has been written and comments have been made on at least 2 other postings | The initial posting is not complete, OR the poster has not commented on any other postings | The initial posting has not been made and no comments have been made on any other postings |
| Forum #2 | The correct URL has been posted and comments have been made on at least 3 other posted web pages | The URL posted is not correct, OR comments have been made on less than 3 other posted web pages | The URL is not posted and no comments have been made on other posted web pages |

Appendix D: Expert Review Survey

Expert Review Survey

These questions pertain to the Instructor Guide that accompanies the online Introductory Web Development course.

Instructor Guide

Is the Instructor Guide easy to follow?

- ☐ Yes
- ☐ No

Is the guide complete?

- ☐ Yes
- ☐ No

Do the activities support the lessons?

- ☐ Yes
- ☐ No

Is the time frame appropriate for the activities to be completed?

- ☐ Yes
- ☐ No

Student materials

These questions pertain to the student learning materials provided with the course.

Are the materials appropriate for the target learners?

- ☐ Yes
- ☐ No

Will the materials provided assist students in completing their assignments?

- ☐ Yes
- ☐ No

Are the videos interesting?

- ☐ Yes
- ☐ No

Are the videos and notes easy to understand?

- ☐ Yes
- ☐ No

Does all the technology work?

- ☐ Yes
- ☐ No

Is the material accessible?

- ☐ Yes
- ☐ No

General Instruction

These questions pertain to the quality of design of the instruction

Does the technology used support the goals of the class?

- ☐ Yes
- ☐ No

Is there enough information presented so learners can achieve the course objectives?

- ☐ Yes
- ☐ No

Are assignments consistent with instructional goals?

- ☐ Yes

- ☐ No

Are directions for students clear?

- ☐ Yes
- ☐ No

Is the information organized appropriately?

- ☐ Yes
- ☐ No

Are the goals relevant to learners?

- ☐ Yes
- ☐ No

Do the assessment materials accurately measure student achievement?

- ☐ Yes
- ☐ No

What other comments do you have about the course? What do you feel works best? What do you feel should be changed?


Appendix E: Course home page in Moodle


Introduction to Web Development

[Moodle](#) ► [IWD](#)


Online Users [-]

(last 5 minutes)


 [Random User](#)


 [Lisi Geffen](#) [message]

Activities [-]

 [Resources](#)








Administration [-]

 [Grades](#)




 [Profile](#)

Topic outline










1 Composing a web page

-  [Video: What is a web page made of?](#)
 -  [Transcript: What is a web page made of?](#)
-  [Video: Composing your first web page](#)
 -  [Transcript: Composing your first web page](#)
-  [Sample first web page](#)
-  [HTML Element Checklist](#)
-  [Forum Discussion - Basic HTML Elements](#)

2 Validating code

-  [Video: Validating code](#)
 -  [Transcript: Validating code](#)
-  [W3C HTML Code Validation](#)

3 Uploading and viewing a web page

-  [Video: Connecting via FTP, uploading a file](#)
 -  [Transcript: Connecting via FTP, uploading a file](#)
 -  [Notes: Connecting to FTP Server with Core FTP](#)
 -  [Notes: Transferring files with Core FTP](#)
-  [Video: Viewing and checking web pages online](#)
 -  [Transcript: Viewing and checking web pages online](#)
-  [Forum Discussion - Final Web Page](#)
-  [Final Grading Rubric](#)
-  [MyWebspiration - FTP connection diagram](#)