<h1> COMP 161 Web Design </h1>

M-W *Lecture/Lab (DC 1349)* – 12:30-1:50

This course is part of
CONX 20052: Graphic Design & Web Programming
connecting with
ARTS 250: Graphic Design I

Who:	Michael Gousie
Where:	Discovery Center 1325
When:	Mon 3:00-4:00; Wed 2:30-4:00; Fri 10:30-11:30 and by appointment
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Content:

You will learn how to create professional and content-rich web sites. To do this, you will learn how to use an integrated development environment (IDE), several software packages, and various software tools. We will work on your web skills in stages, starting from scratch and progressing to basic programming. Much of the classroom time will be devoted to hands-on work.

The general topics covered will be:

- Basic web page design.
- Creating web pages and sites using an integrated development environment (IDE) and a browser, using HTML5 and CSS.
- Adding more complex graphics, either pre-made or created using a standard paint program.
- Building sophisticated web sites that include simple animations and advanced CSS functionality.
- Creating pages that work with different device sizes.
- Learning some basic JavaScript programming to allow for more user interaction.
- Putting it all together in a full-featured web sites.

WARNING! This is not a course that simply teaches how to "point and click" your way through application software! We will **not** be using web page builder software; rather, you will create pages from scratch. You will be writing your own code, using markup languages and a powerful programming language. A significant time commitment is required, much more so than many 100-level courses. Having said that, you will get much satisfaction from what you can accomplish!

Required Texts:

- Lynch, P. and Horton, S. *Web Style Guide*, 4^{th} edition. Yale Press, 2016. Available online on the course web page.

- Duckett, J. *HTML & CSS: Design and Build Websites.* Wiley, 2011. There is also an accompanying web site.

Recommended Text:

- Dean, J. *Web Programming with HTML5, CSS, and JavaScript.* Jones & Bartlett Learning, 2019.

There are many other books and, of course, even more resources on the web.

Required Hardware:

- You must work on your projects on your own laptop (Windows, Mac, or even Linux), or on Wheaton computers. However, the latter may have restricted access times.
- USB flash drive solely for this course. Although you have access to file space on Wheaton's Computer Science server where you will publish your completed web pages, a flash memory stick is very handy for backing up your work. Losing your data is not an excuse for late or unfinished work.

Software:

The required software is freely available online, as well as in the Wheaton labs and on computers in the library atrium. Most likely, you will want to download software on your own computer. The software we will use is as follows:

- Komodo IDE - a free IDE for creating web pages.
- GIMP (GNU Image Manipulation Program) - a robust paint program that works on any platform.
- FileZilla - free File Transfer Protocol (FTP) client software.
- Forticlient Virtual Private Network (VPN) software - available from Wheaton.
- Firefox browser (preferred).

Requirements:

There will be three exams during the course of the semester and a final exam, together worth 40% of the grade; see chart below for more information. There will be five web page/site projects, each highlighting a specific problem, such as basic HTML, good design using CSS, animation, etc. These projects account for 60% of the grade. One or more of the later projects may be built by teams of two.

Exam Schedule:

Exam	Weight	Topic	Date (Subject to change)
Exam 1	9%	Number systems, basic design	September 26
Exam 2	9%	HTML5, GIMP	October 26
Exam 3	12%	HTML5 & CSS	November 16
Final Exam	10%	Responsive design, JavaScript	December 15

Projects:

Project	Weight	Topic	Approx. Due Date
1	4%	HTML warm-up	Week 4
2	10%	Basic web page	Week 7
3	16%	Complete web site	Week 10
4	16%	Site with responsive design and animation	Week 13
5	14%	E-commerce web site	Week 15

Grading:

Grades will be assigned according to the following scale:

A = 93-100, A- = 90-92, B+ = 87-89, B = 83-86, B- = 80-82, C+ = 77-79, etc.

Course Policies:

- You are responsible for all material covered in class, including the reading (shown on course schedule).
- If you must miss a exam for any reason, you must inform me BEFORE the test. Except in the case of emergency, illness, or you fell into Wheaton's original indoor pool[1], makeup exams will not be given.
- Written homework due dates are **firm**. Homework must be handed in at the start of class on the due date. There are **no** late days for homework.
- All project/web page due dates are **firm**. The final code for the projects must be posted and/or turned in electronically by 11:59:59 PM on the due date. Any project turned in on the following day will receive a 15% penalty. Anything turned in later than one day will receive a 0. Any required hard copy and/or written portions must be submitted at the beginning of class on the next day or as instructed on the specification sheet.
- A computer crash is not an excuse for late work. It is important that you **backup all of your work!** Use a flash drive to create backups.
- Web pages will be evaluated using the Firefox web browser. Be sure to test your pages with Firefox before completing your project.
- You are expected to adhere to the Wheaton Honor Code.

  (See https://wheatoncollege.edu/about-wheaton-college/honor-code/)

  - Although *discussion* of projects or homework is encouraged, the final, turned-in version should be the result of your own work.
  - Collaboration on exams is prohibited.
  - You will be required to write and **sign** the pledge on all work turned in: *I have abided by the Wheaton Honor Code in this work.* Instructions for electronic submissions will be given on the project specification sheets.

[1] It's still there; do you know where it is?

  - Any violation of the above guidelines will result in a 0 for that assignment and/or a failing grade for the course.

- During class time, computers in the classroom are to be used **only for the current exercise/problem**, not for surfing the interwebs or checking by how much the Red Sox lost their last game.
- The use of cell phones, iPods, iPads, iPlops, iFlops, and other personal electronic devices is prohibited during class, labs, and exams.
- Accommodations for disabilities:

> *Wheaton is committed to ensuring equitable access to programs and services and to prohibit discrimination in the recruitment, admission, and education of students with disabilities. Individuals with disabilities requiring accommodations or information on accessibility should contact Autumn Grant, Associate Director for Accessibility Services at the Filene Center for Academic Advising and Career Services.*
> *∼ accessibility@wheatoncollege.edu or (508) 286-8215 ∼*

Course Schedule (subject to change)**:**

Week #	Date	Topic(s)	Reading (see notes below)
Week 1		**Introduction**	L&H Ch. 1; notes
	Aug 31	Introduction, basic file systems	
Week 2		**Number systems**	Duckett Ch. 11
	Sep 5	*No class - Labor Day*	
	Sep 7	Terminology, hex numbers and color	
Week 3		**Intro to web pages**	L&H Chs. 4 & 5; Duckett Chs. 1, 2 & 18
	Sep 12	Basic design	
	Sep 14	IDE and basic HTML5	
Week 4		**Basic web pages**	L&H Chs. 6 & 7; Duckett Chs. 3-6
	Sep 19	Tables, images, and more	
	Sep 21	Uploading data to server	
Week 5		**Images**	Handouts
	Sep 26	Exam 1	
	Sep 28	Creating images with GIMP	
Week 6		**Advanced images**	L&H Ch. 11
	Oct 3	Advanced techniques in GIMP	
	Oct 5	Image formats, more design	
Week 7		**Advanced design**	L&H Ch. 8
	Oct 10	*No class - October Break*	
	Oct 12	Design principles and practice	

Course Schedule (continued)**:**

Week #	Date	Topic(s)	Reading (see notes below)
Week 8		**CSS**	L&H Ch. 9; Duckett Ch. 10
	Oct 17	Intro to CSS	
	Oct 19	Text and alignment	
Week 9		**Using CSS**	Duckett Chs. 12 & 13
	Oct 24	Boxes	
	Oct 26	Exam 2	
Week 10		**Advanced CSS**	Duckett Chs. 7, 14 & 16
	Oct 31	Lists, tables, and forms	
	Nov 2	Layout	
Week 11		**Animation**	Course web page; Duckett Ch. 15
	Nov 7	CSS animation	
	Nov 9	Other techniques	
Week 12		**Responsive design**	Course web page
	Nov 14	Viewports	
	Nov 16	Exam 3	
Week 13		**More responsive design**	Handouts
	Nov 21	Site design and implementation	
	Nov 23	*No class - Thanksgiving Break*	
Week 14		**Web programming**	Notes
	Nov 28	Forms	
	Nov 30	Basic JavaScript	
Week 15		**JavaScript**	Notes
	Dec 5	Basic math and the DOM	
	Dec 7	Clean up	
Week 16		**Finals Week**	
		Final exam Tuesday, 12/15 9:00 AM	Whew!

Notes:

- L&H refers to the **4th edition** of the Lynch and Horton textbook.
- The reading includes items on the web, as mentioned in class.
- There will be exam questions based on the reading that we will **not** formally cover in class.