

O'REILLY WEB STUDIO

Learning

*By the author of the bestselling  
Web Design in a Nutshell*

# Web Design

*A Beginner's Guide to  
HTML, Graphics, and  
Beyond*

**Jennifer Niederst**



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A Beginner's Guide to HTML, Graphics, and Beyond

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# Learning Web Design

by Jennifer Niederst

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# Preface

Over the past few years, I've had the opportunity to teach web design to hundreds of absolute beginners. My classes and workshops have been filled to capacity with seasoned graphic designers, office assistants, recent college graduates, programmers looking for a more creative outlet, work-at-home moms, and anyone else looking to get a start in web design. Despite the variety of backgrounds, I find that I keep hearing the same questions and concerns over and over. Similarly, I've noticed that there are certain concepts that regularly trip up my students and other topics that they master with ease.

Through a certain amount of trial and error, I've developed a successful method for teaching beginning web design, and that method forms the structure for this book. Reading this book is a lot like sitting in my classroom!

I wrote my last book, *Web Design in a Nutshell* (O'Reilly, 1999), because it was the book I needed to do my job as a web designer. I've written this book because it is the book I wish I had been able to give my students. While *Web Design in a Nutshell* is comprehensive and contains detailed explanations, it is most appropriate for intermediate-level and professional web designers. *Learning Web Design* addresses the specific needs and concerns of beginners. I like to think of it as the "prequel" to the Nutshell book.

Although this book is for newcomers, I haven't "dumbed down" or glossed over anything. I dig deep into HTML coding and web graphics production. You will certainly find plenty of technical information, as you'd expect in a book from O'Reilly.

However, I do assume you have a certain level of knowledge. Obviously, you'll need to know your way around a computer and have a basic familiarity with the Web, even if you've just surfed a little. Also, this book doesn't teach basic principles of graphic design such as color theory, type design, or balance and proportion. However, I do provide some design tips in Chapter 19, Web Design Dos and Don'ts. Finally, I assume that you know how to use an image editing software package to create graphics; I'll teach you how to make them appropriate for the Web.

## TIP

Be sure to visit the companion web site for this book at [www.learningwebdesign.com](http://www.learningwebdesign.com). It features color charts, lists of links from the book, updates, and other good stuff.

Whenever possible, I provide pointers on how current web design tools, both for authoring web pages and creating web graphics, can help you create web sites more quickly and easily. These tools have come a long way in the past few years, and I wholeheartedly recommend that you take advantage of them, even for professional-level work. Unfortunately, I can't include every available web-related product in this book, so I've stuck with the most popular tools: Dreamweaver, GoLive, and FrontPage for web authoring, and Photoshop, Fireworks, and Paint Shop Pro for creating web graphics. In most cases, the general principles apply to whichever tool you prefer, so don't be dismayed if your favorite tool isn't featured here. If it works for you, that's all that matters.

Whether you are reading this book on your own or using it as a companion to a web design course, I hope it gives you a good head start toward becoming a web designer. And more importantly, I hope you have fun!

## Contents

The book is divided into four parts, each covering a general subject area.

### Part I: Getting Started

Part I provides answers to the common questions people have when getting started in web design. It lays a foundation for understanding the medium, before jumping into the nitty-gritty of tags and file formats.

Chapter 1, *Where Do I Start?*, answers the big questions: where to start, what you need to learn, what you need to buy, and so on.

Chapter 2, *How the Web Works*, introduces the Web, URLs, servers, browsers, and the anatomy of basic web pages.

Chapter 3, *Getting Your Pages on the Web*, provides a step-by-step demonstration of how to upload a web page. This chapter also addresses finding a hosting service and registering domain names.

Chapter 4, *Why Web Design Isn't Like Print Design*, is a summary of the unknown factors that affect the web design process, as well as tips for coping with them.

Chapter 5, *The Web Design Process*, takes you through the steps of creating a web site, from conceptualization through final testing.

### Part II: Learning HTML

Part II focuses on HTML tags and their uses. I provide complete instructions for tagging by hand, and also offer tips on using popular web authoring tools that can do the job for you.

Chapter 6, *Creating a Simple Page*, shows how to create a basic web page, and includes explanations of how HTML works and the tags necessary to structure a document.

Chapter 7, *Formatting Text*, explains all the tags and attributes used to control the display of type in web pages.

Chapter 8, *Adding Graphic Elements*, explores the HTML tags related to adding graphics and horizontal rules to the page.

Chapter 9, *Adding Links*, focuses on the tags used for adding hypertext links to a page.

Chapter 10, *Tables*, provides a thorough introduction to tables: how they're used, how they're tagged, and how they can go wrong.

Chapter 11, *Frames*, covers the structure and creation of framed documents, including explanations of frame-related HTML tags as well as tips and tricks for using frames effectively.

Chapter 12, *Color on the Web*, explains the options for specifying colors for HTML elements.

## **Part III: Creating Web Graphics**

Part III covers what you need to know about creating graphics for the Web. I provide background information on web graphics file formats, overviews of available tools, and practical tips for graphics production and optimization.

Chapter 13, *All About Web Graphics*, introduces important concepts that apply to all web graphics: appropriate file formats, image resolutions, production tips, and more.

Chapter 14, *Creating GIFs*, discusses all aspects of creating graphics in the GIF format, including transparency, optimization tips, and the web palette.

Chapter 15, *Creating JPEGs*, describes the process of creating and optimizing JPEGs.

Chapter 16, *Animated GIFs*, looks at the creation and optimization of animated GIFs.

## **Part IV: Form and Function**

Part IV returns to the big-picture issues of what makes a web site work well and look professional.

Chapter 17, *Web Design Techniques*, uses a combination of the skills established in Parts II and III to create a number of common web design elements.

Chapter 18, Building Usable Web Sites, introduces the basic principles of information design, interface design, and navigation.

Chapter 19, Web Design Dos and Don'ts, provides a rapid-fire list of tips for what to do and what *not* to do in web design.

Chapter 20, How'd They Do That: An Introduction to Advanced Techniques, introduces advanced techniques and technologies, so you can recognize them when you see them.

## Conventions Used in This Book

The following typographic conventions are used in this book:

### *Italic*

Used to indicate URLs, email addresses, filenames, and directory names, as well as for emphasis.

### Colored roman text

Used for special terms that are being defined and for cross-references.

### Constant width

Used to indicate code examples and keyboard commands.

### Colored constant width

Used to indicate HTML tags and attributes, and used for emphasis in code examples.

### *Constant width italic*

Used to indicate placeholders for values in HTML attributes.

**G** Used to indicate a figure that appears in full color in the gallery insert.

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# Getting Started

There's a lot more to the art of web design than HTML and GIF files. If you're just getting started, chances are you have some big questions. Where do I start? How does it all work? How do I actually get my stuff on the Web? How is web design different from print design?

Part I answers all of these questions and more. Before we get into the nitty-gritty of tags and file formats, it is important that you have a good feel for the web design environment. Once you understand the medium and its quirks, you'll have a good head start toward using your tools and making design decisions. All the rest will fall into place.

## IN THIS PART

- Chapter 1, *Where Do I Start?*
- Chapter 2, *How the Web Works*
- Chapter 3, *Getting Your Pages on the Web*
- Chapter 4, *Why Web Design Isn't Like Print Design*
- Chapter 5, *The Web Design Process*



# Where Do I Start?

The buzz about the Web has been so loud it is impossible to ignore. For many people, it's a call to action—a new career opportunity, an incentive to keep up with competitors, or just a chance to get stuff out there for the world to see. But the Web can also seem overwhelming.

Through my experience teaching web design courses and workshops, I've had the opportunity to meet people of all backgrounds who are interested in learning how to build web pages. Allow me to introduce you to just a few:

“I've been a print designer for 17 years, and now all my clients want web sites.”

“I work as a secretary in a small office. My boss has asked me to put together a small internal web site to share company information among employees.”

“I've been a programmer for years, but I want to try my hand at more visual design. I feel like the Web is a good opportunity to explore new skills.”

“I am an artist and I want to know how to get samples of my paintings and sculpture online.”

“I'm right out of college and I heard that there are lots of jobs in the web design field.”

“I'm a designer who has watched all my colleagues switch to web design in the last few years. I'm curious about it, but I feel like I'm too late.”

Whatever the motivation, the first question is always the same: “Where do I start?” With something as seemingly vast and fast-moving as the Web, it's not easy to know where to jump in. But you have to start somewhere.

In this chapter, I will answer the most frequently asked questions from people who are ready to make the leap into web design.

### IN THIS CHAPTER

Am I too late?

Where do I start?

What do I need to learn?

Do I need to learn Java? What other languages do I need to know?

What software and equipment do I need to buy?

## Am I Too Late?

That's an easy one—absolutely not! Although it may seem that everyone in the whole world has a personal web page, or that your colleagues are all light years ahead of you in web experience, I can assure you that you're not too late. Furthermore, there is plenty of room for you in the business. The industry as a whole is thirsty for folks who know how to make web pages (even at an entry level) and the opportunities continue to expand.

Keep in mind that this is a medium and an industry in its infancy. You're still in time to be a pioneer!

## Where Do I Start?

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*The first step is understanding the fundamentals of how the Web works, including a working knowledge of HTML, the role of the server, and the importance of the browser.*

The first step is understanding the fundamentals of how the Web works, including a working knowledge of HTML, the role of the server, and the importance of the browser. This book has been written specifically to address these topics, so you are certainly on the right track. Once you learn the fundamentals, there are plenty of resources on the Web and in bookstores for you to further your learning in specific areas.

One way to get up to speed quickly is to take an introductory web design class. If you don't have the luxury of a full-semester course, even a week-end or one-day seminar can be extremely useful in getting over that first hump.

If your involvement in web design is purely at the hobbyist level, or if you have just one or two web projects you'd like to publish, you may find that a combination of personal research (like reading this book) and solid web-design tools (such as Macromedia Dreamweaver) may be all you need to accomplish the task at hand.

If you are interested in pursuing web design as a career, I recommend learning enough to put together some sample web sites for yourself or your friends, just to show your stuff to potential employers. Getting an entry-level job and working as part of a team is a great way to learn how larger sites are constructed and can help you decide which specific area of web design you would like to pursue.

## What Do I Need to Learn?

This one's a big question. The answer depends on where you are starting and what you want to do. I know, I know, that answer sounds like a cop-out, but it really is true, given the wide variety of tasks involved in web design.

The term "web design" has become a catch-all for a process that actually encompasses a number of different disciplines, from graphic design to programming. We'll take a look at each of them.

If you are designing a small web site on your own, you will need to wear many hats. The good news is that you probably won't notice. Consider that the day-to-day upkeep of your household requires you to be part-time chef, housecleaner, accountant, diplomat, gardener, and construction worker—but to you it's just the stuff you do around the house. In the same way, as a solo web designer, you'll be part-time graphic designer, writer, producer, and information architect, but to you, it'll just feel like “making web pages.” Nothing to worry about.

Large-scale web sites are almost always created by a team of people, numbering from a handful to hundreds. In this scenario, each member of the team focuses on just one facet of the design process. If you are not interested in becoming a jack-of-all-trades solo web designer, you may choose to specialize and work as part of a team. If that is the case, you may be able to simply adapt your current set of skills and interests to the new medium.

The following are some of the core disciplines involved in the web design process, along with brief descriptions of the skills required in each area.

## Graphic Design

Because the Web is a visual medium, web pages require attention to presentation and design. The graphic designer makes decisions regarding everything you see on a web page: graphics, type, colors, layout, etc. As in the print world, graphic designers play an important role in the success of the final product. If you work as a graphic designer in the web design process, you may never need to learn any programming. (I didn't!)

If you are interested in designing commercial sites professionally, I strongly recommend formal graphic design training as well as a strong proficiency in Adobe Photoshop (the industry standard). If you are already a graphic designer, you will be able to adapt your skills to the Web easily.

Because graphics are a big part of web design, hobbyist web designers will need to know how to use some image editing software, at minimum. In addition, you may also want to do some personal research on the fundamentals of good design. I recommend *The Non-Designer's Web Book* by Robin Williams (well-known for her popular *The Non-Designer's Design Book*) and John Tollett (Peachpit Press, 1998). It provides sound graphic design advice as applied to the web medium. For more general background on design principles, check out *Design Basics, Fifth Edition* by David Lauer and Stephen Pentak (Harcourt College Publishers, 2000).

### AT A GLANCE

“Web design” actually combines a number of disciplines, including:

- Graphic design
- Interface design
- Information design
- HTML production
- Programming
- Multimedia



## Web Design Skills of Working Web Designers

### Adam Gibbons

Senior Designer at a large web marketing firm

#### DOES:

- Information architecture
- Interface design
- Graphic production
- HTML production (with authoring tool)

#### DOESN'T DO:

- JavaScript
- DHTML
- Programming

### Jennifer Niederst

Freelance web designer  
[www.littlechair.com](http://www.littlechair.com)

#### DOES:

- Graphic design and production
- Interface design
- Information design
- Writing/content development
- Basic HTML production
- Style sheet creation

#### DOESN'T DO:

- JavaScript
- Back-end programming (CGI, XML)

### Jason Warne

Senior Designer at a large web development company

#### DOES:

- Interface design
- Graphic production
- Multimedia production (Flash)

#### DOESN'T DO:

- HTML production
- JavaScript
- Programming

## Interface Design

If graphic design is concerned with how the page looks, interface design focuses on how the page works. The interface of a web site includes the methods for doing things on a site: buttons, links, navigation devices, etc., as well as the functional organization of the page. In most cases, the interface and graphic design of a site are inextricably entwined. I discuss interface design further in Chapter 18, *Building Usable Web Sites*.

Often, the interface design falls into the hands of a graphic designer by default; in other cases, it is handled by an interface design specialist. Many interface designers have backgrounds in software design. It is possible to find courses on interface design; however, this is an area that you can build expertise in by a combination of personal research, experience in the field, and common sense.

## Information Design

One easily overlooked aspect of web design is information design—the organization of content and how you get to it. Information designers (also called “information architects”) deal with flow-charts and diagrams and may never touch a graphic or text file; however, they are a crucial part of the creation of the site.

Some information designers have a background in the Library Sciences. It is possible (but not simple) to find courses specifically about information design, although they are likely to be at the graduate level. Again, some personal research and experience working on a team will go a long way toward rounding out this skill. We will look at some basic principles of information design in Chapter 18.

## HTML Production

A fair amount of the web design process involves the creation and troubleshooting of the HTML documents that make up a site. Production people need to have an intricate knowledge of HTML (the tagging language used to make web documents), and usually some additional scripting or programming skills. At large web design firms, the team that handles HTML and coding is sometimes called the “development” department.

Fortunately basic HTML is easy to learn on your own, and there are new and powerful tools that can reduce errors and speed up the production process.

## Programming

Advanced web functionality (such as forms and interactivity) requires traditional programming skills for writing scripts, programs, and applications, and for working with databases, servers, and so on. The stuff