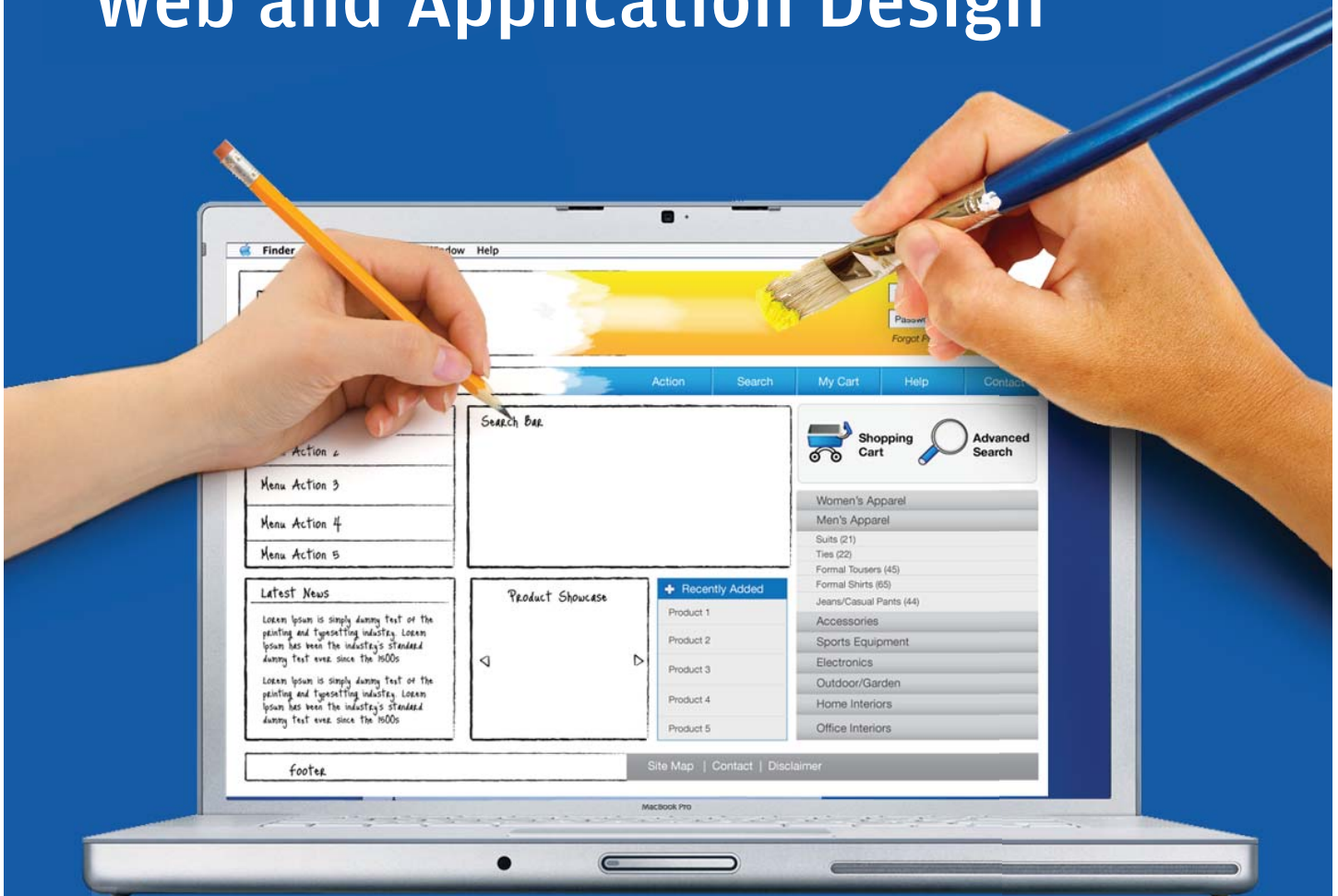


# The Science and Art of Effective Web and Application Design



LEARN PROVEN USER-CENTERED  
DESIGN PRINCIPLES

**3** day course

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# The Science and Art of Effective Web and Application Design

## Why take this course?

Designing intuitive and effective user interfaces is both science and art. During this course, participants will learn how to apply research-based and field-tested Web and application design principles and methodologies.

Initially they will focus on the four foundational layers of the interface: Navigation, Presentation, Content, and Interaction. Participants will then be provided with the framework and methodology needed to support rapid prototyping initiatives. Finally, they will extend their sphere of influence through the application of accessibility and cross-cultural design methods.

### What you'll learn

- › How to implement user-centered requirements into usable designs
- › How to integrate the focal points of visual design: Navigation, Presentation, Content, and Interaction
- › How Web site and application design strategies differ and overlap

## General Course Information

### What You Get

- › A comprehensive student manual
- › Workbook and Resource Guide that contains:
  - Course exercises
  - Useful publication and Web site references
  - User interface control selection guide
  - Glossary with annotations and illustrations
  - Quick reference job aids

### Who Should Attend

Those involved in the design and development of Web, e-commerce, informational and promotional sites, Intranets, and applications.

### Prerequisites

There are no prerequisites to attend this course

## Course Objectives

### Participants will learn to:

- › Identify, select, and implement appropriate navigation models used to build intuitive navigation structures
- › Make better decisions and recommendations to improve visual design, including: layout, color, graphics and icons, and text
- › Implement effective usability-based content organization and treatment methods
- › Ensure intuitive interaction through appropriate UI control selection and error and feedback design
- › Increase design efficiency using Web and application standards
- › Extend their UCD sphere of influence into the domains of user experience, accessibility, and cross-cultural design

“There’s science behind a usable design. When you combine science with best practice, then you get a truly usable and elegant interface. In this course you’ll learn how to design usable interfaces, and the underlying science that makes them usable.”



**Mary Michaels**, MBA, CUA  
Director of Training

# Course Outline

## 1 Design is Science and Art

- › Scientific models in user-centered design (UCD)
- › Definition of UCD
- › Characteristics of usable designs
- › UCD Benefits

*Exercise: Designing for functional requirements*

*Exercise: Conduct a design heuristic evaluation*

## 2 Navigation

- › Characteristics of usable navigation
- › Primary navigation systems
  - Hierarchical models
  - Persistent design systems
  - Sequential navigation
  - Search
- › Supplemental navigation
  - Index
  - Breadcrumbs
  - Quick links
- › Multiple systems navigation design

*Exercise: Select appropriate navigation models*

## 3 Presentation

- › Visual-cognitive processing
  - Eye movement and eye tracking
  - Gestalt principles of visual design
- › Layout

*Exercise: Evaluate and redesign a cluttered screen*

- › Color
- › Graphics
- › Text

## 4 Content

- › Printed vs. online content
- › Writing for clarity
  - Writing style
  - Word choice
  - Mechanics
- › Methods that facilitate scanning
  - Writers' pyramid
  - Headings, bulleted and numbered lists

*Exercise: Sharpen writing skills*

## 5 Interaction

- › Factors that influence interaction design
- › User interface controls
  - Data entry
  - Navigation and action
  - Selection

*Exercise: Selecting appropriate UI Controls*

- › Error handling and prevention
- › Feedback

*Exercise: Design an effective feedback message*

## 6 Screen Elements and Wireframing

- › Screen elements
- › Wireframing
  - Low fidelity
  - High-fidelity
- › Effective prototyping strategies

*Exercise: Build a paper wireframe*

## 7 Accessibility

- › Types of disabilities
  - Vision
  - Hearing
  - Motor
  - Cognitive
- › Assistive technologies
- › Accessibility laws
  - Americans with Disabilities Act
  - US Rehabilitation Act
  - International Laws
- › Accessibility guidelines
  - Section 508 Guidelines
  - Accessibility Guidelines (WCAG 2.0)
  - Web Accessibility Initiative (WAI)
- › Evaluating for accessibility

*Exercise: Conduct a site review for accessibility*

## 8 Internationalization

- › Internationalization, globalization, and localization
- › Multicultural considerations
- › Internationalization design process and usability testing

## 9 Beyond Design Knowledge

- › Barriers to implementing UCD practices
- › UCD practitioners' knowledge, skills, and abilities
- › Academic training and HFI certification
- › UCD and HCI professional organizations

“I have a better understanding of how to design navigation and interaction points, resulting in increased confidence—now I will be a more effective leader in my organization. I really liked that the information presented in the course was backed by actual research and real-world examples.”

**Christine J. Tahvonen** –  
TransUnion

## Our Guarantee of Your Satisfaction

*Human Factors International, Inc. intends that all participants will benefit from the seminar. We offer the best possible training in this field. If at any time during the first day of the course a participant notifies the instructor of his or her desire to withdraw, he or she may leave and receive a full refund. There is absolutely no risk to the participants or their companies.*

**Register online now!**

[www.humanfactors.com/training/schedule.asp](http://www.humanfactors.com/training/schedule.asp)

## Certification

### CUA Certification

Become a Certified Usability Analyst™ (CUA) with HFI's certification program. CUAs take courses in all the key areas of software usability, then pass an examination demonstrating their mastery.

- Course 1. User-Centered Analysis and Conceptual Design
- Course 2. The Science and Art of Effective Web and Application Design
- Course 3. Practical Usability Testing
- Course 4. Putting Research into Practice

### CXA Certification

The Certified User Experience Analyst (CXA) certification documents your grasp of advanced skills in persuasion engineering, strategy, and innovation.

- Course 1. How to Design for Persuasion, Emotion, and Trust (PET design™)
- Course 2. The PET Architect
- Course 3. Design for The Big—User-Centric Innovation and Strategy
- Course 4. How to Support Institutionalization of a Mature UX Practice

### Advantages of Certification

- › Get certified by the world's leading user-centered design firm
- › Become a recognized usability authority within your company with inclusion in HFI's official CUA directory
- › Join CUA Central—the online community of CUAs
- › Gain skills to help your company increase user satisfaction in products and services
- › Achieve growth and progress in your career path

“The certification served as a reinforcement for what I’m doing, so I am more confident in presenting a concept or design.”



**Jim O'Brien** –  
Senior Interaction Designer  
AutoTrader.com

“The training was great, very effective. Now, having been tested and certified by HFI, I have more confidence in addressing usability challenges.”



**Chow Sok Mui Murie** –  
Senior Creative Consultant  
NCS, Singapore

**For more information:**

[www.humanfactors.com/training/certification.asp](http://www.humanfactors.com/training/certification.asp)

## Featured Instructors



Drew Falk, MS, CUA



Arno Bublitz



Hitesh Agrawal, MS, CUA



Steve Fleming, CUA

### A partial list of companies where we have taught Human Factors courses

- Agilent Technologies
- Airborne Express
- Ameritech
- AT&T Information Systems
- The BBC World Service
- Blue Cross/Blue Shield
- ChevronTexaco
- Cognizant Technology Solutions
- Deloitte Consulting
- dotMobi
- Ericsson Information Systems
- Ernst & Young
- FedEx
- Fidelity Investments
- General Motors
- Hewlett-Packard
- IBM
- Library of Congress
- McKesson HBOC
- MCI
- Metropolitan Life Insurance
- Motorola
- National Semiconductor
- Nextel
- Northern Telecom
- Pay Pal
- Prudential Life
- RBC Royal Bank
- SAP / SAP Norway
- Social Security Administration
- Standard Bank SA
- Vodafone
- Wipro technologies

### Onsite Training

If you have a group of people who would like to attend this course, please contact us to discuss having a private course at your company or hosting a public course.

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