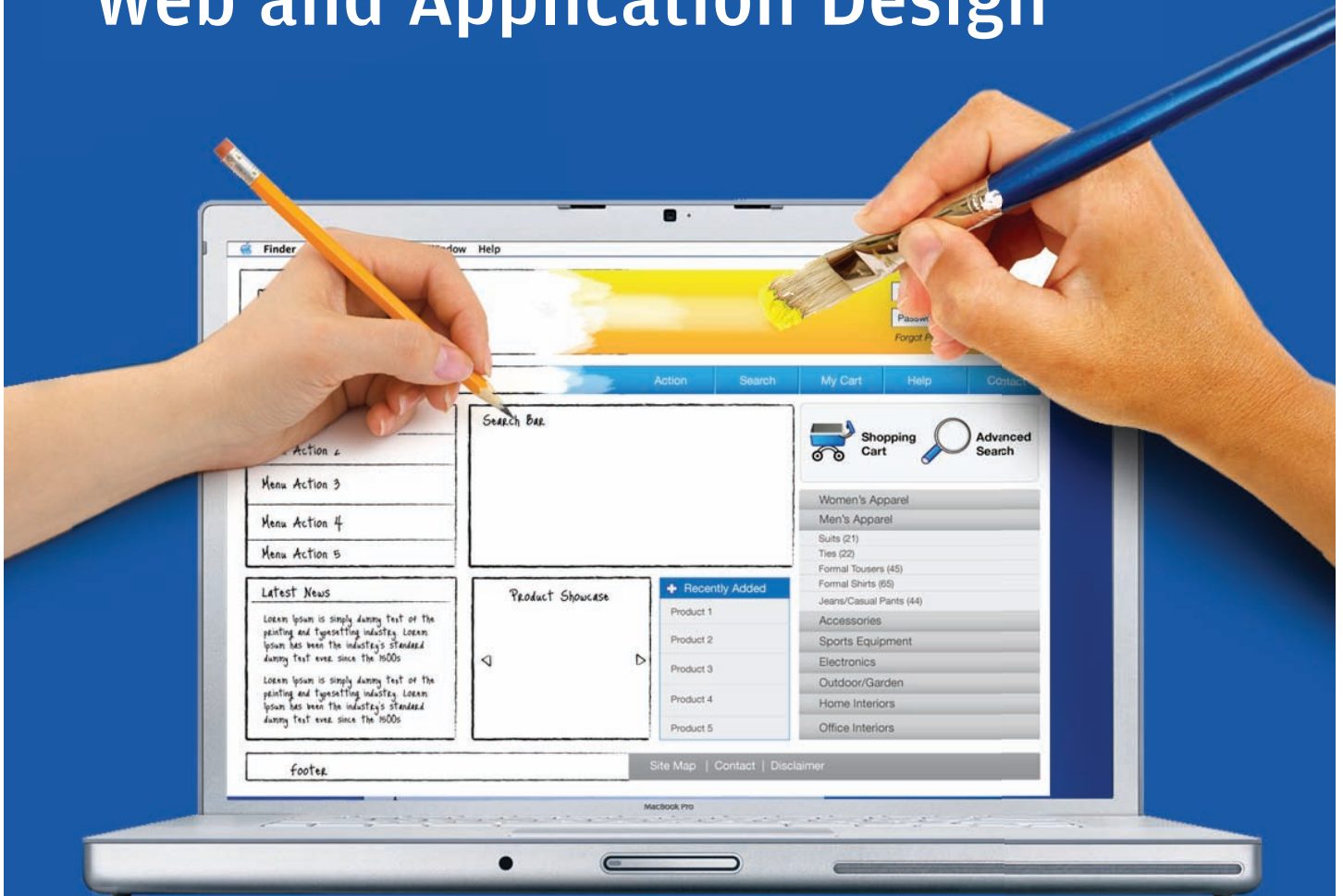# The Science and Art of Effective Web and Application Design

LEARN PROVEN USER-CENTERED
DESIGN PRINCIPLES

3 day course

www.humanfactors.com

Human Factors International

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 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
  • 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 e-commerce, sites, 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."
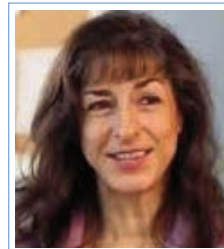
Mary M. Michaels
BFA, MBA, CUA, CXA
Global Director of Training
Evolution, Certification, &
Strategic Advisor

Course Outline

1 Design is Science and Art
› Scientific models in user-centered design (UCD)
› Definition of UCD

Exercise: Designing for functional requirements

› Characteristics of usable designs
› UCD Benefits

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. digital 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 and selection
  • Navigation and action
  • Multi-function controls

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

› Why design for accessibility
› Types of disabilities
  • Vision
  • Hearing
  • Motor
  • Cognitive
› Assistive technologies
› Accessibility 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 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 now!

www.humanfactors.com/training

Certification

Advantages of HFI Certification
› Get certified by the world's leading user-centered design firm and become a recognized UX authority
› Help your company increase user satisfaction in products and services
› Join CUA Central – exclusive online community for CUAs and CXAs
› Achieve growth and progress in your career path

HFI offers two kinds of certification, each requiring an examination to demonstrate mastery. Moreover, HFI offers optional courses to help you prepare for each exam.

CUA Certification
Become a Certified Usability Analyst™ (CUA) with HFI's certification program. CUAs must pass an examination demonstrating their mastery in all key areas of interface usability. This certification is supported by the following courses:
Course 1. User Experience (UX) Foundations
Course 2. User-Centered Analysis and Conceptual Design
Course 3. The Science and Art of Effective Web and Application Design
Course 4. Practical Usability Testing

CXA Certification
The Certified User Experience Analyst™ (CXA) certification indicates advanced skills in persuasion, innovation, strategy, and institutionalization of UX. CUA certification is required to take the CXA exam. This certification is supported by the following courses:
Course 1. How to Design for Persuasion, Emotion, and Trust (PET design™)
Course 2. The PET Architect
Course 3. Omni-Channel UX Strategy and Innovation: An Ecosystem & Future Modeling Approach
Course 4. How to Support Institutionalization of a Mature UX Practice

"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/certification

Featured Instructors

Cathline Marshall
User Experience Strategist
BA, CUA

Girish Rao
Center of Excellence Lead
MS, CUA, CXA

David Bell
User Experience Strategist
BSc, MSc, CUA

Nina Vaught
Senior Usability Specialist
BA, 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

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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