Responsive Web Design with HTML5 and CSS3

Course Contents:

1 **Getting Started with HTML5, CSS3 and Responsive Web Design**
- Why smart phones are important
- Are there times when a responsive deign isn't the right choice?
- Defining of responsive web design
- Example of responsive web design
- Get your viewport testing tools here!
- HTML5 – why it's so good
- New, semantically meaningful HTML5 tag elements
- CSS3 enables responsive designs and more
- How can CSS3 solve everyday design problems?
- Can HTML5 and CSS3 work for us today?

2 **Media Queries: Sporting Differing Viewports**
- You can use media queries today
- Why responsive designs need media queries?
- Media query syntax
- What can media queries test for?
- Using media queries to alter our design
- The best way to load media queries for responsive designs
- Our first responsive design
- Responsive designs- making images as economical as possible
- Content clipping in smaller viewports
- Stopping modern mobile browsers from auto-resizing the page
- Fixing the design for different viewport widths
- Media queries-only part of the solution
- We need a fluid layout

3 **Embracing Fluid Layouts**
- Why proportional layouts are essential for responsive designs
- Amending a design from fixed to proportional layout
- A formula to remember
- Setting a context for proportional elements
- Using ems rather than pixels for typography
- Fluid images
- Making images scale with the viewport
- Serving different images for different screen sizes
- Where fluid grids and media queries come together
- CSS Grid systems
- Rapidly building our site with a Grid system

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4   HTML5 for Responsive Designs
- What parts of HTML5 can we use today?
- How to write HTML5 pages
- A sensible approach to HTML5 markup
- New semantic elements in HTML5
- The semantic elements in HTML5
- The HTML5 outline algorithm
- Practical usage of HTML5's structure elements
- What about the main content of the site?
- HTML5 text-level semantics
- Applying text-level semantic to our markup
- Embedding media in HTML5
- Adding video and audio the HTML5 way
- Fallback for older browsers
- Responsive Video
- Offline Web Applications
- Understanding the manifest file
- Viewing the site offline

5   CSS3: Selectors, Typography, and Color Modes
- What CSS3 offers the frontend developer
- Using CSS3 to design and develop pages in the browser
- Anatomy of a CSS rule
- Vendor prefixes and how to use them
- Quick and useful CSS3 tricks
- CSS3 multiple columns for responsive designs
- New CSS3 selectors and how to use them
- CSS3 attributes selectors
- CSS3 substring matching attributes selectors
- A practical, real world example
- CSS3 structural pseudo-classes
- Custom web typography and font rules
- New CSS3 color formats and alpha transparency
- Alpha Channels

6   Stunning Aesthetics with CSS3
- Text shadows with CSS3
- Color Properties
- Pixels, em, or rem
- Shadow Properties
- Gradient Properties
- Responsive considerations for CSS3

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- Bring CSS3 properties together
- Background Images Properties
- Sizeable icons which are perfect for responsive designs

7   CSS3 Transitions, Transformations, and Animations

- What CSS3 transitions are and how we can use them
- The properties of a transition
- Understanding timing functions
- Transform Properties
- Breaking down the 3D effect
- Animating with CSS3
- Putting CSS3 transformations and animations together

8   Conquer Forms with HTML5 and CSS3

- HTML5 forms
- Understanding the component parts of HTML5 forms
- HTML5 input types & new elements
- Styling HTML5 forms with CSS3
- Form-specific CSS3 pseudo class selectors

9   Solving Cross-browser Responsive Challenges

- Progressive enhancement versus graceful degradation
- Modernizr-the frontend developer's Swiss army knife
- Fix styling issues with Modernizr
- Modernizr adds HTML5 element support for old IE
- Add min/max media query capability for Internet Explorer 6,7, and 8