

Course Outline



Tel: +44 (0) 118 979 4000 Fax: +44 (0) 118 979 4000

Email: training@ptr.co.uk Web: www.ptr.co.uk

JavaScript Advanced

Course Description:

JavaScript is a mature, standards-based and widely available scripting language, embedded in many browsers, used mainly to add flexibility and interactivity to web pages without necessarily requiring further server interaction. In addition to its built-in-facilities, there are freely-accessible libraries of JavaScript code to help build typical applications.

This two-day course follows on from the three-day JavaScript Introduction. It covers considerably more on arrays and objects, the DOM in much more detail, use of cookies, interacting with stylesheets, and extra aspects of forms with JavaScript. There is an emphasis on complete applications, also working with other tools including server applications.

Pre-requisites:

This course is for Web developers and designers looking to extend the functionality of their web pages beyond pure (X)HTML in a rich and sophisticated. Students should be thoroughly with the techniques of creating web pages using (X)HTML, including forms. They should be comfortable in using one or more web browsers such as Internet Explorer, Firefox, Opera and Google Chrome.

Students should have knowledge of JavaScript equivalent to JavaScript Introduction. For one organisation, for those without such experience, the Introduction and Advanced topics, and perhaps others, may be selectively combined.

Course Content:

- **More advanced arrays**
- **-Slices - selecting contiguous elements**
- **-Further sorting notions**
- **-Multidimensional arrays**

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- **-Processing and sorting nested data structures**
- **-Associative arrays**
- **-Prototype's extra Array methods**
- **-Prototype's Enumerable and Hash classes**
- **More on functions and objects**
- **-Anonymous functions**
- **-Adding methods to built-in and custom objects**
- **-prototype properties**
- **-Different ways of creating custom objects**
- **Prototype's language extensions**
- **-Extra Object and Function methods**
- **-The Class class**
- **-String and RegExp extensions**
- **-Template class**
- **-Class inheritance**
- **DOM Level 1 and 2 techniques**
- **-Node and Element objects**
- **-Traversing HTML documents**

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- **-Modifying the structure**
- **-Keyboard event handling**
- **-DOM2 event handling**
- **-More on the Prototype library**
- **Cross-browser issues**
- **-Handling exceptions**
- **-The multiplicity of browser versions**
- **-Browser detection techniques**
- **-Object detection**
- **-Testing strategies**
- **-Prototype's \$ and other methods**
- **Pseudodatabases and JavaScript**
- **-Internally representing large data sets**
- **-Dynamic documents**
- **Stylesheets and JavaScript**
- **-Scripting in-line styles**
- **-Computed styles**
- **-Interacting with stylesheet classes**
- **-Representing stylesheets**

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- **-Prototype's \$\$ and other methods**
- **Cookies**
- **-Nature, structure and application of cookies**
- **-Cookie duration, visibility and security**
- **-Creating, retrieving, updating and deleting**
- **-Cookie libraries**
- **-Alternatives to cookies**
- **Form handling: the Prototype library**
- **-The \$F utility**
- **-Form and Form.Element methods**
- **-Form.Observer and Form.Element.Observer**
- **Embedded objects and JavaScript**
- **-Interacting with applets**
- **- Shockwave and Flash**
- **-ActiveX objects**
- **Ajax introduction**
- **-The XMLHttpRequest object**
- **-Making a data request**
- **-Handling the response: XML JSON, etc**

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- **-Synchronous vs asynchronous**
- **Ajax applications**
- **-Third-party libraries**
- **-An Ajax.Autocomplete example**
- **-Ajax.InPlaceEditor**
- **-Database access**
- **-Validation and Ajax**

Course Duration: 2 Days