# WEEK 7: INTRODUCTION TO JAVASCRIPT

INFO/CS 1300: Fall 2016

# COURSE MAP

| Topic Area | Dates | Goals | Assignments |
|---|---|---|---|
| Introduction and Infrastructure | 8/24 – 8/26 | 1-5 | All |
| HTML & Structure | 8/29 – 9/9 | 1,2 | Brief Assignments |
| CSS & Presentation | 9/12 – 9/30 | 2 | |
| Client-Side Scripting: JavaScript & jQuery | 10/3 – 10/21 | 3 | |
| Server-Side Scripting: PHP | 10/24 – 11/4 | 3 | |
| Basic User Testing | 11/7 – 11/18 | 4 | Final Project |
| Taking a Site Live | 11/21 – 12/2 | 1-5 | |

# AGENDA

- Brief recap.
- Brief introduction to JavaScript.
- Basic JavaScript demonstration.

# RECAP: WHERE WE'VE BEEN

- File management & repositories.
- Basic server use:
  - File transfer.
  - File & directory management.
- HTML: structure.
- The DOM.
- CSS: separating style from structure.
- Features:
  - Sticky header.
  - Columns.
  - Colors.
  - Fonts.
- Basic responsive design.

# BASIC TERMS: CLIENT-SIDE SCRIPTS

- Client-side: runs on the client, not the server.
  - JavaScript historically has been client-side.
  - Can now run on server or client.
  - We will study client-side JavaScript.
  - PHP is a server-side language (usually).
- Scripting (controversial definition!):
  - Scripts or automates tasks.
  - Focus on tasks, not applications, per se.
  - Interpreted, not compiled.
- Linter (JSLint in Brackets): catches syntax errors, suggests best practices.
- Browser console: catches errors. Similar to validation.

# BASIC TERMS: JAVASCRIPT

- Function: a group of related commands to be run as a group.
  - Notice onload method (see below for method).
- Array: container object, multiple values.
  - Values can be of same or different types.
  - Accessed by numerical index, starting with 0.
    - `monthNames[0] = "January"`.
- Variable: container for a value.
  - Example: `var this_month = monthNames[9]`, i.e., October.
  - Notice zero-based numbering.
- Object (in OOP): combination of data and methods.
  - Data in variables.
  - Method = function attached to object.

# BASIC TERMS: JAVASCRIPT

- Script placement:
  - Code will run where script is placed.
  - Links to scripts often placed at bottom of HTML file.
  - Notice `window.onload` method call.
- The DOM tree is an object that can be modified in real time.
- Control structures: control factors such as program flow and state. Common examples:
  - Branching with `if-then-else`.
  - Looping with `for`.