

## CNMT 210 Bonus Assignment (OPTIONAL)

Due Date: 12/15/2015 8:00am Central Time (NO LATE ASSIGNMENTS ACCEPTED)

Points: 10

This assignment demonstrates your ability to build a web page that uses JavaScript to calculate the circumference of a circle along with a demonstration of your HTML and CSS abilities.

The page should contain roughly the same look and feel as the Box Model assignment we worked on in week 6. The page will contain a form that asks for the radius through a text box. On submit, JavaScript should be used to calculate the circumference. The formula for calculating circumference can use the Math.PI built-in within JavaScript. Assuming that you have the radius value from the form stored in a variable called 'radius', the JavaScript code is:

```
var circumference = 2 * Math.PI * radius;
```

The page should not use alert() to convey anything to the user. You should use the formHandler and related event code that was given in class and is on D2L. However, note that this is an individual assignment and you should not use extra (from the Internet) or shared code for the assignment other than that given in class or on D2L.

In addition to the form, there should be a sidebar that contains a link to the Wikipedia page on circumference. All CSS and JavaScript must be external to the HTML and must be valid. This assignment does not need to work in older browsers or be responsive. The assignment must work in the current version of Firefox.

There are screenshots in this document. You do not need to match the colors, borders, or fonts to the screenshots, though the overall look and feel will be graded.

The grading rubric that will be used for this assignment is contained within this document. I strongly encourage you to read through this carefully to ensure that you have met the requirements.

### Rubric

Is HTML valid and HTML5?	Yes - Continue	No - Stop here, grade = 0
Is CSS valid?	Yes - Continue	No - Stop here, grade = 0
Is JavaScript free of syntax errors, on load and on execution?	Yes - Continue	No - Stop here, grade = 0
Is JavaScript and CSS contained completely in external files?	Yes - Continue	No - Stop here, grade = 0
Are JavaScript and CSS declarations correct (including MIME type)?	Yes - Continue	No - Stop here, grade = 0
How is submit event connected?	addEventListener() (See Week 14 for example code that you should use . Only use the minimum necessary code for this assignment.)	Use of one or more inline event handler(s) - Maximum grade reduced by half, calculated based on final grade for assignment.
How is output sent to document?	createTextNode/appendChild or innerHTML? Continue with full credit	Use of alert or any other method? Maximum grade reduced by half, calculated based on final grade for assignment.
Is page formatted according to specification?	Yes - 3 points	No - 0 to 2.9 points
JavaScript validates that it has received a number and that it has received input?	Yes - 2 points	No - 0 to 1.9 points
Appropriate use of styling for errors and output?	Yes - 2 points	No - 0 to 1.9 points
JavaScript function(s) for circumference is/are minimal to perform necessary requirements?	Yes - 3 points	No - 0 to 2.9 points

The page before the form has been submitted:

The screenshot shows a web browser window with the address bar displaying `cwa.braingia.org/cnmt210/bonus/`. The page content is as follows:

# CIRCUMFERENCE CALCULATOR

**Calculate**

Radius:

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**About Circumference**

See [Wikipedia](#) for a reasonable introduction to circumference

An invalid form submitted:

Code Page

cwa.braingia.org/cnmt210/bonus/

# CIRCUMFERENCE CALCULATOR

## Calculate

Please use a number for radius

Radius:

Calculate

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### About Circumference

See [Wikipedia](#) for a reasonable introduction to circumference



Correctly filled out form, circumference calculated and sent to output:

The screenshot shows a web browser window with the address bar displaying `cwa.braingia.org/cnmt210/bonus/`. The page title is "Code Page". The main content area has a yellow background. At the top, there is a blue banner with the text "CIRCUMFERENCE CALCULATOR" in yellow. Below the banner, there is a section titled "Calculate" in orange. Under this section, the text "Circumference is 6.283185307179586" is displayed. Below this, there is a label "Radius:" followed by a text input field. A "Calculate" button is located below the input field. To the right of the "Calculate" section, there is a box titled "About Circumference" in orange. Inside this box, the text "See [Wikipedia](#) for a reasonable introduction to circumference" is displayed. At the bottom of the page, the text "Copyright © 2015 Steve Suehring" is visible.