Adding Math Using the Equation Editor

The Equation Editor is available within the HTML Editor. It enables users to insert mathematical and statistical equations into their content in the Brightspace platform. It supports the input of MathML and LaTeX, as well as a graphical editor where you can visually create equations.

There is a variety of options for adding math within the Brightspace system and many places this can be added such as quizzes, news postings, discussions, etc., anywhere where the HTML Editor appears. Knowing the options will help you plan for developing math and statistical equations.

There are 4 popular ways to add math in D2L’s products:

- Brightspace’s Graphical Editor
- LaTeX
- MathML
- Chemistry equation

Graphical Editor

The Graphical equation option offers 10 tabs of symbols, arrows, Greek letters and numbers, matrices, scripts and layouts, decorations, big operators, calculus, and context for creating math equations.

LaTeX

LaTeX is a typesetting system based on TeX. It provides a text syntax for complex mathematical formulae. Brightspace Learning Environment stores equations entered in LaTeX format as MathML to ensure consistency and accessibility.

MathML

MathML is a standard adopted by the World Wide Web Consortium (W3C). It uses XML to describe mathematical notation by capturing both its structure and content. This enables MathML to support visual display and assistive technology access.

As a standard, Brightspace Learning Environment stores and displays all equations in the MathML format, regardless of the format you use to enter equations. Brightspace Learning Environment uses the MathJax JavaScript engine to display MathML equations.

Go to MathJax.org (http://www.mathjax.org) to learn more about MathJax features.

Chemistry equation

The Chemistry equation option offers specialized chemistry symbols for inorganic chemistry formulas.
Accessing the Equation Editor

In the HTML editor, click the dropdown next to the Epsilon symbol and select a format.

![Dropdown menu with options]

Tabs in the Graphical Equation Editor

<table>
<thead>
<tr>
<th>Icon</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
</table>
| ![Chemistry tab](image) | Chemistry tab | Add specialized chemistry symbols for inorganic chemistry equations  
**Note**: This tab only appears when you select the Chemistry equation option |
| ![General tab](image) | General tab | • Add a template for building equations.  
• Add and edit text in the equation using the Cut, Copy, Paste, Undo, Color, and other text editing function |
| ![Symbols tab](image) | Symbols tab | Add mathematical symbols to equations |
| ![Arrows tab](image) | Arrows tab | Update or add arrows to equations |
| ![Greek and letters tab](image) | Greek and letters tab | Update or add uppercase and lowercase Greek characters to equations |
| ![Matrices tab](image) | Matrices tab | Update or add matrices to equations |
| ![Scripts and layout tab](image) | Scripts and layout tab | Add scripts or layouts to build equations |
| ![Decorations tab](image) | Decorations tab | Add fences such as brackets and vertical bars around text fields |
| ![Big operators tab](image) | Big operators tab | Update or add big operators to equations |
| ![Calculus tab](image) | Calculus tab | Add a template for building Calculus equations |
Keyboard shortcuts available in the Graphical Equation Editor

- Use Ctrl + f to create a fraction.
- Use Ctrl + 9 to add round brackets.
- Use Ctrl + h to create superscript.
- Use Ctrl + j to create subscript.
- Use Ctrl + z to undo your last action.
- Use Ctrl + i to create an integral.
- Use Ctrl + > to enlarge text and Ctrl + < to shrink text.

Create an Equation

1. Navigate to the HTML Editor where you want to create an equation.
2. From the Graphical equation drop-down list, do one of the following:
   - To insert a graphical equation, select Graphical equation.
   - To insert a MathML equation, select MathML equation.
   - To insert a LaTeX equation, select LaTeX equation.
   - To insert a Chemistry equation, select Chemistry equation.
3. In the Insert Equation window, enter your equation.
4. Select Insert.

Note: You may need to select the Show all components icon to see the Equation Editor icon.
An example of a graphical equation

\[ \sqrt{4} + \sqrt{16} \]