Moving Mathematics Online - Creating high quality online STEM content from existing sources

Date: January 18-19, 2021 · 12:00 - 3:00 pm EST.

What you will learn—and how you can apply it

By the end of this live, hands-on online course, you will understand:

- how to author for the web / with the web in mind
- how to preserve structure and design for both print and web
- how to adjust authoring formats for better conversion results
- core design and accessibility considerations for web content

And you will be able to:

- Convert and create online math content for teaching and learning
- Use command line based tools for conversion
- Employ MathJax as a rendering engine for the math on your website
- Improve equations and diagrammatic content for the web
- Apply a basic understanding of accessibility requirements and how to meet them
- adjust for different types of content such as slides or lecture notes.

This training is for you because...

- You’re a Faculty in Mathematics, Computer Science or similar who is teaching online.
- You work with faculty in STEM subjects.
- You want to become proficient in providing online courses and learning material.

Prerequisites

- Basic understanding of LaTeX
- You have used an ASCII editor before (i.e., not Word, LibreOffice,...)

Recommended preparation

- Assemble some small LaTeX documents of your own choosing.
- Install pandoc on your computer or get acquainted with the (limited) online version.
Learning plan

# of sessions: 2 x 2  
Session duration: 2 x 3 hours

Course schedule
- Day 1
  - Understanding the Web and authoring with the web in mind
    - Lecture with Q&A
  - Break
  - Math Input formats and their conversion
    - preserving structure
    - preserving design
    - pagination vs reflow
    - Exercise: convert some prepped documents

- Day 2
  - User Experience and Accessibility
    - basics (WCAG etc)
    - equations
    - diagrammatic content
    - Exercise: experiment with prepared content to get an understanding of
      - zoom
      - colors and contrast
      - screenreaders
      - STEM content
  - Break
  - Presenting/teaching on the web
    - slides
    - lecture notes
    - assessment
    - Exercise:
      - authoring and conversion for different use case
      - experiment with prepped content or BYOC (bring your own content)