Creating accessible and interactive documents with PreTeXt

A JMM2023 Professional Enhancement Program

Steven Clontz
Department of Mathematics and Statistics
University of South Alabama

Oscar Levin School of Mathematical Sciences University of Northern Colorado

2023 January

Abstract

This JMM Professional Enhancement Program will be held on Thursday, January 5 between 9 am - 11 am and Saturday, January 7 between 9 am - 11 am in Salon CD on the fourth floor of the Boston Marriott Copley Place.

PreTeXt¹ is a document authoring system that allows you to convert the source of your document into a variety of output formats, including fully accessible webpages, PDF, Epub, Jupyter Notebooks, and braille. This "write once, read anywhere" approach has made it a popular choice for authors of Open Educational Resources, but PreTeXt can also be used to create other kinds of mathematical documents as well. Recent updates make this process much easier; there has never been a better time to get started with PreTeXt.

Participants of this PEP will be introduced to the fundamentals of authoring documents with PreTeXt and gain the technical skills required to work with it. Specifically, participants will learn how to:

- Install all required free and open-source software
- Create a new PreTeXt document
- Write and structure content using PreTeXt markup.
- Add content to the document, including mathematics, graphics, interactive exercises, and more.
- Build accessible and interactive webpages as well as a static PDF from the same PreTeXt source.
- $\bullet~$ Easily deploy the interactive webpages online (for free).

We will also share tips for converting existing documents into PreTeXt. Prior to the PEP, participants should have some familiarity with LaTeX or other markup languages. No previous experience working with PreTeXt or HTML/XML is assumed. Participants should bring a Windows, Mac, or Linux laptop on which they can install software, or alternatively any device that can use the CoCalc.com service. Instructions for downloading and installing software will be provided prior to the PEP in this document.

¹https://pretextbook.org

1 Before We Begin...

words..

2 Write Once, Read Anywhere

 ${\rm words...}$

This document is available in HTML format at https://stevenclontz.github.io/ptx-jmm-2023/, and the same document is available in a PDF format at https://stevenclontz.github.io/ptx-jmm-2023/pdf/main.pdf.

Colophon

This book was authored in PreTeXt.