# R/LaTeX/Markdown workshop pre-requisites and EPA installation instructions

Emily Li and Erik Beck

2018

## Contents

# 1   Basic info about the workshop

| Day | Time | Room |
|---|---|---|
| **Tues, Sept 11** | **8:30-11:30am** | **C111C** |

This 1/2-day workshop will provide attendees with hands-on experience using the basics of LaTeX, Markdown, and the R package knitr. After attending this workshop, you will be able to use these tools to facilitate reproducible reports and research with R.

The draft agenda:

| Time | Topic |
|---|---|
| 8:30-8:45 | Discussion of reproducible research |
| 8:45-9:00 | LaTeX in a standalone environment |
| 9:00-9:15 | Markdown in a standalone environment |
| 9:15-9:45 | How Markdown and LaTeX can work together |
| 9:45-10:00 | BREAK |
| 10:00-10:30 | R and reproducible research tools (knitr, sweave) |
| 10:30-11:30 | Use Markdown and LaTeX with R |

# 2   You will need

It is expected that you have some familiarity with R and RStudio, can install packages from CRAN, and understand basic R syntax.

We will be using R, RStudio, and MiKTeX during this workshop. These must be installed prior to September 11.

- R, RStudio

- MiKTeX

- Your preferred TeX editor (TeXStudio, TeXWorks, ShareLaTeX, emacs, notepad, notepad++, etc.)

- R packages:

  - knitr
  - ggplot2 (or all of tidyverse)
  - pandoc

## 2.1 R and RStudio

Simply email EZTech, now "EISD", at EISD@epa.gov) and request that R and RStudio be installed on your machine. They will usually push that out within a day or so.

## 2.2 MiKTeX

1. Go to `https://usepa.sharepoint.com/sites/EZForms/SitePages/Home.aspx`

2. Under Create a Request, click on "Freeware/Shareware"

3. Fill out your employee info

4. For "Justification", say: Needed in conjunction with R and associated packages to create self-contained documentation and reports using R. This makes the paradigm of reproducible research feasible with data analysis. MiKTeX is a bundling of the TeX and LaTeX typesetting tools for Windows OS. The website for MiKTeX base download and installation is: https://miktex.org/download

5. For "Software Title", say: MiKTeX

6. Enter supervisor name

## 2.3 TeX Editor