

# SOC 4650/5650: Lecture 05 Functions

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## Packages

- measurements
- RColorBrewer
- sf
- tidyverse
  - dplyr
  - ggplot2
- viridis

## Choropleth Maps

```
ggplot2::geom_sf(.data, mapping = aes(fill = fillVar),  
  color = "hex")1
```

<sup>1</sup> See [ColorHexa.com](http://ColorHexa.com) for hex values.

## Converting Between Measurements

### Conversion Function

```
measurements::conv_unit(x, from, to)2
```

<sup>2</sup> Always use this as part of a  
dplyr::mutate() call!

### Measurement Units

```
"m2", "hectare", "km2", "ft2", "yd2", "acre", "mi2", "naut_mi2"
```

### Inside mutate()

```
dplyr::mutate(.data, newVar = conv_unit(oldVar, from, to))
```

### *Arithmetic Operators*

+ - "addition"  
- - "subtraction"  
\* - "multiplication"  
/ - "division"  
^ - "exponentiation"

### *Color Brewer*

#### *Preview Palettes*

```
RColorBrewer::display.brewer.all()
```

#### *Use Palettes*

```
RColorBrewer::scale_fill_distiller(palette = "pal",  
  trans = "reverse")
```

### *Viridis*

```
viridis::scale_fill_viridis(option = "pal")
```