TUNE-UP FOR SPRING SEMESTER

CRMDA Staff: Charlie Redmon, Chong Xing, Eric Shannon, Meghan Sullivan, Michael Wu and Zack Roman

This 2-day workshop will begin with the basics of R and move on to more advanced practices, tools and applications. It is an opportunity to develop your skills and enhance your research techniques.

Day 1 - January 11
1. R for project management & workflow
2. Import/Export data
3. Recode, subset and reshape data
4. Project help & consultations

Day 2 - January 12
1. Merge & reorganize data
2. Descriptive graphing for data exploration
3. Presentation & manuscript graphing
4. Project help & consultations

More Info & Registration
Go to crmda.ku.edu/winter-statistical-workshop
$100-$140 per person | Everyone is welcome | Computer required
Can’t attend in person? Attend remotely using zoom (kansas.zoom.us)

Questions?
Contact Auburn Packer, CRMDA Administrative Associate
crmda@ku.edu | 785.864.3353
## WinteR Workshop

### Schedule-At-A-Glance

#### DAY 1  
**Thursday, January 11**

<table>
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<th>Time</th>
<th>Session</th>
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| 9:00 - 10:20 AM | **Introduction to the Workshop and R**  
Chong Xing  
- Software Installation (have installed before the Workshop)  
  *Windows help page: https://crmda.ku.edu/windows-admin-tips*  
  *Mac help page: https://crmda.ku.edu/mac-admin-tips*  
- R Introduction  
- R for project management and workflow |
| 10:30 AM - Noon | **Data Import/Export**  
Charlie Redmon  
- Importing different file types: csv, xlsx, etc.  
- Verifying imported data  
- Recoding variables  
- Exporting data |
| 1:30 - 3:30 PM | **Data Manipulation**  
Meghan Sullivan  
Michael Wu  
Zack Roman  
- Sub-setting data sets using multiple logical conditions  
- Reshaping data from wide to long format (and vice versa) |
| 3:30 - 4:00 PM | **Project Help and Consultations** |

#### DAY 2  
**Friday, January 12**

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| 9:00 - 10:30 AM | **Data Manipulation Continued**  
Meghan Sullivan  
Michael Wu  
Zack Roman  
- Merging multiple data sets by key indicators  
- Reorganizing and sorting on multiple factors |
| 10:45 AM - Noon | **Graphing: Exploratory and Descriptive**  
Eric Shannon  
- Summary stats  
- Distribution (hist, boxplot, density plots)  
- Stats by subgroup (cross-tabulation) |
| 1:30 - 3:30 PM | **Graphing Presentation and Manuscript**  
Charlie Redmon  
Zack Roman  
- Plot demos (ggplot and base R)  
- Bar graphs/error bars  
- Scatter plots/categorical interaction (different shapes/color) |
| 3:30 - 4:00 PM | **Project Help and Consultations** |

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**crmda.ku.edu**  
**Watson Library, Room 470**  
**785.864.3353**