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| **Welcome to DCSI 605** | |
| 05/15-05/21 | **Module 1: Introduction to Data Visualization** |
| Content | * Lecture:  1. Introduction to data visualization 2. Graphics Components for Data Visualization  * Discussion: Programming for making a data visualization * Reading assignment: Online material to be posted |
| 05/22-05/28 | **Module 2: Data Manipulation with R and R Markdown file** |
| Content | * Lecture:  1. Data type and data structure in R 2. Introduction to data manipulation 3. Introduction to R Markdown  * Lab: Data Manipulation * Discussion: Find two potential datasets for your final project; * Reading Assignment: Online material to be posted |
| 05/29-06/04 | **Module 3: Common Visualization Idioms and Rule of thumb in data visualization** |
| Content | * Lecture: Common Visualization Idioms  1. Introduction to ggplot2 2. Introduction to common visualization idioms  * Lab: Boxplot and Bubble plot * Discussion: 1) Are you sure you want a pie chart? 2) Does a scatter plot prove the causation? 3) How to choose an appropriate graph for your goal? * Reading Assignment: Online material to be posted |
| 06/05-06/11 | **Module 4: Data Reduction** |
| Content | * Lecture:  1. Introduction to data reduction techniques 2. Spatial resampling  * Lab: Spatial resampling * Quiz which covers the topics in Modules 1-3 * Discussion: Assess your potential datasets for your final project * Reading: Online material to be posted |
| 06/12-06/18 | **Module 5: Temporal Visualization** |
| Content | * Lecture:  1. Introduction to time series  * Lab: Time series plot * Discussion: * Reading Assignment: Online material to be posted |
| 06/19-06/25 | **Module 6: Spatial Visualization** |
| Content | * Lecture:  1. Introduction to spatial visualization  * Lab: Spatial mapping * Reading Assignment: Online material to be posted |
| 06/26-07/02 | **Module 7: Interactive plot and Multiple view layout in R** |
| Content | * Lecture:  1. Introduction to interactive plot 2. Multiple-view layout  * Lab: Introduction to interactive plot and multiple-view layout * Reading Assignment: Online material to be posted |
| 07/03-07/09 | **Module 8: JavaScript** |
| Content | * Lecture:  1. Introduction to JavaScript 2. Introduction to D3.js  * Lab: D3.js graphing * Reading Assignment: Online material to be posted * Quiz which covers the topics in Modules 4-7. |
| 07/10-07/21 | **Module 9: Finalize project-code for your visualization and write report** |
| Content | * Clean the data * Code the data visualization * Write the report * Draft the presentation * Submit all the required documents |