

## STAT 317: Data Visualization with R

This course is design to know the fundamentals of data visualization. As the demand of present era that one must be able to know the art and science of turning data into readable graphics to showcase the data's insights. Therefore, this course will provide students with a formal ground in data visualization through hands-on experience using R, a popular sophisticated software packages e.g, grammer of graphics in R. These skills will benefit students in their practical life and future.

### Course information:

<b>Code</b>	STAT 317
<b>Credits</b>	3
<b>Title</b>	Data Visualization with R
<b>Pre-Requisite</b>	STAT 206
<b>Course Contents</b>	Fundamental concept of data visualization with R:data presentation, introduction to ggplot2 for data visualization, univariate and bivariate, visual elements like charts, graphs, or interactive maps for categorical and quantitative variables; Statistical Models: heat maps for relationship, linear regression, logistic regression, survival plots; Information Visualization Types: multi-dimensional, grouping, mapping, and time dependent graphs; Design Principal of data Visualization: customizing graphs by attractive color schemes, annotations, interactive graphs and best practices, in Visualization.
<b>Learning Outcomes:</b>	At the end of the course the students will be able to: <ol style="list-style-type: none"><li>1. Understand and perform data analysis using visualization.</li><li>2. Describe and interpret visual presentations of data for effective communication.</li><li>3. Apply data visualization tools in other domains.</li></ol>
<b>Text Book</b>	Kabacoff,R. (2018). Data Visualization with R <a href="https://rkabacoff.github.io/datavis/datavis.pdf">https://rkabacoff.github.io/datavis/datavis.pdf</a>
<b>Reference Book</b>	<ol style="list-style-type: none"><li>1. Chang, W. (2013). R Graphics Cookbook. O'Reilly. <a href="http://www.cookbook-r.com">http://www.cookbook-r.com</a></li><li>2. Wickham, H. (2016). ggplot2: Elegant Graphics for Data Analysis.2nd Springer. <a href="http://ggplot2.org/book/">http://ggplot2.org/book/</a>; <a href="http://hadley.nz/">http://hadley.nz/</a></li><li>3. Exploratory Data Analysis with R” by Roger D. Peng</li></ol>
<b>Assessment Criteria</b>	Midterm Exam, Assignments, Quizzes, Class participations Project, Final Exam

**Consultation Information:**

Office Room# = S-423

Consultation Hour : 10am to 11am (Monday- Friday)

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Meeting ID: 953 9422 4709

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