

	ePGD-ABA	Module-I	2020-21 Batch
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Course Title	Data Visualization for Analysis and Communication		
Area	Information Systems Area		
No. of Sessions	15 (fifteen)		
Instructor(s)	Professor Kavitha Ranganathan		
Email	kavitha@iima.ac.in	Phone	079-7152-4829

Course Description & Objective
<p>Effective data visualization is an important tool in your analytical toolkit. It allows you to quickly examine large amounts of data, expose trends and problems efficiently, exchange ideas with key players, and influence the decisions that will ultimately lead to success.</p> <p>The goal of this course is to expose you to visual representation methods and techniques that will help you analyze complex data and present your insights effectively. In this course you will study best practices in design for graphs, tools for visualizing data from a variety of fields, dashboard design / implementation and storytelling with data. You will also learn to use visualization software like GapMinder and Tableau in addition to Excel.</p>

Session Details		
Session-1	Topic	The Value of Visualization
	Reading(s)	<ul style="list-style-type: none"> Chapter 1: Information Visualization, In Readings in Information Visualization. Card, et al. (pdf) Visual Representation: Implications for Decision Making by Lurie, N.H. and C.H. Mason. Journal of Marketing, 71(1): 160-177.
Session-2&3	Topic	Effective Use of Form and Space – Fundamentals of Graphs
	Reading(s)	<ul style="list-style-type: none"> Graph Selection Matrix Seven Common quantitative relationships in Graphs and how to display them Save the Pies for Dessert Constructing Correlation Bar And Paired Bar Graphs With Microsoft Excel
Session-4	Topic	Integrity in Visualization
	Reading(s)	Chapter 2 of The Visual Display of Quantitative Information by Edward Tufte

Session-5	Topic	Visual Perception and Quantitative Communication
	Reading(s)	Chapter 5 of Envisioning Information by Edward Tufte
Session-6 & 7	Topic	Effective Use of Form and Space – Detailed Design of Tables and Graphs
	Reading(s)	- Summary at a Glance: Table Design - Summary at a Glance: Graph Design
Session-8	Topic	Additional Constructs and Multivariate Analysis
	Reading(s)	- Chapters 4 and 5 of The Visual Display of Quantitative Information by Edward Tufte - Chapter 1 of Envisioning Information by Edward Tufte
	References	http://tech.fortune.cnn.com/2011/08/15/put-on-your-5-d-glasses/
Session-9	Topic	Escaping 2 Dimensions: Animated Scatter-Plots
	Reading(s)	Instructions for creating Motion Charts in Excel
	References	GapMinder and Google Motion Charts (www.gapminder.org)
Session-10	Topic	Dashboards for Strategy Visualization
	Reading(s)	Dashboard Confusion by Stephen Few: http://www.perceptualedge.com/articles/ie/dashboard_confusion.pdf Bullet Graph Design Specifications https://www.perceptualedge.com/articles/misc/Bullet_Graph_Design_Spec.pdf
Session-11 & 12	Topic	Exploratory Data Visualization (Tableau)
	Case	The Steaming Mug by Kavitha Ranganathan – IS0136
	References	http://www.tableausoftware.com/public
Session-13	Topic	Storytelling with Data
	Reading(s)	The Storytelling with Data Process
Session-14	Recap of course and Wrap-up	
Session-15	Project Presentations	

Pedagogy

The course is a mix of in-class exercises, lectures, cases and hands-on sessions.

Evaluation Pattern	
Individual Assignments	60%
Final Group Project	40%