

C740 – Course 1 “Fundamentals of Data Analytics” (2cr)

- **52hr/cr – 104hr (3wk) – 36pg paper (53hr) – 30hr Video Lectures – 18.5hr Textbook & Labs**
- **Definition:** Tool and techniques. Summarize data, review statistical models, explore data mining techniques, contemplate ethical issues.
- **(Optional) Self-Prep Training,** 18.75hr (2 wk) – 18.75hr Video Lecture – 1/1 : 1/10
 - DONE – 1.25 hr – [LINK](#) – Microsoft, Introduction to Data Science (expires June 2020)
 - DONE – 5.25 hr – [LINK](#) – Univ of Michigan – Introduction to Data Analytics for Managers (skip over SQL lessons) – **Excellent**, wide coverage, depth just right
 - DONE – 2.75 hr – [LINK](#) – Babson – Analytics for Decision Making – **Excellent**
 - DONE – 2.50 hr – [LINK](#) – Microsoft, Ethics and Law in Data and Analytics
 - DONE – 4.00 hr – [LINK](#) – Babson – Data Analytics Fundamentals (Excel focus, skip over some lessons not needed)
 - DONE – 3.00 hr – [LINK](#) – AWS, The Elements of Data Science (Skipped most of sections 4 and 5 because advanced)
- **Instructor’s Recommended Pre-Training,** 11.50hr (4 d) – 11.50hr Video Lecture – 1/19 : 1/22
 - DONE – 3.25 hr – [LINK](#) – Excel Statistics Part 1 – **Excellent**
 - DONE – 1.75 hr – [LINK](#) – Excel Statistics Part 2 – **Excellent**
 - DONE – 0.25 hr – [LINK](#) – Intro to Descriptive Statistics
 - DONE – 0.00 hr – [LINK](#) – What is Probability
 - DONE – 0.25 hr – [LINK](#) – Time Series Analysis
 - DONE – 0.50 hr – [LINK](#) – Good Time Series Analysis (fascinating use of fitting models to derive filters to remove noise and isolate signal, @2x, with skipping)
 - DONE – 0.25 hr – [LINK](#) – Forecasting with Time Series Data
 - DONE – 0.25 hr – [LINK](#) – Introduction to Linear Regression (watched 3 videos in the set, 2x)
 - DONE – 0.15 hr – [LINK](#) – Introduction to Regression Analysis (2x)
 - DONE – 0.10 hr – [LINK](#) – Running a Simple Regression Analysis (2x)
 - DONE – 0.15 hr – [LINK](#) – Running Multiple Regressions on Excel (1.5x)
 - DONE – 0.35 hr – [LINK](#) – Monte Carlo Theory (1.75x)
 - DONE – 0.15 hr – [LINK](#) – Monte Carlo Using Excel Video (1.50x – created for Manahattan Project)
 - DONE – 0.25 hr – [LINK](#) – Simple Monte Carlo in Excel – **Excellent** – Integration area under curve with simple formulas, 5000 pts cover the area
 - DONE – 0.50 hr – [LINK](#) – Statistical Aspects of Data Mining (1.75x) - **Excellent**
 - DONE – 0.10 hr – [LINK](#) – Histograms Using Excel
 - DONE – 1.50 hr – [LINK](#) – Excel 2013 Statistics (Highline Community College! 2.50hr lecture, but 1.75x takes less time)
 - DONE – 0.75 hr – [LINK](#) – C740 Lecture Webinar #1
 - DONE – 0.25 hr – [LINK](#) – C740 Project Overview + APA Style Guide
 - DONE – 0.75 hr – [LINK](#) – C740 Tips Webinar – Excellent, re-watch when do assignment for tips
- **Interactive Text Books + Take Notes,** 18.50hr (3 d) – 18.5hr Interactive TextBooks – 2/1 : 2/4
 - DONE – 0.25 hr – Chapter 1 – Getting Started
 - DONE – 2.25 hr – Chapter 2 – Descriptive Statistics
 - DONE – 2.75 hr – Chapter 3 – Probability
 - DONE – 2.00 hr – Chapter 4 – Inferential Statistics
 - DONE – 5.50 hr – Chapter 5 – Linear Regression
 - DONE – 1.00 hr – Chapter 6 – Time Series Analysis
 - DONE – 4.00 hr – Chapter 7 – Data Mining
 - DONE – 0.75 hr – Chapter 8 – Ethics
- **Additional Tips & Links from Instructor’s Email & Course Chatter,** 2.5hr (2 d) – 2.5hr Video Lecture – 2/4 : 2/5
 - DONE – 0.25 hr – [LINK](#) – Student Advice PDF
 - DONE – 1.75 hr – [LINK](#) – C740 Course Tip Sheet: (5) ZScore, (2) Chi-Square, ANOVA, Monte Carlo Simulation; stopped midway thru...revisit during perf asmt AS NEEDED.
 - DONE – 0.25 hr – [LINK](#) – Download and Skim Read 74pg of Course Chatter DOC; review it repeatedly while doing the project and at end when will make sense
 - DONE – 0.25 hr – [LINK](#) – Performance assessment Tips Video Lecture; Stopped because same as last one in pre-training (only slightly different); will re-watch when doing project
- **Performance Assessment (Project & Paper) ,** 52.50hr (3 wk) – 52.50hr Writing Paper – 2/5 : 2/21
 - DONE – 52.50 hr – Excel Data Cleaning, Regression Analysis, Research Ideas on what to do, rough out both XL documents, very iterative.