**Data Analytics in Business - Course Schedule - Summer 2020** *(as of 4 May)*

**\*\*\*Course Schedule is subject to change during the semester to adapt to needs of instruction.\*\*\***

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| **Week/Topic** | **Release Dates** | **Weekly Topic** | **Course Activities** | **Due Dates** |
| **Module 1: Basics (Weeks 1-4)** | | | | |
| **Week 1:**  Mon 11 May 2020 | Mon 11 May  12:00 UTC  = 8:00 am EDT | Linear Regression  Learning R Code  Real Estate Example | ISLR, Sections 3.1, 3.2  Link: [Introduction to R Coding](http://faculty.marshall.usc.edu/gareth-james/ISL/code.html) |  |
| **Week 2:**  Mon 18 May | Fri 15 May  12:00 UTC  = 8:00 am EDT | Analytics using Indicator Variables and Interaction Terms  Nonlinear Transformation Models | ISLR, Section 3.3  [Link: How Do I Interpret a Regression Model?](https://stats.idre.ucla.edu/other/mult-pkg/faq/general/faqhow-do-i-interpret-a-regression-model-when-some-variables-are-log-transformed/)  TASK: Graded Homework #1 released on Thu 21 May at 8:00am EST  TASK: Self-Assessment 1 opens Thu 21 May at 8am EST |  |
| **Week 3:**  Mon 25 May | Fri 22 May  12:00 UTC  = 8:00 am EDT | Logistic Regression.  Customer Default example | ISLR, Section 4.3 | Self-Assessment 1 due Wed 27 May at 23:59 EDT |
| **Week 4:**  Mon1st June | Fri 29 May,  12:00 UTC  = 8:00 am EDT | Treatment Effect, Randomized Controlled Experiments, and Natural Experiments | Link: [Program Evaluation and the Diff-in-Diff Estimator](https://eml.berkeley.edu/~webfac/saez/e131_s04/diff.pdf)  TASK: Graded Homework #2 Opens on Thu 4 June at 8:00am EST  TASK: Self-Assessment 2 opens Thu 4 June at 8:00am EDT | Graded Homework #1 due Wed 3rd June at 23:59 EST |
| **Module 2: Finance (Weeks 5-6)** | | | | |
| **Week 5:**  Mon 8 June | Fri 5 June  12:00 UTC  = 8:00 am EDT | Introduction, and Measuring Risk and Return.  Measuring Risk Adjusted Performance | Assessment: Warren Buffett risk and return case  Assessing Warren Buffett’s alpha  TASK: Self-Assessment 3 Opens on Thu 11 June at 8:00am EST | Peer Review: Graded Homework #1 due Mon 8 June at 23:59 EST |
| **Week 6:**  Mon 15 June | Fri 12 June  12:00 UTC  = 8:00 am EDT | Factor Investing | What drives Warren Buffett’s alpha?  TASK: Self-Assessment 4 Opens on Thu 18 June at 8:00am EST | Self-Assessment 2 due Wed 17 June at 23:59 EDT  Self-Assessment 3 due Wed 17 June at 23:59 EDT  Graded Homework #2 due Wed 17 June at 23:59 EST |
| **Midterm Test**  **In Week 7** | Opens  Fri 19 June 21:00 UTC = 5:00 pm EDT | Test on first 6 weeks of material | **Two Parts:**  Part 1 = theoretical (timed & proctored)  Part 2 = computational | Take Midterm Test parts 1 & 2 due Sunday 28 June at 23:59 EDT |
| **Module 3: Marketing (Weeks 7-9)** | | | | |
| **Week 7:**  Mon 22 June | Fri 19 June  12:00 UTC  = 8:00 am EDT | Marketing and Advertising | Read (Business Case 1): Advertising Experiments at the Ohio Art Company  TASK: Self-Assessment 5 Opens on Thu 25 June at 8:00am EST | Peer Review: Graded Homework #2 due Mon 22 June at 23:59 EST  Self-Assessment 4 due Wed 24 June at 23:59 EST |
| **Week 8:**  Mon 29 June | Fri 26 June  12:00 UTC  = 8:00 am EDT | Integrated Digital Marketing  Predictive Marketing Across Channels | Read (Business Case 2): Star Digital: Assessing the Effectiveness of Display Advertising  TASK: Graded Homework #3 Opens Mon 29 June at 8:00am EST  TASK: Self-Assessment 6 Opens on Thu 2nd July at 8:00am EST | Self-Assessment 5 due Wed 1st July at 23:59 EDT |

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| **Week 9:**  Mon 6 July | Fri 3rd July  12:00 UTC  = 8:00 am EDT | Implementing Predictive Marketing Across Channels | TASK: Self-Assessment 7 Opens on Thu July 9 July at 8:00am EST  Read (Business Case 3): Chase Sapphire: Creating a Millennial Cult Brand. | Self-Assessment 6 due Wed 8July at 23:59 EST  Graded Homework #3 due Wed 8 July at 23:59 EDT |
| **Module 4: Operation Management (Weeks 9-11)** | | | | |
| **Week 9 CONTINUED**  Mon 6 July | Fri 3 July  12:00 UTC  = 8:00 am EDT | Introduction and Managing Queues | [Link: The Supply Chain Economy and the Future of Good Jobs in America, by Mercedes Delga and Karen Mills (2018)](https://hbr.org/2018/03/the-supply-chain-economy-and-the-future-of-good-jobs-in-america)  TASK: Self-Assessment 8 Opens Thu 9 July at 8:00am EST |  |
| **Week 10:** Mon 13 July | Fri 10 July  12:00 UTC  = 8:00 am EDT | Statistical Process Control  Forecasting Demand | Read (BC4): [Operations Management Reading: Managing Queues](http://hbsp.harvard.edu), by Elliott Weiss  Read (BC5): Statistical Process Control, by Nelson Fraiman  TASK: Self-Assessment 9 Opens Mon 13 July at 8:00am EST  TASK: Self-Assessment 10 Opens Mon 13 July at 8:00am EST | Peer Review: Graded Homework #3 due Mon 13 July at 23:59 EST  Self-Assessment 7 due Wed 15 July at 23:59 EST  Self-Assessment 8 due Wed 15 July at 23:59 EDT |
| **Half-Week 11:** Mon 20 July | Fri 17 July  12:00 UTC  = 8:00 am EDT | Inventory Management | Read (BC 6): Time Series, by Phillip Pfeifer  Read (BC7): Managing Inventories--Reorder Point System[,](http://hbsp.harvard.edu) by Robert Landel, James Freeland. | Self-Assessment 9 due Tue 21 July at 23:59 EDT  Self-Assessment 10 due Tue 21 July at 23:59 EDT |
| **Final Exam** | | | | |
| **Final Exam** | Opens Thu 23 July 12:00 UTC  = 8:00 am EST | Test based on the Whole Course material | **Two Parts:**  Part 1 = theoretical (timed & proctored)  Part 2 = computational | Final Exam is due Thu 30 July 2020 at 23:59 EDT |