Course Schedule

Course name and code: DSC513 Introduction to Data Science

General Course Schedule (Subject to change)

Week 1: August 13-14
- Introduction to AI and Data Science
- Use cases
- Technology
- Introduction to R

Week 2: August 20-21
- Discussion on AI in society
- Role of Data, Data science pipeline, Case studies
- R programming basics

Week 3: August 27-28
- Loops and Conditionals
- R Markdown

Week 4: September. 3 -4
- Data Wrangling: Introduction to dplyr packages
- Dplyr- summarize, group_by, plotting
- **Quiz 1(MCQs): Sunday September 4 (From Week 1 to Week 3)**

MID Sem Exam 1: Sep 10-11, 17   - 90 minutes exam
In-Lecture Mid Sem Questions: Portion till Week 4

Week 5: Sep 18
- Introduction to Tidyr

Week 6: Sep 24-25
- Understanding Tidyverse Part II

Week 7: **Oct 1**
- Understanding Tidyverse Part II(contd)
- Qualitative Data Analysis Part I

Week 8: **Oct 9**
- Qualitative Data Analysis part II
- Exploring Maps in R programming Part I

Quiz 02: Oct 09 – Portions-> From week 05 to Week 08

Week 9: **Oct 15-16**
- Exploring Maps in R Part II
- Sample Covid 19 analysis, Mini Project Description

Oct 15: Announcement of Mini Project

MID Sem Exam II: Oct 22-23, 30   90 minutes exam   *In-Lecture Week 5-9*

Week 10: **Oct 31**
- Statistical Modelling Introduction
- Statistical Modelling Part II
- Statistical Modelling Part III

Week 11: November 5-6
- Statistical Modelling - Covariates and effect size- + Intro to Missing Data
- Missing Values - Part II

Week 12: November 06-07
- Missing Values- Part III - Imputation, Simputation etc
- Web Scraping using R

Week 13: November 12-13
- Data Science and Ethical Issues,
- Discussions on privacy, security, ethics
- Case studies

Week 14: November 19- 20
- Case studies

Mini Project Submission – November 19 Saturday

Week 15: November 26
- Presentation on Mini Project

Class ends

End sem Exam: December 3rd onwards   120 minutes exam
Full syllabus