



R : Statistical Programming Methods

R : 程式、機率與統計

Introduction

This course is aimed to develop the fundamental and working statistical knowledge with the hands-on experience for students to conduct further advanced business analysis.

- The course will include:
 - - R programming
 - - Data Analysis
 - - Statistical experiments and introduction of probability
 - - Regression and Prediction

Learning Objectives

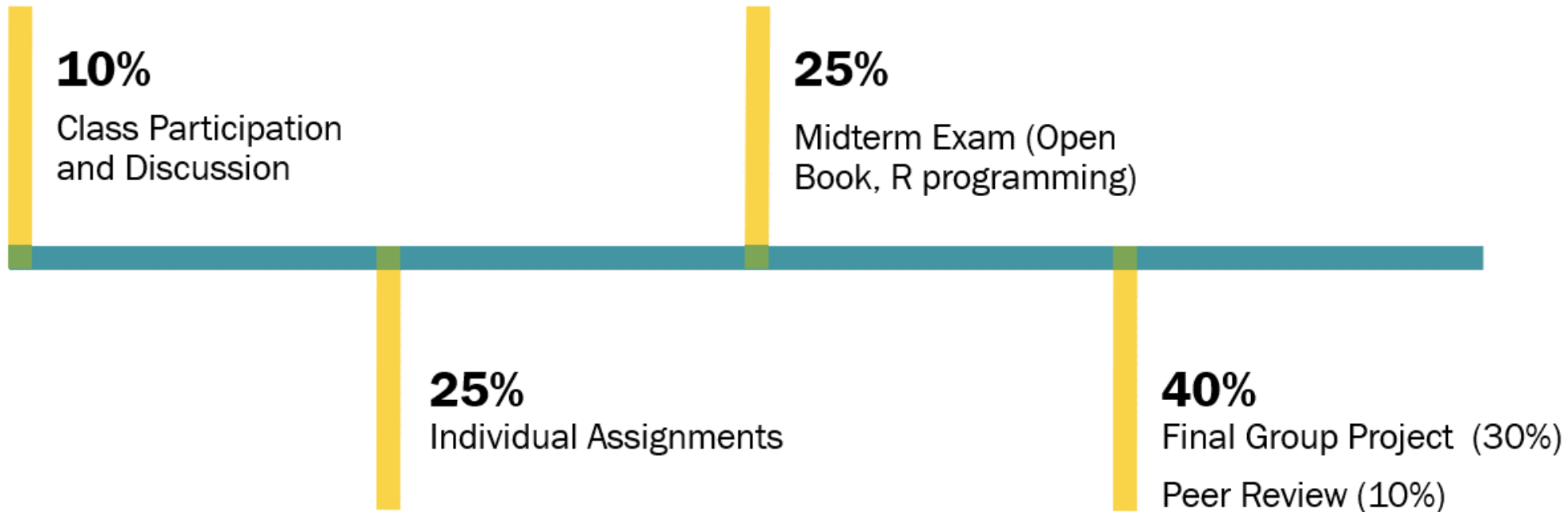
- By the end of the course, students are expected to:
 - Understand the basic R language and use RStudio
 - Manage and filter data to support analysis
 - Apply statistical tools in R to analyze data and discuss findings
 - Demonstrate data visualization techniques
 - Develop regression models

Textbooks

- R Programming for Data Science
[Peng, R] The Lean Publishing
- Discovering Statistics Using R [Field, A.,
Miles, J. & Field, Z.] SAGE Publications
Ltd
- Practical Statistics for Data Scientists:
50 Essential Concepts Using R and
Python. [Bruce, P., Bruce, A., & Gedeck,
P] O'Reilly



Assessment



Group Project (40%)

- Based on your own interest, you can choose any topic/field you like to conduct analysis.
- Data can be secondary data or survey data from any sources
- Example:
 - Financial Market Trends (factors)
 - Customer behavior
 - Political Campaign (e.g., election)
- Your report should include (but not limited to):
 - Basic Introduction of chosen topic
 - Fundamental analysis of the obtained data
 - Data Visualization
 - Hypothesis Testing and Regression



Group Project (40%)

- No more than four (4) students in one group
- Please post your group members in FB group before 2023/2/28
- Presentation (20%)
 - Maximum 20 minutes (+10 minutes Q&A)
 - All group members need to present
- R code (10%)
 - Data and code need to submit along with presentation slides
 - Make sure all code can be run and similar results can be obtained by TAs
- Peer Review (10%) will be conducted
 - intergroup (小組互評) and intragroup (組內互評)

Before Next Week...



Installation of R

[R: The R Project for Statistical Computing \(r-project.org\)](https://www.r-project.org/)



[Download RStudio | The Popular Open-Source IDE from Posit](https://posit.co/)

