

R Programming

Course title – Intitulé du cours	R Programming
Level / Semester – Niveau / semestre	M1 / S1
School – Composante	Toulouse School of Economics
Teacher – Enseignant responsable	Sébastien PARENTY
Lecture Hours – Volume Horaire CM	15
TA Hours – Volume horaire TD	
TP Hours – Volume horaire TP	7.5
Course Language – Langue du cours	English
TA and/or TP Language – Langue des TD et/ou TP	English

Teaching staff contacts – Coordonnées de l'équipe pédagogique :

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Course Objectives – Objectifs du cours :

The aim of this course is to discover the world of data science with R software, with a particular focus on techniques useful to economists. It is broken down into 10 sessions of 1h30 each, during which you will learn to manipulate, transform and analyze all types of data, with the aim of acquiring a basic general knowledge of data science. 5 examples of practical work will be carried out, including some from the great data classics.

Prerequisites – Pré requis :

Laws of probability and common statistical theorems. No knowledge of computer coding is necessary.

Practical information about the sessions – Modalités pratiques de gestion du cours :

This is a fully interactive, computer-friendly course. Students are expected to bring their computers and run the codes at the same time as the teacher.

Grading system – Modalités d'évaluation :

Final Exam

Bibliography/references – Bibliographie/références :

R for Data Science at <https://r4ds.had.co.nz/>

Session planning – Planification des séances

- 1. Introduction
- 2. Data I
- 3. Data II
- 4. Econometrics
- 5. Statistics
- 6. Loops and functions

- *7. Machine Learning*
- *8. DataViz*
- *9. R Shiny*
- *10. The great data classics*