Statistical and Computational Methods for Engineers (part I)

5-12-19-26, June, University of Rome "Niccolo' Cusano"

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Course Description[1]**:** The course aims to provide essential statistical and computational tools to research in Engineering and in Science. The emphasis is on application of the methods considered.
Prerequisite(s): None.
Credit Hours: 8 (additional hours upon request)
Programming language(s) for Statistical Computing: R, Octave and Python
Text(s): No single book is required. Readings will be assigned on each class.
Course Objectives:
At the completion of this course, students will be able to:

1. Defining a research project and the types of statistical analyses needed
2. Designing statistical experiments and simulation studies
3. Performing the statistical analysis of data
4. Writing efficient algorithms in various programming languages
5. Interpreting the statistical results obtained
6. Analysing the robustness and the sensitivity of the results obtained

Tentative Course Outline:
The weekly coverage might change as it depends on the progress of the class. However, you must keep up with the reading assignments.

Week	Content
5 June 15-17	• Basics
12 June 15-17	• Programming
19 June 15-17	• Statistical Computing I with Applications
26 June 15-17	• Statistical Computing II with Applications

[1]This syllabus template was created by: Brian R. Hall