Content

Course Code	Course Name	Semester	Theory	Practice	Lab	Credit	ECTS
RI203	Statistical Methods in Social Sciences	3	2	0	0	2	3

Prerequisites	
Admission Requirements	

Language of Instruction	French
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	Course objective is to give to the student the basic knowledge about, • Descriptive statistics (representation of datas, charts, measures of central tendency and dispersion). • Probability distributions (law of sum and product of probabilities, conditional probability, discrete and continuous probability distributions). • Statistical inference and estimation theory. • Parametric and non-parametric hypothesis tests.
Content	1) Introduction to statistics, organization of datas and data analysis. 2) Organization of datas and data analysis, frequency distribution. 3) Descriptive measures of central tendancy and dispersion of distributions. 4) Probability and law of probability. 5) Elementary laws of probability for discrete variables. 6) Elementary laws of probability for continuous variables. 7) Sampling and statistical inference (Estimation of a mean and proportion) 8) Parametric hypothesis testing. 9) Non-parametric hypothesis testing (Test Chi-square of independance and homogeneity) 10) Non-parametric hypothesis testing (Test Chi-square of conformity)
References	Bernard Grais, “Statistique descriptive”,3eme edition, Dunod, Paris Vincent Giard, "Statistiques Appliquées a la Gestion", Edition Economica,Paris. Paul Newbold, William L.Carlson, Betty Thorne, “Statistics for Business and Economics”, 6th edition, Prentice Hall, Upper Saddle River, New Jersey, 2007 Roger C. Pfaffenberger, James H. Patterson, “Statistical Methods for Business and Economics”, Irwin 2003

Theory Topics

Week	Weekly Contents
1	Introduction to statistics
2	Organization of datas and data analysis, frequency distribution.
3	Descriptive measures of central tendancy and dispersion of distributions.
4	Descriptive measures of central tendancy and dispersion of distributions.
5	Probability and law of probability.
6	Elementary laws of probability for discrete variables.
7	Elementary laws of probability for continuous variables.
8	Sampling and statistical inference (Estimation of a mean and proportion)
9	Sampling and statistical inference (Estimation of a mean and proportion)
10	Mid term Exam.
11	Parametric hypothesis testing.
12	Parametric hypothesis testing.
13	Non-parametric hypothesis testing (Test Chi-square of independance and homogeneity)
14	Non-parametric hypothesis testing (Test Chi-square of conformity)