

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	
Course Type	Compulsory
Course Level	Bachelor Degree
Objective	<p>Course objective is to give to the student the basic knowledge about,</p> <ul style="list-style-type: none"> • 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	<p>1) Introduction to statistics, organization of datas and data analysis.</p> <p>2) Organization of datas and data analysis, frequency distribution.</p> <p>3) Descriptive measures of central tendency and dispersion of distributions.</p> <p>4) Probability and law of probability.</p> <p>5) Elementary laws of probability for discrete variables.</p> <p>6) Elementary laws of probability for continuous variables.</p> <p>7) Sampling and statistical inference (Estimation of a mean and proportion)</p> <p>8) Parametric hypothesis testing.</p> <p>9) Non-parametric hypothesis testing (Test Chi-square of independance and homogeneity)</p> <p>10) Non-parametric hypothesis testing (Test Chi-square of conformity)</p>
References	<p>Bernard Grais, "Statistique descriptive", 3eme edition, Dunod, Paris</p> <p>Vincent Giard, "Statistiques Appliquées a la Gestion", Edition Economica, Paris.</p> <p>Paul Newbold, William L. Carlson, Betty Thorne, "Statistics for Business and Economics", 6th edition, Prentice Hall, Upper Saddle River, New Jersey, 2007</p> <p>Roger C. Pfaffenberger, James H. Patterson, "Statistical Methods for Business and Economics", Irwin 2003</p>

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)