Laboratorio di analisi dei dati

Psicologia sociale, del lavoro e delle organizzazioni

Anno accademico:	2012/2013
Ambito disciplinare:	cfr. il Portale dei Piani di studio di Ateneo http://offweb.unipa.it
Codice:	13344
Articolazione in moduli:	no
Docente:	*Laboratorio di analisi dei dati:* Antonino Mario Oliveri (Professore associato)
Settore scientifico disciplinare:	SECS-S/05
Cfu:	6
Ore riservate allo studio personale:	110
Ore riservate alle attiv. did. assistite:	40
Anno di corso:	1
Tipo di valutazione:	Idoneità
Calendario delle attività didattiche:	cfr. il calendario delle lezioni
Organizzazione della didattica:	The course will be held in English. 1) Lectures. 2) Practical lessons. The exam consists of an open book PC session focusing on the production of a report where answers have to be given to some questions arranged by the teacher. During the exam, students have to select the most suitable statistical tools among those studied and run all analyses on datasets supplied by the teacher.
Frequenza:	Consigliata
Metodi di valutazione:	Laboratorio di analisi dei dati: sviluppo di casi di studio, attività di laboratorio
Ricevimento:	Antonino Mario Oliveri: Dipartimento di Scienze economiche, aziendali e finanziarie (SEAF), Viale delle Scienze, Edificio 13, II piano, Venerdì 12-14. - email: statisticasociale@unipa.it - telefono: 091.23895 284

Risultati di apprendimento attesi

Conoscenza e capacità di comprensione
(Knowledge and understanding)
We expect that students will strengthen their ability in understanding and they will be able to write critically elaborate texts which will include the use of statistical techniques for analyzing mass behaviours and attitudes. Such techniques are in fact largely used in evaluation processes within communities and all other contexts where psychologists work.

Capacità di applicare conoscenza e comprensione
(Applying knowledge and understanding)
Psychologists are expected to critically use statistics within their work environment. We refer, for

example, to the observation of the behaviour of individuals and groups within families and institutions; to the prevention of hardship and to the facilitation of wellness at work and in society, and to the evaluation of related policies; to the personnel selection, training and evaluation for both public and private organizations.

Autonomia di giudizio
(Making judgements)
The course is designed for the achievement of this ability. All the phases of the research path are analyzed, so that students can acquire the expertise necessary to critically select, among many data analysis tools, the more suitable to the nature of the investigated phenomena.

Abilità comunicative
(Communication skills)
At the end of the course, students are expected to be able to interpret and communicate the results of their work, both as research results and in any other format. In order to do that, students have to reinforce the elements of their statistical language, and to acquire the capabilities required to produce scientific and professional reports.

Capacità di apprendimento
(Learning skills)
Critical thinking and the selection of the most suitable research designs (among many possible options) represent the most relevant purposes of this course. People able to do this, can also develop the ability to learn by themselves in further steps of their academic and professional career.

Obiettivi formativi
Laboratorio di analisi dei dati

Titolo del corso: *Data analysis laboratory*
(Learning purposes)
This course offers students the chance to think about some fundamental issues related to the research methodology and to data analysis, with a particular focus on direct applications.
The main purpose of the course consists of orientating students to the critical use of statistical analysis tools for producing research reports. Case-studies, obtained from the psychological field, will be used in order to explain the close connection among the researcher's questions, the choice of one among many research designs, and statistical tools. Applications will be encouraged through the MS Excel and R softwares.

Lezioni frontali

Ore:	Argomenti:
3	Review of descriptive and inferential statistics.
3	The analysis of the relationship between variables. Causation and covariation.
4	From bivariate through multivariate analysis. The paradoxes of multivariate analysis. Multiple linear regression. Analysis of variance (ANoVa). Non-parametric tests.

Esercitazioni

Ore:	Argomenti:
2	MS Excel 2003.
4	Introduction to R.

7	Univariate descriptive statistics, graphical representations.
7	Bivariate descriptive statistics, the linear regression model.
6	Statistical inference.
4	Analysis of variance (ANoVa). Non-parametric tests.

Testi consigliati:
- Review of Statistics (concepts and methods).
All academic books on descriptive and inferential statistics used by students during their BA degree courses fit the requirements of this course; some additional papers and/or online resources will be suggested by the teacher to interested students.
- Data analysis using MsExcel 2003.
Rosenberg K. M. (2007), The Excel Statistics Companion Version 2.0, Wadsworth Cengage Learning, Belmont CA, http://www.cengage.com/search/productOverview.do'Ntt=the+excel+statistics+companionll9780495 186953&Ntk=alllIP_Isbn13&N=+4294921982
- Data analysis using R.
This course does not require that students spend money to use the R software. Online free of charge resources can be downloaded from the website of the CRAN project: http://cran.r-project.org/ For those who prefer to keep textbooks in their bookcase, an exhaustive guide for beginners is: Dalgaard P. (2008), Introductory statistics with R, Springer, http://www.springer.com/statistics/computanional+statistics/book/978-0-387-79053-4