UNIVERSITÀ DEGLI STUDI DI PALERMO

Department: null

A.Y. 2009/2010

DEGREE COURSE IN STATISTICAL SCIENCE

- STATISTICS FOR SOCIAL AND BIOMEDICAL APPLICATIONS -

Educational objectives

The 2nd cycle degree course in statistics, in accordance with the specific objectives of the class and the indications stemming from the surveys about the placement of graduates in statistics (such as, for instance, the inter-university project STELLA), aims at training professionals with sound grounding in mathematics, probability, statistics and computer data processing, capable of operating in various applicative sectors with autonomy and responsibility and to fit in the labour market as qualified experts capable of producing, processing and analysing diverse information flows.
The educational framework of the course. Having as access requirement an adequate grounding in informatics, mathematics, probability and statistics, is characterised by:
- The presence of a common bulk of advanced courses in mathematics, probability and statistics subjects (including Econometrics), ensuring students full command of basic disciplines upon which subsequent theoretical-methodological and applicative statistics will be based;
- The attribution of quite wide credit intervals to the various disciplinary ambits required by regulations in force. This choice will enable the articulation of educational offer in specific interest areas, that differ form each other for 36-40 credits, and namely : one oriented to the economic, corporate and financial ambit, and the other oriented to the social, bio-statistical and environmental ambit;
- The attention to teaching methodologies, making sure that the solid theoretical grounding, based on frontal teaching, is integrated with laboratories, in which case studies and real problems will be discussed and applicative issues will be investigated, in which statistic is the indispensable tool of analysis. In this way, the development t of and adequate critical analysis will be facilitated in students who, starting from sound methodological bases , will be brought to maintain a constant attention to the data formation process - according to definition and measurement concepts - and to a critical use of theories and methods with respect to the type and meaning of available data, turning them into information and therefore usable knowledge for decision making. Laboratory activities will also help to develop communication skills, through the preparation and presentation of written and/or oral reports.
- A particular attention to language skills, with advanced educational activities in English for Scientific Purposes (ESP);
- The possibility of carrying out an internship (stage) within companies or private or public organisations, with a duration equivalent to 6-8 credits;
- Final examination, consisting of an original dissertation about an issue agreed with a Professor; the preparation of the dissertation is awarded 24-30 credits and might be associated to the stage experience.

The educational regulations also provides for the verification of the correspondence between actual study load and the credits corresponding to individual subjects according to the line of the survey carried out within the CampusOne project.

Professional opportunities

As reported in Almalaurea data and in the surveys of the consortium Stella, the employment rate one year after the degree is rather high for both 1st and 2nd cycle graduates in statistics; 2nd cycle graduates, in particular, might carry out high responsibility activities in: public administrations; in the planning and experimentation branches of companies in the biomedical, epidemiological, ecological-environmental fields; in the statistical branches of medium- big companies; in the marketing branches of production and distribution companies; in companies managing information systems; in statistical consulting companies providing external support to private and public companies; in public and private research centres and institutes.
In such professional ambits, 2nd cycle graduates in Statistics may carry out the following activities: planning of complex statistical surveys in the specific specialisation fields; planning and control of the outcomes of experiments and controlled clinical trials; planning and implementation of evaluation activities for quality management and performance measurement; certification of statistical data for publishing or for use in other statistical surveys; certification of the statistical methodologies and techniques used in surveys; analysis of data and formalisation of mathematical/statistical models to investigate phenomena and to carry out forecasts in various applicative ambits; planning and creation of data bases for the statistical analysis of specific phenomena.
In the public sector, after the creation of SISTAN (National Statistical System) statistical branches have been created in central state administration, local agencies and local healthcare agencies, as well as in other public offices, depending from ISTAT (Central Statistical Institute).

Final examination features

It consists of an original paper related to one of the class specific disciplinary ambits. The dissertation topic might also be related to the stage experience; dissertations might be both on paper and on multimedia devices. The final examination is awarded with 24-30 credits, with the difference corresponding to 0-6 stage credits: i) for dissertations accompanied by stage or by a guided statistic consulting period, credits will be awarded as follows: 24 (final examination) + 6 (stage); ii) for dissertation without stage, but with a higher workload, credits will be awarded as follows: 30 (final examination) + 0(stage); the strong experimental and/or methodological character of the dissertation is the reason why 30 credits are awarded.

Subjects 1 ° year	CFU	Per	V\W	SSD	TAF
01238 - CALCULUS *Di Benedetto(PA)*	8	Ann.	V \ 1	MAT/05	C
14332 - NON PARAMETRIC METHODS *Chiodi(PO)*	8	Ann.	V \ 1	SECS-S/01	B
14361 - QUALITY MANAGEMENT AND STATISTICAL CONTROL *La Rosa(PQ)*	8	Ann.	V \ 1	SECS-S/03	B
07973 - STATISTICAL MODELS FOR SOCIAL SCIENCES *Giambalvo(PO)*	8	Ann.	V \ 1	SECS-S/05	B
02694 - ECONOMETRICS *Lo Cascio(PA)*	6	Ann.	V \ 1	SECS-P/05	B
07979 - STATISTICAL MODELS *Lovison(PO)*	10	Ann.	V \ 1	SECS-S/01	B
05807 - STOCHASTIC PROCESSES *Sanfilippo(PA)*	8	Ann.	V \ 1	MAT/06	B
07936 - ENGLISH LANGUAGE FOR SPECIFIC PURPOSES *Romeo(PA)*	4	Ann.	V \ 0		F
	60				

Subjects 2 ° year	CFU	Per	V\W	SSD	TAF
14335 - CATEGORICAL DATA ANALYSIS	6	Ann.	V \ 1	SECS-S/01	B
14325 - STATISTICAL EVALUATION METHODS AND BIOSTATISTICS *Attanasio(PO), Capursi(PO)*	10	Ann.	V \ 1	SECS-S/05	B
06634 - INTERNSHIP	6	Ann.	G \ 0		F
05917 - FINAL EXAMINATION	24	Ann.	G \ 0		E
Optional subjects	6				C
Free subjects	8				D
	60				

OPTIONAL SUBJECTS

Optional subjects	CFU	Per	V\W	SSD	TAF
03026 - EPIDEMIOLOGY *Simonetti(PC)*	6	Ann.	V \ 1	MED/42	C
02807 - HEALTH ECONOMICS *Li Donni(PA)*	6	Ann.	V \ 1	SECS-P/03	C

Legenda: Per. = periodo o semestre, Val. = Valutazione (V=voto, G=giudizio), TAF= Tipologia Attività Formativa (A=base, B=caratterizzante, C=Affine, S=stages, D=a scelta, F=altre)