UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Ingegneria
ACADEMIC YEAR	2018/2019
BACHELOR'S DEGREE (BSC)	DIGITAL ENTERPRISE INNOVATION ENGINEERING
SUBJECT	STATISTICS
TYPE OF EDUCATIONAL ACTIVITY	A
AMBIT	50283-Matematica, informatica e statistica
CODE	06644
SCIENTIFIC SECTOR(S)	SECS-S/02
HEAD PROFESSOR(S)	BARONE STEFANO Professore Associato Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	9
INDIVIDUAL STUDY (Hrs)	147
COURSE ACTIVITY (Hrs)	78
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	1
TERM (SEMESTER)	2° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**BARONE STEFANO** Monday 11:00 13:00 Aula M - presso il Dipartimento di scienze agrarie, alimentari e forestali, viale delle scienze, Palermo, edificio 4, sezione Coltivazioni Arboree. Piano terra. Wednesday 11:00 13:00 Aula M - presso il Dipartimento di scienze agrarie, alimentari e forestali, viale delle scienze, Palermo, edificio 4, sezione Coltivazioni Arboree. Piano terra.

DOCENTE: Prof. STEFANO BARONE

PREREQUISITES	Having already passed the examination of Mathematical Analysis I, is highly recommended .
LEARNING OUTCOMES	KNOWLEDGE AND UNDERSTANDING At the end of the course students will have knowledge of the basic tools of probability (including major random variables), the descriptive and inferential statistics (point and interval estimation and hypothesis testing) and analysis of statistical dependence between variables (regression analysis). APPLYING KNOWLEDGE AND UNDERSTANDING The student will be able to use such assets in the enterprise, helping to enrich the set of its analysis tools through non-deterministic methods. JUDGEMENT The student will be able to collect, organize, analyze data related to a phenomenon under study and interpret the results of analyzes appropriate statistics. COMMUNICATION ABILITY The student will acquire the ability to communicate the methods of approach to problems inherent random phenomena, both in autonomy and also working in multidisciplinary teams. Communication skills will be assessed in the examination. LEARNING ABILITY The student will have learned the principles of statistical/scientific method and will be able to acquire new information, as well as read the results of any statistical software. Learning skills will be evaluated in the examination
ASSESSMENT METHODS	Written Exam + Oral Exam, both compulsory (details below) Written exam: The written exam foresees the resolution of 5 exercises worth 5 points each. The written test will be considered sufficient if the score is at least 12. For the written test students may use only pen, ruler and pocket calculator (no computers, no cell phones). During the course of the written examination, students can withdraw.. Oral exam: The oral exam is mandatory regardless of the outcome of the written test (as long as sufficient). It provides two questions whose answers are evaluated with a score from 0 to 3. 0 = no response or insufficient response 1 = sufficient answer 2 = good response 3 = excellent response During the course students can be awarded bonus points, obtained on the basis of exercises.
EDUCATIONAL OBJECTIVES	The student at the end of the course must have knowledge of the basic statistical tools, the calculation of probabilities and in general the scientific method of approach to the real problems. In addition, the student must know how to statistically analyze a dataset.
TEACHING METHODS	Frontal lectures, exercises in classroom, exercises in computer lab
SUGGESTED BIBLIOGRAPHY	1.Dispense del corso - non sono esaustive per lo studio della materia 2.Lombardo, A., "Probabilita' e Statistica". Freeware online 3.Cicchitelli, D'Urso, Minozzo. "Statistica, Principi e metodi". terza edizione Ed. Pearson. 4.Erto, P., "Probabilita' e Statistica le scienze e l'ingegneria". McGrawHill.

SYLLABUS

Hrs	Frontal teaching
8	EXPLORATORY DATA ANALYSIS
8	CALCULATION OF PROBABILITY
8	RANDOM VARIABLES
8	STATISTICAL INFERENCE
8	REGRESSION

Hrs	Practice
4	EXPLORATORY DATA ANALYSIS
4	CALCULATION OF PROBABILITY
4	RANDOM VARIABLES
4	STATISTICAL INFERENCE
4	REGRESSION

Hrs	Workshops
4	EXPLORATORY DATA ANALYSIS
5	RANDOM VARIABLES
4	STATISTICAL INFERENCE
5	REGRESSION