UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Ingegneria
ACADEMIC YEAR	2021/2022
BACHELOR'S DEGREE (BSC)	CYBERNETIC ENGINEERING
SUBJECT	ECONOMICS FOR ENGINEERS
TYPE OF EDUCATIONAL ACTIVITY	C
AMBIT	10655-Attività formative affini o integrative
CODE	02795
SCIENTIFIC SECTOR(S)	ING-IND/35
HEAD PROFESSOR(S)	ROMA PAOLO Professore Associato Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	9
INDIVIDUAL STUDY (Hrs)	144
COURSE ACTIVITY (Hrs)	81
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	1
TERM (SEMESTER)	2° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	**ROMA PAOLO** Wednesday 15:00 18:00 Ufficio docente previa comunicazione email

DOCENTE: Prof. PAOLO ROMA

PREREQUISITES	Knowledge of basic calculus
LEARNING OUTCOMES	Knowledge and understanding: The student at the end of the course will have the knowledge about general economics and economic sciences, the positive and normative microeconomics, macroeconomics, the financial mathematical tools for the valuation of investments. She/he will be able to understand consumer choices, and the difference between long and short-term decisions of the producer, the formation of the demand and supply curves and the main market structures. She/he will know the main topics of macroeconomics such as measures of welfare and economic growth, the labor market, inflation and the economic cycle. The student will also be able to understand which variables affect rate of return on an investment or project and why. Applying knowledge and understanding: The student will be able to use the techniques for economic analysis to determine the conditions of equilibrium of a market, to see if the demand for a good is elastic or rigid, to evaluate the optimum volume for the supply, calculate the GDP, and evaluate if a given investment is convenient or not. Making judgements: The student will be able to interpret and comment on the aspects of microeconomics; also she/he will be able to gather and interpret the data necessary for the evaluation of investments. Communication skills The student will acquire the ability to communicate and express issues concerning the microeconomics and macroeconomics, and can hold conversations on topics related to business investments and projects, and to accounting aspects. Learning skills The student will have learned the interactions between micro-economic issues and business issues. It will also have to learn to combine the sensitivity to the technological problems with the company's overall efficiency and achieving superior performance in terms of management.
ASSESSMENT METHODS	The assessment of knowledge, skills and application capabilities of the student is through conducting a written test evaluated in thirtieth. The final grade is the sum of the votes assigned to Three exercises and six theoretical questions. The proper solution of each of the three exercises (one related to microeconomics, one to macroeconomics, the other to the measure and comparisons of investments) is worth 6 points (total for the three exercises is 18 points). The correct answer to each of the six questions is worth 2 points (total for the nine questions 12 points). The six questions will cover all the topics covered in the course (supply, demand, elasticity, optimal production volume, economies of scale, market structures, macroeconomics, investment evaluations, measurements and comparisons).
EDUCATIONAL OBJECTIVES	The student will acquire knowledge about the market dynamics, the behavior of the consumer, the manufacturer's choices and will be able to make an economic and financial evaluation of investment alternatives. Another educational objective is to provide the student with the knowledge and skills needed to understand the macroeconomic dynamics in which every day businesses are operating. These knowledge base and skills related to economics, that are complementary to the more technical-scientific ones of the other subjects of the entire educational path, are essential to form the figure of the engineer who will enter the business and the entrepreneurship world once graduated.
TEACHING METHODS	Lectures and exercises
SUGGESTED BIBLIOGRAPHY	•Dispense distribuite durante il corso; •Begg-Vernasca-Fischer-Dornbush, Economia, McGraw-Hill Education, 2014; •Sullivan-Wicks-Luxhoj, Economia Applicata all'ingegneria, Pearson Prentice Hall.

SYLLABUS

Hrs	Frontal teaching
2	Introduction to Economics for Engineers
2	Economics and the economy
5	Demand, supply and the market
3	Elasticity of demand and supply
5	Consumer choice and demand decisions
8	Supply decisions in the short and long term

SYLLABUS

Hrs	Frontal teaching
8	Market structure
4	Introduction to macroeconomics. The economic cycle, inflation, labor market and GDP calculation
5	Introduction to financial math. Interest rates. Present value of a single future payment. Discount factors.
6	Cash flow patterns and their present values. Evaluation of investments alternatives.

Hrs	Practice
3	Economics and the economy
4	Demand, supply and the market
3	Elasticity of demand and supply
3	Consumer choice and demand decisions
6	Supply decisions in the short and long term
5	Market structure
3	Introduction to macroeconomics. The economic cycle, inflation, labor market and GDP calculation
3	Introduction to financial math. Interest rates. Present value of a single future payment. Discount factors.
3	Cash flow patterns and their present values. Evaluation of investments alternatives.