



UNIVERSITÀ DEGLI STUDI DI PALERMO

DEPARTMENT	Ingegneria
ACADEMIC YEAR	2021/2022
MASTER'S DEGREE (MSC)	MANAGEMENT ENGINEERING
SUBJECT	PLANT DESIGN
TYPE OF EDUCATIONAL ACTIVITY	B
AMBIT	50368-Ingegneria gestionale
CODE	18815
SCIENTIFIC SECTOR(S)	ING-IND/17
HEAD PROFESSOR(S)	GIALLANZA ANTONIO Ricercatore a tempo determinato Univ. di PALERMO
OTHER PROFESSOR(S)	
CREDITS	6
INDIVIDUAL STUDY (Hrs)	102
COURSE ACTIVITY (Hrs)	48
PROPAEDEUTICAL SUBJECTS	
MUTUALIZATION	
YEAR	2
TERM (SEMESTER)	2° semester
ATTENDANCE	Not mandatory
EVALUATION	Out of 30
TEACHER OFFICE HOURS	GIALLANZA ANTONIO Thursday 11:00 13:00 Studio del docente

DOCENTE: Prof. ANTONIO GALLANZA

PREREQUISITES	Economics for Engineering and Technical Physics.
LEARNING OUTCOMES	<p>Knowledge and understanding capacity The student will use the Project Management Business Game focused on two fundamental phases of project management: bid and delivery. The student will learn how to manage a bid and plan the project implementation on a simulation platform that evaluates decisions based on performance indicators. Through case studies the student will acquire the ability to analyze and understand a case, identify important information, critical factors and objectives, make decisions and know how to motivate and represent them. At the end of the course the student will know the operating principles of some of the plant's systems (water system, compressed air, heat service).</p> <p>Ability to apply knowledge and understanding With the Project Management Business Game and the case studies, students will immerse themselves in a virtual business context that adheres to the reality in which they will have to make decisions. As far as plant services are concerned, the student will be able to calculate the overall capacity, according to the requests and the type of users, and to carry out a sizing of the plants on the basis of technical-economic considerations.</p> <p>Judgment autonomy The student will be able to identify the needed data to solve the faced problems, to choose the more adequate methodological approach to the specific problem and to evaluate the goodness of the proposed solutions.</p> <p>Communications skill The student will acquire the ability to communicate with competence and language skills also in specialized context.</p> <p>Learning ability The student will have clearer interactions between the different components of an industrial plant with a holistic view.</p>
ASSESSMENT METHODS	<p>Oral exam. The oral test consists of an interview to verify the ability, capacity and skills acquired during the course, the evaluation is expressed in thirtieths. Questions, both open and semi-structured, aim to verify:</p> <p>a) the acquired knowledge; b) the capability of elaborating; c) the possession of adequate capacity to expose the contents of the course.</p> <p>If the oral exam does not reach at least the sufficiency, the exam is considered not passed.</p> <p>Evaluation and criteria: Excellent (30- 30 cum laude): excellent knowledge of the arguments, excellent property of language, good analytic capacity. The student is able to brilliantly apply the knowledge to solve the proposed problems. Very good (26-29): good mastery of the arguments, full language skills. The student is able to apply autonomously the knowledge to solve the proposed problems. Good (24-25): basic knowledge of the main arguments, discrete language skills. The student has limited ability to apply the knowledge to solve the proposed problems. Satisfactory (21-23): the student does not have full competence of the main arguments of the course but he/she possesses satisfactory knowledge, adequate language skills and discrete ability to apply the acquired knowledge. Sufficient (18-20): basic knowledge of the main arguments of the course and of the technical language, poor ability to apply the acquired knowledge. Insufficient: the student does not have an acceptable knowledge of the main arguments of the course. He/she has an insufficient ability to apply the acquired knowledge.</p>
EDUCATIONAL OBJECTIVES	<p>-Ability to deal with the bid and delivery phase of a project. -Ability to understand and make decisions for a real case study. -Knowledge of the main components of general plant services.</p>
TEACHING METHODS	Frontal lessons and classroom exercises
SUGGESTED BIBLIOGRAPHY	<p>-Slides. -A. Pareschi, Impianti meccanici per l'industria, Progetto Leonardo Bologna.</p>

SYLLABUS

Hrs	Frontal teaching
3	Project Management Business Game
3	Learning by doing
6	Compressed air production and distribution service
6	Water service

SYLLABUS

Hrs	Frontal teaching
6	Heat production and distribution service

Hrs	Practice
12	Project Management Business Game
12	Case studies
3	Design of a compressed air network
3	Design of a water network
3	Economic evaluation of a cogeneration plant