

**COURSE OF STUDY:** *Economics and Business Administration (Economia e amministrazione delle aziende)*

**ACADEMIC YEAR.** 2024-2025

**ACADEMIC SUBJECT:** Economics and technology of energy sources

General information	
Year of the course	III
Academic calendar (starting and ending date)	I semester (11-9-23-22-12-23)
Credits (CFU/ETCS):	7
SSD	SECS-P/13 Commodity science
Language	Italian
Mode of attendance	mandatory attendance

Professor/ Lecturer	
Name and Surname	Pietro Alexander Renzulli
E-mail	pietro.renzulli@uniba.it
Telephone	
Department and address	via Lago Maggiore ang. via Ancona Taranto
Virtual room	Ms Teams platform
Office Hours (and modalities: e.g., by appointment, on line, etc.)	Tuesdays and Wednesday 14:30-15:30 in office on campus or on MS Teams platform prior to appointment via e-mail

Work schedule			
Hours			
Total	Lectures	Hands-on (laboratory, workshops, working groups, seminars, field trips)	Out-of-class study hours/ Self-study hours
175	56	/	119
CFU/ETCS			
7			

<b>Learning Objectives</b>	The aim of the course is to characterize the different energy sources from a technological, economic and environmental point of view in order to allow the student to understand the current national and international orientations of energy policy. The student must also be able to independently perform an audit and an energy diagnosis and carry out investment analysis.
<b>Course prerequisites</b>	Basic knowledge of Commodity Science

<b>Teaching strategies</b>	The course is developed through lectures relating to the aspects of the discipline that are relevant and indispensable for the achievement of the specific educational objectives of the teaching and overall of the course of study. Frontal teaching is supported by seminars and exercises and is followed, where possible, by an interaction with learners through discussion groups on the e-learning platform or in the classroom. During the lessons various tools are used for the improvement of teaching such as, for example, MS-Powerpoint presentations projected in the classroom, diagrams, bibliographic indications and anything else deemed useful for improving the effectiveness of teaching.
----------------------------	---

<b>Expected learning outcomes in terms of</b>	
<b>Knowledge and understanding on:</b>	The student of Technology and economics of energy sources will learn how to manage the company also with a view to sustainable development. An indispensable basis will be the knowledge of the methodology for analyzing the company's energy profile. The achievement of these skills will contribute to participation in classroom lessons, exercises in working groups and the commitment of personal study required by the training activities
<b>Applying knowledge and understanding on:</b>	The student, by understanding the strategic context a the company, will be able to understand the current national and international guidelines of energy policy. They will also have to master the energy audit and diagnosis tools. The individual study of the proposed texts and the examination of business cases illustrated in the course of the proposed activities contribute to achieving these skills.
<b>Soft skills</b>	<p>Making informed judgments and choices:</p> <ul style="list-style-type: none"> <li>The student will acquire the ability to analyze the main energy consumption dynamics of the company, to be able to operate with autonomy and authority, selecting the necessary tools to govern the problems that companies must face to improve their energy and economic profile.</li> </ul> <p>Communicating knowledge and understanding:</p> <ul style="list-style-type: none"> <li>The student will be able to effectively communicate ideas and solutions regarding the analysis of the company's energy variable. He will be able to dialogue with collaborators in the business and professional sphere, clearly explaining his conclusions relating to the topics analyzed. Communication skills will be developed during the various activities that involve the presentation of reports by students and as part of the preparation and discussion of the final exam.</li> </ul> <p>Capacities to continue learning:</p> <ul style="list-style-type: none"> <li>By participating in classroom activities and laboratories and finally with the preparation of the final exam, the student will have acquired the ability to independently investigate the issues relating to the implementation of an energy management system in the company and to use of economic tools for the development of energy efficiency projects.</li> </ul>
<b>Syllabus</b>	
<b>Content knowledge</b>	The dimension of the energy problem. Basics of energy economics and technology of the various energy systems. The economic laws of energy. World energy supply and demand. The Italian energy situation. Uses of energy in the various economic sectors. National energy balance. Future energy needs and forecast models. National energy plans. Energy, territory and environment. Energy management. Energy efficiency. Energy audit and diagnosis. Energy management systems.
<b>Texts and readings</b>	G. Nebbia, "Lezioni di merceologia", pagg. 61-145 A. Clo', "Il rebus energetico", Il Mulino, 2008
<b>Notes, additional materials</b>	MS Powepoint slides for each topic
<b>Repository</b>	MS Teams
<b>Assessment</b>	
<b>Assessment methods</b>	Oral examination
<b>Assessment criteria</b>	<ul style="list-style-type: none"> <li>Knowledge and understanding</li> </ul> <p>The student knows how to manage the company also with a view to sustainable development and masters the methodology of analyzing the</p>

	<p>company's energy profile.</p> <ul style="list-style-type: none"> <li>• Applied knowledge and understanding The student understands the current national and international guidelines of energy policy and masters the tools of energy audit and diagnosis.</li> <li>• Autonomy of judgment The student has acquired the ability to analyze the main energy consumption dynamics of the company and is able to select the tools necessary to govern the problems that companies must face in order to improve their energy and economic profile.</li> <li>• Communication skills The student will be able to effectively communicate ideas and solutions regarding the analysis of the company's energy variable.</li> <li>• Capacities to continue learning The student will have acquired the ability to independently investigate issues relating to the implementation of an energy management system in the company and the use of economic tools for the development of energy efficiency projects with a critical approach.</li> </ul>
Final exam and grading criteria	<p><i>The final grade is awarded out of a total of thirty points. The exam is passed when the grade is greater than or equal to 18/30.</i></p> <p>The oral test consists of the answer to three questions/topics related to the program which contribute equally to the formulation of the final grade. The evaluation criteria of the questions are the following:</p> <ul style="list-style-type: none"> <li>— Completeness and exhaustiveness of the answer</li> <li>— Argumentative ability</li> <li>— Critical processing.</li> </ul>
<b>Further information</b>	