

International Telematic University UNINETTUNO

Organize the 1st edition of the Master 1

“Circular Economy 4.0: Energy, Technology and Environment”
(A.Y. 2019/2020)

In cooperation with **CRIS Cittadella Universitaria Poggiardo** and **EUROCRIS SRL**



Title	Circular Economy 4.0: Energy, Technology and Environment
Objectives	<p>The objective of this Master’s Course in Circular Economy is that of assuring an excellence-level training to those who wish to work in fields in which an efficient resource management, based on an integrated-cycle perspective, is essential and develop their ability to cope with the complexity of environmental problems through a global and dynamic approach. A circular economy is a regenerative system aiming at keeping products, components and materials at their highest usefulness and value while minimizing waste, emissions and the use of energy. We shift from a linear economic model, based on the production of waste, to a circular one which entails the re-use and recycling of goods. Circular economy opens new areas for innovation and gives new opportunities for competitiveness, growth and employment.</p> <p>In Circular Economy, the profile of the manager becomes more and more essential in the current situation and helps in supporting businesses and organizations in implementing a circular economy, in the framework of the various functions and phases involved by this important economic and environmental challenge.</p> <p>The European and national legal guidelines are more and more recurrently defining policies and processes aimed at educating citizens and institutions towards waste reduction practices and, more than ever, at implementing paths that encourage the reuse of goods that would be otherwise destined to waste treatment. Apart from the revolution of circular economy, there is the fourth industrial revolution with the Italian program of Industry 4.0 that allows for the re-engineering of the production processes of our businesses aimed at new, advanced, smart and sustainable manufacturing of the future.</p>
Course Structure and Methodology	The Master’s Course has a duration of 1,500 hours of study corresponding to 60 ECTS credits (University ECTS Credits). University ECTS Credits are awarded after passing the final exam.



	<p>Upon completion of the Master's Course, all those who met the required conditions and passed the final exam will be awarded a diploma of First-Level Master's Course in "Circular Economy 4.0: Energy, Technology and Environment".</p>	
Teaching program	DISCIPLINE	Teaching program
	<p>MODULE 1 – Basics of Circular Economy This module includes the definition of integrated policies and actions for a circular and sustainable use of resources, redefining strategies and market models to protect the competitiveness of industries and the reservoir of natural resources by supplying knowledge about all business tools required by the transition towards a circular economy, even at local level. Electrotechnics and electrical plants: basic scales, production systems.</p>	
	<p>MODULE 2 - Marketing Strategy/Execution Analysis of sites, identification of strengths and weaknesses, sector strategic planning, dynamic adjustments.</p>	
	<p>MODULE 3 – Analysis of waste production and sustainable management The module deals with issues related to an integrated waste management and to legal aspects.</p>	
	<p>MODULE 4 – Models of sustainable development in building science and buildings energy certification This module is divided into three macro-areas: technical physics applied to buildings, heating and energy plants, including renewable sources, buildings' renewable sources. The module starts by presenting some basic notions related to principles of technical and thermodynamic physics. After that, there is a study of the buildings' energy performance. The second part of the module is focused on the analysis and design of the main energy plants also mentioning plants based on renewable sources. Finally, the third part of the module illustrates, in full details, the methodology of energy certification of a building according to the main Italian laws applicable and by using the DOCET software package.</p>	
	<p>MODULE 5 – Project Management This module offers an overview of the environment within which a project is realized and provides full details on the various aspects that must be considered during the project planning and realization stages. More specifically, it briefly deals with issues related to business organization and teamwork. It introduces the notion of project, its lifecycle, the related management and operational processes. In particular, it describes the planning and control strategies of technical performance, timing, resources and costs and the relative reporting. It also supplies some notions about projects' risk management and on</p>	



	how to handle technical documentation and on the control of the setting-up.	
	<p>MODULE 6 – Energy Efficient Management This module supplies knowledge on energy management techniques, starting from the study of legislation in the energy sector, incentives in the energy field and the energy market. Then, the module deals with the application of Smart Grids for an optimal management of energy and the use of home-automation systems for energy saving. Finally, the module pays particular attention to the role of the Energy Manager.</p>	
	<p>MODULE 7 – Environmental Sustainability and Soil Protection Environmental systems, monitoring plans and certifications.</p>	
	INTERNSHIP	
	FINAL DISSERTATION	
	TOTAL CREDITS	
Target students and admission requirements	<p>In order to enroll for the Master’s Course the students must hold:</p> <ul style="list-style-type: none"> • Degree obtained as per didactic regulations previous to the Ministerial Decree of the 3rd November n° 509; • Degrees as per Ministerial Decree 509/99 and as per Ministerial Decree 270/2004; • Specializing Degrees as per Ministerial Decree 509/99 and master-level degrees (<i>laurea magistrale</i>) as per Ministerial Decree 270/2004; <p>Additionally, applicants holding a university degree earned abroad and equivalent to a university degree required to access the Master’s Course as regards duration and content can submit an admission request.</p>	
Activities	<p>The courses include:</p> <ul style="list-style-type: none"> • Online lessons, supplemented by slides; • Face-to-face lessons, seminars and study meetings and face-to-face training days at the site of the CRIS Cittadella Universitaria Poggiardo – Center of Poggiardo (Lecce, Italy); • If they reach the required participants’ lowest amount, they may implement also the CRIS sites of Lecce and Bari (Italy). • Downloadable study materials. <p>The students are requested to fulfill the following obligations:</p> <ul style="list-style-type: none"> • Self-study of the supplied training material; • Participation in the networked activities; • Pass of the final exam (written paper – thesis) that will be performed before an exam commission. 	



Course duration	This First-Level Master's Course in "Circular Economy 4.0: Energy, Technology and Environment" lasts one year, corresponding to 1,500 hours of overall workload for the learner, equivalent to 60 ECTS Credits (University Training Credits).
Enrolment	The enrolment fee is € 7,500.00 (seven thousand and five hundred/00).
Deadlines	The courses will start on the 30 th September 2019, unless possible delays, and will be completed on the 30 th September 2020. The exam may be postponed due to a possible extension of the date of beginning of the course.
Information	CRIS Cittadella Universitaria Poggiardo - Sede di Poggiardo (Lecce, Italie) CRIS – Via De Gasperi, 11 – 73037 – Poggiardo (Lecce, Italie) Tél: +39 340.1165558 / 330.579765 E-MAIL: unicris.puglia@gmail.com PEC: crispoggiardo@pec.it SITO INTERNET: www.unicris.it



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