OFFICIAL COURSE

**Engineering for International Sustainable Development**

**MODULE I (METHODS)**

**A.Y. 2022-2023**

**LECTURER IN CHARGE:** Massimo Zortea

**CO-LECTURERS:** (appointments in progress)

**CONTEXT:** the course, promoted by the University of Trento, UNESCO Chair in Engineering for Human and Sustainable Development, is part of the educational offer of the **MSc Degree in Engineering for the Environment and the Territory**, Curriculum "Environmental Sustainability and International Cooperation (ESIC)". However it is open and useful to students and workers of any discipline, as it offers an opportunity for initial training and professional updating on all issues of Sustainable Development and International Cooperation.

** CONTENTS:** the course is divided into two parts, strictly interconnected (it is recommended to attend to both): Sustainable Development and International Cooperation; Participatory management of projects and conflicts. The first part (SUSTAINABLE DEVELOPMENT AND INTERNATIONAL COOPERATION) has the following learning goals: make the student acquire basic knowledge, skills and competences to apply concepts, principles, strategies and theoretical-practical tools of sustainable development in their professional and working activities (in companies, in public administrations, in third sector bodies, in education / training institutions), with particular attention to the international dimension, as well as to cultivate job or volunteer opportunities in the vast field of sustainability and international cooperation. The course is also useful as a professional refresher and retraining path. Consequently, as expected learning outcomes, the student, upon passing the related tests, will be able to:

a) build and enhance a good critical understanding of specific international and local contexts in which sustainable development and in particular environmental sustainability will be applied;

b) understand and use the basic concepts and principles related to sustainable development, especially in the environmental sphere, and the advanced ones peculiar to its application in the field of international cooperation;

c) to know and interact with the many subjects involved in various capacities in the areas covered by the course;

d) understand, analyse, apply the sustainable development goals set by the system of the relevant global and local agendas, as well as the goals of other relevant global agendas (contents and methods);

e) use and adapt to their contexts the main tools and methods for sustainable development and international cooperation, with special attention to those for environmental sustainability; in particular, apply the Environmental Mainstreaming Approach.

The second part (PARTICIPATED MANAGEMENT OF PROJECTS AND CONFLICTS), developing with a strong experimental character to provide basic knowledge and tools for the management of sustainable development projects, both locally and internationally, has the learning goals of providing students with a "toolbox" to read, analyse and understand the contexts in which they operate and manage interventions that involve a variety of stakeholders, intervening in a sustainable way to promote economic and social development even in situations of conflict.

This area develops along two complementary lines. The first has conflict – meant as a resource – as its point of observation. Thanks to the study of some case studies, it allows to understand the cultural dimension, analyse and question the power relations between the actors involved, to study their direct effects on territorial organization and innovation, introducing the topic participatory approaches in the sustainable development of the territory with particular reference to the issue of environmental conflicts, using the latter to investigate the general issue of conflict transformation and the construction of sustainable solutions that allow people to manage them. The second explores project methods, and in particular how to promote participatory sustainable development projects, offering an overview of the different approaches and basic skills necessary for their management. The contents have a strong experiential character, and are based on the analysis, also practical, of the main methodological approaches (Project Cycle Management, Appreciative Inquiry, Agile etc.) and techniques used in the management of projects in the international field, with particular attention to the most consolidated and innovative ones (Open Space Technology, World Café, Scenario Workshop, etc.).
Therefore, as expected learning outcomes, the student, upon passing the related tests, will be able to:

- produce a critical reading of the contexts in which he/she is called to operate, with particular attention to: relationship between stakeholders and the environment, ethnic diversity, power relations, organization and territorial innovation;
- carry out an analysis of conflicts, with particular reference to environmental ones, and experiment with some methods for managing them;
- know some project methods, with particular reference to those typically used in the field of sustainability in international contexts, through the practical experimentation of some of them.

In addition to the ordinary lectures, some Optional Workshops and Seminars will also be organized this year; their contents will be communicated later. The attendance to all these stimulating opportunities is recommended, also because the students will be actively involved in the management, for the benefit of both theoretical and practical learning.

The complete calendar of all training activities will be communicated at the first lesson and updated during the course.

**LANGUAGE:** the course is held entirely in English, since this AY.

**TEACHING METHODOLOGY:** an interactive approach is favored, practical case studies, discussion forums in the classroom and on the online learning platform, experimentation with process facilitation techniques, participation in simulations and role-playing games. Just to make full use of this methodology, it is recommended to attend lectures in both thematic areas (which are not divisible).

**VERIFICATION OF LEARNING:** written and oral exam; the written test consists of a multiple choice questionnaire; the oral test consists of a dissertation on a real case study chosen from a list drawn up by the lecturers also on the proposal of the students (oral performance evaluation is based on 3 parameters: 1) analytical skills, also taking into account the higher or less data availability; 2) design responsiveness; 3) exhibition capacity).

A twofold alternative is offered for the completion of the exam:

a) exam-exercise in pre-appeal, consisting of an individual written test as above followed by a group project work on the case study (each group shall present the results of their work as a frontal lesson during a final event);

b) individual exam, with written test on questionnaire and oral test on real case study as above.

During the course, official intermediate tests or test simulations will be proposed, on the part of the program previously carried out (optional).

**VENUE-DATES-TIMES:** lectures will be held in classroom 1R at the Department of Civil, Environmental and Mechanical Engineering (DICAM) of the University of Trento, starting from 12 September until 19 December 2022 with this weekly timetable: Monday 2:30 pm - 7:30 pm and Friday 11:30 am – 1:30 pm, for a total of 80 classroom hours.

The first lesson (12 September 2022) will therefore start at 2:30 pm.

**RECIPIENTS:** university students of all MSc degrees, both scientific and humanistic; HSE or sustainability managers in profit or non-profit organizations, freelancers, professionals, public administration officials, entrepreneurs, international cooperation practitioners, teachers and lecturers interested in sustainable development and related issues, operating in national/local and/or international contexts. Enrolled students who request it to the lecturer in charge can adapt the course to their personal needs with additional information and/or bibliographic references. Dialogue with teachers and among students is very open, as well, and is encouraged and supported, to foster interdisciplinary learning.

**REQUIREMENTS:** full attendance to the course (which includes exam and ECTS recognition) is subject to formal registration at the University of Trento. Interested participants not enrolled in UniTrento degree courses, shall enroll in the single course (“iscrizione a corso singolo”), upon payment of a tuition fee (https://www.dicam.unitn.it/76/ufficio-offerta-formativa-e-gestione-studenti).

**UNIVERSITY CREDITS:** 6 (six) university credits (ECTS) are recognized to regularly enrolled participants who include the course in their study plan and regularly pass the exam.

**INFORMATION:** more information about the course at the following link: https://drive.google.com/drivefolders/1qO_Ce1Zly4ZLd4J-CRzT4rOzbckMM4fc?usp=sharing

**ENROLLMENT:** interested candidates can send a simple e-mail message with name, surname, degree course (for UniTrento students) or name, surname, background/job (for non-UniTrento students) to the lecturer in charge Massimo Zortea (massimo.zortea@unitn.it). He will provide details on the enrollment procedure.