



UNIVERSITÀ
DEGLI STUDI
DI BRESCIA

PhD Programme

“Ingegneria Civile e Ambientale, della Cooperazione Internazionale e di Matematica”

(Cycles XXXVI, XXXVII e XXXVIII)

Coordinator: prof. Paolo Secchi

Curriculum:

“Appropriate methodologies and techniques in international cooperation

For development”

Tracks: Technology and Health

Curriculum coordinator and contact for Technology Track: Prof. Sabrina Sorlini

Contact person (Health Track): Alberto Matteelli

TEACHING PROGRAMME

Approved by the teaching board

1st December 2022 – 30th November 2023

The Curriculum "Appropriate methodologies and techniques in international development cooperation" promotes research activities for the development of appropriate solutions to contexts with limited resources regarding environmental and medical-health issues. The Curriculum is divided into two tracks: Technological and Health.

The Technological specialization deals with the issues of access to drinking water, "sanitation", waste management and energy production. It is proposed to: i) analyze the technical problems in the environmental field and the solutions applicable in countries with limited resources; ii) define, test and implement on a real scale appropriate technologies for the management of the environment in countries with limited resources; iii) disseminate knowledge and experience on appropriate technologies for resource limited countries.

The Health track develops research on the major infectious endemics (HIV, malaria, tuberculosis, neglected diseases, etc.), and in general to contribute to the achievement of the health objectives for sustainable development (SDGs). It is proposed to: i) analyze the determinants of health in specific contexts in countries with limited resources; ii) planning international health cooperation interventions for the benefit of communities in countries with limited resources; iii) planning research interventions aimed at sustainable development in compliance with ethical parameters; iv) plan and implement training interventions and transfer of knowledge and skills in the health sector.

The training proposal of the Curriculum includes training and research activities, conducted both in Italy and abroad. Of particular importance is the participation in project activities in the field, in resource limited countries, in collaboration with cooperation organizations and local universities.

The Curriculum is specifically dedicated to learning research and management skills that can find an operational application in International Cooperation activities managed both at a supranational (International Organizations) and national (General Directorate for Development Cooperation, Ministry of Foreign Affairs) and local level in the scope of programs promoted by Non Governmental Organizations (NGOs).

TEACHING ACTIVITY

The training course, lasting 3 years, includes teaching, research and project development activities in the field in contexts with limited resources. The didactic activity is divided into basic didactics, which includes common training proposals for the two curricula, and sector didactics, specifically addressed to each of them.

The basic teaching proposal has a strong interdisciplinary connotation and involves skills in the fields of economics, anthropology, engineering, medicine, etc. It includes participation in seminars, specialization courses, conferences and summer schools.

The teaching programme herein presented is addressed to all the PhD students attending the 36th, 37th e 38th cycles (for all the cycles) or only to the students of one specific year (when the number of the cycle is specified). (Year 1: XXXVIII cycle; Year 2: XXXVII cycle; Year 3: XXXVI cycle).

Basic teaching (for both the two tracks)

Activity	Hours	Description
Short course Anthropology Prof. Maria Giovanna Cassa Years 1-2-3	6	The short course is organized in two seminars and presents an analytical approach to practices and systems of interest in local change processes. It is an important interdisciplinary activity that provides basic knowledge on cultural and anthropological aspects of extreme importance in development cooperation projects.
Course Methods for international cooperation for development and projects' participated management (module 1) Prof. Massimo Zortea Year 1	80	The course, in this first module, illustrates the methodologies typically used in international development cooperation and for the participatory management of projects. The course is organized by the University of Trento.
Course Module 2: Project stage in international development context: project for development with environmental integration (only for students who attended module 1) Prof. Massimo Zortea Year 1	20	The course, in this second module, aims to provide students with a "toolbox" to read, analyze and understand international contexts and manage interventions that involve a variety of stakeholders, operating in situations of conflict and social exclusion.

Specific teaching (TT Technology Track – HT Health Track)

Activity	Hours	Description
Course Municipal Solid Waste Management in Developing Countries Years 1 – 2	14 TT	Online course Link: https://www.coursera.org/learn/solid-waste-management/
Course Planning and Design of Sanitation Systems and Technologies Years 1 – 2	11 TT	Online course Link: https://www.coursera.org/learn/sanitation
Course Introduction to Household Water Treatment and Safe Storage Years 1 or 2	11 TT	Online course Link: https://www.coursera.org/learn/water-treatment
Course Introduction to Faecal Sludge Management Years 1 or 2	11 TT	Online course Link: https://www.coursera.org/learn/faecalsludge
Course of APPROPRIATE ENVIRONMENTAL TECHNOLOGIES FOR RESOURCE LIMITED COUNTRIES (A.A. 2021)	60 TT	Teaching course in the Master's Degree Course in Civil and Environmental Engineering is https://unibs.coursecatalogue.cineca.it/insegnamenti/2022/753514/2016/2158/10041 Second semester Feb-June 2023
Conference: Appropriate technologies for environmental management in low income countries Years 1-2-3	8 TT+HT	International conference organized by CeTAmb - Research center "Appropriate technologies for environmental management in resource limited Countries", University of Brescia 22 December 2022
Summer School Appropriate technologies & critical environmental issues in low income countries Years 1-2-3	40 TT+HT	Summer school organized by CeTAmb - Research center "Appropriate technologies for environmental management in resource limited Countries", University of Brescia. The course focuses on appropriate technologies for improving environmental and health conditions in

		<p>resource limited countries. The course program will include: 1) Introduction to the concept appropriate technologies and their sustainability in low income countries, 2) Focus on appropriate technologies for water, wastewater and solid waste management, 3) Presentation of case studies, 4) Teamwork on choice and development of appropriate technologies in selected contexts.</p> <p>June – July 2023</p>
<p>Summer School</p> <p>Education towards the international education for development</p> <p>Years 1-2-3</p>	40 TT+HT	<p>Summer school organized by Fondazione Tovini in collaboration with the University of Brescia and Università Cattolica.</p> <p>September 2023</p>
<p>Visiting professor</p> <p>Cycle of seminars from Prof. Dora Laky</p> <p>Year 2-3</p>	8 TT	<p>Challenges of drinking water treatment technologies</p> <p>https://www.unibs.it/sites/default/files/2022-11/locandina%20Dora%20Laky%20%281%29.pdf</p> <p>7-8th November 2022</p>
<p>Visiting professor</p> <p>Cycle of seminars from Prof. Gabrielle String</p> <p>Year 2-3</p>	8 TT+HT	<p>Improving WASH programs in humanitarian response</p> <p>6-7th December 2022</p>
<p>Master in Global Health</p> <p>Year 1</p>	15 TT 3-4 full months HT	<p>The Master Course in Global Health organized by the University of Brescia, provides the bases for understanding health priorities in limited resource settings and plan for intervention to improve the health status. The program covers epidemiology, statistical methods, health economics, anthropology and clinical sciences appropriate for limited resources countries and the most vulnerable population groups.</p> <p>13 Feb-23 May 2023</p> <p>https://www.unibs.it/it/didattica/post-laurea/master-corsi-di-perfezionamento-24-cfu/corsi-di-perfezionamento-e-aggiornamento/corso-di-perfezionamento-global-health-0#:~:text=DURATA,e%20circa%20300%20di%20autoapprendimento.</p>

