CIVIL AND ENVIRONMENTAL ENGINEERING

DIATI - Applied Environmental Engineering

Funded By	Dipartimento DIATI

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Context of the research activity	The research will focus on the engineering aspects revolving around the protection of ecosystems, the prevention/remediation of chemical, physical, and biological contaminations of environmental systems, and the greening of processes in civil, agricultural and industrial settings. Examples include: - chemical and biological cycles, ecological alterations and ecotoxicology - fate and transformation of pollutants in the environment - remediation and reclamation of contaminated environmental systems - quality of natural environments, environmental impacts and risk - water and wastewater treatment - waste treatment and recycling - gaseous emissions treatment - sustainability of industrial and agricultural processes - environmental management of companies - innovative technical/technological solutions for the protection and management of natural resources

Objectives	General objectives of the research are the improvement of environmental quality and of the sustainability of processes. Specific objectives of the doctoral research may encompass: application and refinement of tools for the correct evaluation of the environmental impacts and risks of new or existing processes; quantitative assessment of contaminations and of their effect on humans and on the ecosystems; design and implementation of reclamation and remediation activities; development of technical and technological solutions for the treatment contaminated liquid, solid, and gaseous emissions, for the protection of natural environments, and for the

	extraction/recycling/reuse of valuable resources from natural or anthropogenic streams. These studies bring together knowledge and tools from chemistry, physics, biology, civil engineering, environmental engineering, chemical engineering, separation and purification science, as well as management and economics disciplines.

Skills and competencies for the development of the activity	The ideal candidate has knowledge of implications and applications of engineering processes; has a strong background in applied environmental engineering; knows how to bring together expertise from various disciplines to a specific task; speaks and writes in correct English; has good written and oral communication skills; is motivated, independent, and shows the potential to develop an original research activity leading to exceptional scientific accomplishments.