

Annex 1

PHD COURSE IN “INFORMATION AND COMMUNICATION TECHNOLOGY AND ENGINEERING”	
Total number of positions	8 (6 covered by scholarship)
Number of scholarships	6 (3 funded by the University, 1 funded by Istituto Superiore delle Comunicazioni e delle Tecnologie dell'Informazione, 2 funded by CNR)
Length of the course	Three years
Academic disciplines related to PhD course	ING-INF/01, ING-INF/02, ING-INF/03, ING-INF/04, ING-INF/05, ING-IND/31
Educational objectives	<p>The PhD course in Information and Communication Technology and Engineering aims at training researchers in the ICT areas, with particular regard to:</p> <ul style="list-style-type: none"> - Nano-electronic technologies and devices, optoelectronic and photonic components for telecommunications, interconnections on chips, sensor networks; - Physical, chemical, biological sensors, biochips, lab-on-chip, micro and nanosystems for the environment, industrial processes, materials and structures, transport, space, security, food, biotechnology, medicine; - Diagnostic techniques and advanced imaging for cultural heritage, security, industrial processes, materials and structures, automotive and aerospace, biomedicine; - Methods and techniques for the formalization, extraction, and the management of information from large amounts of data (big data); - Software systems for simulation/emulation of the "human-like reasoning" and neuromorphic problem solving in medical field; - Techniques for "human-machine" interaction in medicine and cultural heritage; - Methods for processing large volumes of remote sensing data based on distributed computing infrastructures; - Development of methodologies for modeling and design of control systems for complex systems; - Advanced techniques for the synthesis of antennas; - Modeling of systems and micro and nano-scale magnetic materials, analysis of the magnetization dynamics for technological applications of spintronics and magnetic recording; - Multi-polarization of scattering models for applications involving remote sensing and electromagnetic diagnostics to

	<p>microwaves;</p> <ul style="list-style-type: none"> - Non-stationary signals with applications to communications, radar sonar and biological systems; - Signal and image processing; - Radar and microwave imaging; - Remote sensing. <p>The activities involve attending courses and seminars given by the faculty of the Department of Engineering, as well as by researchers of other institutions, both on basic topics and on more specific issues, related to the research activities of doctoral students. The training will also be carried out by attending courses offered in the framework of other PhD courses both in Italy and abroad.</p>
Coordinator of the PhD board	Prof. Marco Ariola (ariola@uniparthenope.it)
Requirements for admission	<p>“Laurea specialistica” or “Laurea magistrale” or equivalent foreign Master’s Degree.</p> <p>The validity of a foreign degree is assessed by the PhD Board, in compliance with the regulations in force in Italy and in the issuing country.</p>
Admission procedure	<p>The admission procedure is divided in two parts:</p> <ul style="list-style-type: none"> - in the first phase the examination committee examines the curriculum of the candidates and all the attached documentation, as specified below; the maximum score is 100 points; the minimum score to be admitted to the interview is 60 points; - the second phase of the procedure consists of an interview with the candidate; the maximum score is 50 points; the minimum score to pass the interview is 30 points.
Documentation evaluation	<p>The evaluation of the examination committee will be based on the following criteria:</p> <ul style="list-style-type: none"> - candidate’s curriculum and publications (maximum of 60 points); - other scientific merits (maximum of 5 points); - description of a detailed plan of the research activity the candidate intends to carry out during the Ph.D. Note, however, that the research illustrated in the document sent with the admission application does not necessarily represent the research to be developed during the Ph.D. itself (maximum of 25 points); - reference letters (maximum of 10 points). <p>Only the candidates who achieve a score of at least 60/100 are admitted to the interview</p>

<p>Oral test</p>	<p>The interview will be held on September 24th, 2019 at the Centro Direzionale di Napoli, isola C4, starting from 10am.</p> <p>The interview will be based on the discussion of the candidate's curriculum, publications and plan of research activity.</p> <p>During the interview, good knowledge of at least one foreign language of the European Union will be assessed.</p> <p>The maximum score for the interview is of 50 points. Only candidates scoring a minimum of 30 points will pass the interview.</p> <p>The interview can be held either in Italian or in English.</p>
<p>Documents that are needed to be attached to the application (besides those specified in the general part of this Call)</p>	<ul style="list-style-type: none"> - Curriculum and publications - Other scientific merits useful to the evaluation of the candidates - Detailed plan of a possible research activity - Reference letters