



UNIONE EUROPEA



Università degli Studi di Cagliari

**PhD Course in Electronic and Computer Engineering**  
Curriculum 1 - COMPUTER ENGINEERING AND AUTOMATIC CONTROL  
CURRICULUM 2 - ELECTRONICS AND TELECOMMUNICATIONS

DISCIPLINARY SCIENTIFIC AREA	9 - INDUSTRIAL AND INFORMATION ENGINEERING
COORDINATOR	PROF. FABIO ROLI
HEAD DEPARTMENT	DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING
DURATION	3 YEARS
EDUCATIONAL OBJECTIVES AND RESEARCH TOPICS	<p>The PhD course in Electronic and Computer Engineering aims to train young researchers to make them ready to carry out academic and industrial research projects in the following areas:</p> <ol style="list-style-type: none"> <li>1. Automatic Control and Systems Engineering</li> <li>2. Telecommunications</li> <li>3. Electromagnetism</li> <li>4. Electrical Circuits and Modelling</li> <li>5. Industrial Electronics Power</li> <li>6. Computer Engineering</li> <li>7. Microelectronics</li> <li>8. Electrical and Electronic Measurements</li> </ol> <p>Central point of the doctoral education is the development of an original research project to be carried out in close contact with the supervisor and strongly aimed to the advancement of knowledge in the relevant field of engineering.</p> <p>The main goal of the course is to create professionals who find suitable job placement at academic institutions, research centres, high-tech firms, and that they are potentially able to initiate economic undertakings with high scientific and technological content.</p>
ELIGIBILITY AND OTHER REQUIREMENTS FOR CANDIDATE	<ul style="list-style-type: none"> <li>- degree from the Italian university system awarded according to D.M. n. 509/1999 (diploma di laurea specialistica);</li> <li>- degree from the Italian university system awarded according to D.M. n. 270/2004 (diploma di laurea magistrale);</li> <li>- degree from the Italian university system awarded according to the regulations established before D.M. n. 509/1999 (diploma di laurea);</li> <li>- academic qualification issued by a foreign university recognized as equivalent. The foreign degree must be comparable in duration and content to the titles listed above and provide access to PhD courses in the country of achievement</li> </ul>
ADMISSION TESTS	<p>ASSESSMENT OF QUALIFICATIONS, CURRICULUM VITAE, WRITTEN TEST AND INTERVIEW.</p> <p>All admission tests can be conducted in English.</p> <p>During the interview it will assess the knowledge of English language.</p> <p>Candidates who are not resident in Cagliari and who are unable, for justified reasons, to attend the interview at the registered office, can be granted the opportunity to do the interview by teleconference, on the same date and time established for interviews in the presence, according to art. 4. of the call.</p>



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<p>ADMISSION TESTS FOR FOREIGN CANDIDATES APPLYING FOR RESERVED POSITIONS SUPPORTED BY A SCHOLARSHIP</p>	<p>EVALUATION OF THE CURRICULUM VITAE, REFERENCE LETTERS AND INTERVIEW.          The interview can be conducted in English by teleconference with audio and video modality that allows the verification of the identity of the candidate.          The curriculum vitae and letters of reference can be written in English.          For foreign applicants, the dates of interviews by teleconference will be communicated to the interested parties via email.</p>
<p>TOPICS OF WRITTEN TEST</p>	<p>The written test for the Italian candidates consists in the preparation of the support material (transparencies) for a scientific presentation on the topics of the doctoral program.</p>
<p>POSITIONS</p>	<p>13</p>
<p>SCHOLARSHIPS</p>	<p>4 UNIVERSITY OF CAGLIARI (1 RESERVED FOR FOREIGN CANDIDATES GRADUATES IN FOREIGN UNIVERSITIES);          5 DEPARTMENT OF ELECTRICAL AND ELECTRONIC ENGINEERING:</p> <ul style="list-style-type: none"> <li>▪ RESEARCH PROJECT “Innovative electric energy storage systems for the dispatching of intermittent renewable sources”, REFERENCE Prof. Alfonso Damiano (GRANT ECU - ENI CORPORATE UNIVERSITY S.P.A.),</li> <li>▪ RESEARCH PROJECT " GALLIUM NITRIDE ", REFERENCES Proff.ri Massimo Vanzi e Giovanna Mura (GRANT HUWAEI),</li> <li>▪ RESEARCH PROJECT “Aloha”, REFERENCE Prof. Paolo Meloni (GRANT H2020-ALOHA RICFPQ_CTC_EUALOHA_2017),</li> <li>▪ RESEARCH PROJECT “Fitoptivis”, REFERENCE Prof. Luigi Raffo (GRANT H2020ECSEL – FITOPTIVIS);</li> <li>▪ RESEARCH PROJECT “Development of devices and sensors based on organic semiconductors for biomedical applications”, REFERENCE Prof. Annalisa Bonfiglio (GRANT RICDIP_2017_FLEXIBLE_BIO_ELECTRONICS_BONFIGLIO);</li> </ul> <p>1 CRS4, RESEARCH PROJECT “System theory and IoT paradigms for cybersecurity of industrial control systems and critical infrastructures”, REFERENCE Dott. Alessandro Pisano (REFERENCE CRS4 Dott. Piero Pili).          Scholarships will be awarded to candidates successfully positioned in the ranking list, obtaining the best score and a positive evaluation on the adequacy of their CV in carrying out the specific research topic connected to the scholarship.          Three additional PON RI 2014-2020 scholarships may be available in the case of admission to funding of three projects presented by the PhD course in response to the Call MIUR prot. n. 1090 of 4.5.2018, on “Artificial intelligence for the energy market” (subject area 09 - Industrial and information engineering, ING-INF/05), “Artificial intelligence and IT security” (subject area 09 - Industrial and information engineering, ING-INF/05), “the Internet of Things” (subject area 09 - Industrial and information engineering, ING-INF/03). The PON RI scholarships are aimed at supporting doctoral programs including mandatory periods of study and research to be spent abroad and in a company.</p>
<p>POSITIONS WITHOUT SCHOLARSHIP</p>	<p>3</p>
<p>REFERENCE PERSON</p>	<p>PROF. FABIO ROLI - MOBILE PHONE: +39 320 4372999 - EMAIL</p>



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	<a href="mailto:rol@dice.unica.it">rol@dice.unica.it</a>
WEBSITE	<a href="http://www.dice.unica.it/DRIEI/">http://www.dice.unica.it/DRIEI/</a>