



(ANNEX 4)

CALL FOR ADMISSION TO PHD POSITIONS – 35 cycle PHD PROGRAMME in INNOVATION FOR THE CIRCULAR ECONOMY

PhD Programme Coordinator	Prof. Francesco Quatraro
Department	Economics and Statistics Cognetti de Martiis
PhD Programme duration	3 years
PhD web site	http://inno-ce.campusnet.unito.it
Course start date	1 st November 2019
Departments involved in PhD programme	Economics and Statistics Cognetti de Martiis; Culture, Politics and Society; Chemistry; Computer Science; Agricultural, Forestry and Food Sciences; Management Engineering (Polytechnic of Milan)

Positions offered ¹	
n. 4 positions with scholarship , of which n. 1 reserved to candidates with international qualifications	of which: - n. 4 scholarships funded by the University
n. 2 positions reserved to employees of companies or public bodies	of which: - n. 1 position reserved to employees of GENERAL MOTORS GLOBAL PROPULSION SYSTEMS-TORINO S.R.L. - separate ranking - <i>The awarding of the position is subject to formalization of the agreement with the company;</i> - n. 1 position reserved to employees of ECOPACK S.P.A. - separate ranking - <i>The awarding of the position is subject to formalization of the agreement with the company.</i>

¹ All additional positions, with or without scholarships and/or in apprenticeship contracts (Legislative Decree n. 81/2015 art.45), which may become available after the publication of this Call, will be announced on the University websites <http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca> e <http://en.unito.it/research/phd/phd-programmes>.



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Titles of Research Projects / Research Fields

The list of research projects is available on the University' website <http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca> and <http://en.unito.it/research/phd/phd-programmes>. The list may be updated until the deadline of call for admission to PhD positions.

Entrance examinations

Schedule with information on dates and venues of entrance examinations will be published on the websites: <http://www.unito.it/ricerca/fare-ricerca-unito/dottorati-di-ricerca> and <http://en.unito.it/research/phd/phd-programmes>, starting from **9th April 2019**.

Application fee

Application fee is €50.00 for each application submitted.

Candidates applying with international qualifications are exempted from paying the application fee.

Application fee deadline: 16th April 2019 (mandatory deadline).

Candidates who do not pay the application fee within the deadline will be excluded from the competition.

CALL FOR ALL POSITIONS	
Admission procedure	
Assessment of qualifications, research project and interview	
Qualifications to be uploaded in the on-line application	
<ul style="list-style-type: none"> • Application form (duly signed and including identification document/passport); • For applicants with international qualifications: submit on-line documentation as specified in Art. 4 of this Call; • For applicants under condition: provision of Bachelor's degree grade, certificate or self-certification with a complete list of academic transcripts concerning the 1st cycle degree (Laurea Triennale) and 2nd cycle degree (Laurea Magistrale) with marks, weighted average and credits. For applicants applying under condition, please also check Art. 5 of the Call. • Abstract thesis of Master'S Degree (max. 2500 characters) • Research project (max 10.000 characters) written in English or in Italian by the candidate choosing a title within those offered by the PhD Programme • Publications (max. 6) 	
Assessment criteria	Maximum score 100 points
Assessment of qualifications	Maximum score 45 points
Final grade of Laurea/ second cycle degrees (or weighted average of list of examinations taken during the Laurea Triennale/1 st cycle degree and Laurea Magistrale/2 nd cycle degree for candidates applying under condition): 106-110 (cum laude): max. 30 points from 101 to 105: max. 25 points from 96 to 100: max. 20 points from 91 a 95: max. 15 points	Maximum score 30 points



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<= 90: max. 10 points For applicants holding an international qualification Curriculum Studiorum (as per Application Form and transcripts)	
Abstract thesis of Master degree (max. 2500 characters)	Maximum score 5 points
Publications and other qualification - Publications: max 8 points - Other qualifications: max. 2 punti	Maximum score 10 points
<i>Minimum threshold for admission to the next step</i>	30 points
Research project	Maximum score 25 points
<i>Minimum threshold for admission to the interview</i>	15 points
Interview	Maximum score 30 points
<i>Minimum threshold for passing the interview</i>	20 points
Further information about the examination: The interview will be focusing on topics concerning environmental sustainability, circular economy models, and the related enabling technologies. The relevant disciplinary domains will include economics, sociology, computer science and chemistry, based on the Curriculum Studiorum and the documented experience of the candidate. Candidate may, on request and upon authorization of the Board, sustain the interview via Skype. (See art.8 of the Call)	

Titoli progetti di ricerca/Titles of research projects

Positions with scholarships:

- 1) Unveiling the convergence between Digital Transformation and Circular Economy / Trasformazione Digitale ed Economia Circolare (*supervisor: Prof. Francesco Quatraro*)
- 2) Global value chains, international trade and circular flows in input-output frameworks (*supervisor: Prof. Francesco Quatraro*)
- 3) Ergonomics and Circular economy: consumer needs and behaviour for user-centred design (*supervisor: Prof. Margherita Micheletti Cremasco*)
- 4) Biodegradable bioplastics: a valuable tool for circular economy



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- 5) Innovative materials and processes for water treatment and reuse
- 6) Materials for Circular Economy in Industry 4.0
- 7) Sustainable production of advanced materials from biowaste within a biorefinery approach
- 8) Economia circolare e modelli di business (*supervisor: Prof. Filippo Barbera*)
- 9) Eli imprenditori dell'economia circolare (*supervisor: Prof. Filippo Barbera*)

Position reserved to employees of General Motors Global Propulsion Systems – Torino S.r.l.

- Development of business model applying circular economy to the supply chain in the automotive and transportation sector (*supervisor: Prof. Francesco Quattraro*)

Position reserved to employees of Ecopack S.p.A.

- Applying circular economy principles to paper-based food packaging (*supervisor: Prof. Claudia Barolo*)