

INDUSTRIAL ENGINEERING	
CYCLE	XXXVII
COORDINATOR	Prof. Gianni ROYER CARFAGNI email: gianni.royer@unipr.it Department of Engineering and Architecture
DURATION	3 anni
STARTING DATE OF THE PHD PROGRAM	01/01/2022
PARTNER INSTITUTION FOR UNIVERSITY COOPERATION AGREEMENTS	<ul style="list-style-type: none"> Universidade Federal de Santa Caterina (Brazil)
RESEARCH TOPICS (The candidate MUST mandatorily indicate one research topic in the ANNEX A)	
<ul style="list-style-type: none"> Theoretical and applied mechanics, mechanics of materials and structures, material technology, machine design, measurements and diagnostics. Economic, organizational, managerial, logistics, plants and legal aspects in the field of engineering. Energy systems, thermo-fluid dynamics, fluid machinery, applied physics. 	
TRAINING OBJECTIVES	
The Industrial Engineering PhD program aims to give participants a deep knowledge in the main topics relevant to industrial engineering. The PhD course presents numerical, analytical and experimental techniques, in order to face any technical or scientific problem of the industrial engineering, with managerial skills, to provide autonomy in work and readiness of inclusion in a collaborative environment with other researchers and technicians. The internationalization phase envisaged in the three-year curriculum allows to forge links with other foreign reality by providing the PhD an additional tool to get into a scientific context not just limited to national borders.	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission: <ul style="list-style-type: none"> Laurea specialistica or Laurea magistrale (second cycle master's degree) Laurea Vecchio Ordinamento (degree obtained under the previous Italian regulations); Second cycle Master's degree obtained abroad, equivalent to the above mentioned Italian degrees and recognized as suitable for the admission to doctoral program Undergraduate applicants may also submit applications with the obligation of getting their degree by October 31st 2021 .

POSITION PUT OUT TO COMPETITION	7	With Scholarship - Action IV.4 - "Doctorates and research contracts on innovation topics"	1
		With Scholarship - Action IV.5 - "Doctorates on Green issues of the PON R&I 2014-2020"	6
Position with Scholarship LINKED TO SPECIFIC TOPICS			
When registering for the competition, candidates must indicate to the Examining Board, in the specific section of ANNEX A, their interest of being assigned one or more scholarships on a specific topic. The Examination Board will evaluate their eligibility based on specific competences, experience and specific aptitudes of the applicants. For the definition of the research project, the candidate will be able to view the research topics of the Phd course Board at https://dia.unipr.it/it/node/2834			
N°	ACTION	BOUND RESEARCH TOPIC	
1	Action IV.4 - "Doctorates and research contracts on innovation topics"	<ul style="list-style-type: none"> Enhancement of human capital in research and innovation: high performance materials, packaging systems and technologies, electrically driven vehicles 	

6	Action IV.5 - "Doctorates on Green issues of the PON R&I 2014-2020"	<ul style="list-style-type: none"> Technologies for sustainable development and reduction of climate change impacts: renewable sources, decarbonization, distributed generation, high-efficiency process methods, innovative and environment-friendly materials, development in the pharmaceutical and food sectors
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ADMISSION PROCEDURES	<p>Assessment of QUALIFICATIONS: up to 50 points (a minimum score of 25 points shall be required to be admitted to the Oral Exam)</p> <p>ORAL EXAM: up to 70 points</p> <p>Minimum score for ELIGIBILITY: 70/120</p>
Foreign Language	<p>Language the fluency of which shall be assessed during the Oral Exam: ENGLISH.</p> <p>The evaluation of the knowledge of this language will be oral and will consist in reading and translating of a scientific text.</p>
<p>CANDIDATES ADMITTED TO THE ORAL TEXT CAN TAKE THE EXAM IN PRESENCE OR REMOTELY IN AUDIO AND VIDEO TELECONFERENCE</p> <p>(Candidates who intend to take the Oral Exam remotely must submit request, to this purpose, as per the model attached to the competition notice)</p>	
<p>THE INTERVIEW MAY BE HELD ALSO IN ENGLISH</p>	
<p>LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT</p>	
<p>MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION</p>	
ANNEX A	(art. 5 of the Competition notice)
Identification Document	Scanned Copy of a valid identity document with photo (i.e. identity card, passport)
Curriculum Vitae et studiorum	No specific CV format is required (see art. 4 of the Competition notice)
Abstract of degree thesis	Abstract of the second cycle master's degree thesis. Undergraduate applicants must submit the draft of the thesis approved by their supervisor (abstract/draft of the thesis: 10.000 characters including spaces)
Qualifications	<p>Certificates and academic transcript of records for both Bachelor' and Master' degrees containing the following details for each degree held: (art. 4 of the Competition notice): University that granted the degree - Type of degree (first cycle/second cycle/single cycle) Name of the degree program - Date of graduation - Final mark - List of exams and corresponding scores (academic transcript of records) - Translation into Italian or English (only for degrees issued in languages other than Italian or English).</p>
Research Project	<p>Drawn up according to the format attached to the competition announcement</p> <p>THE EVALUATION OF THE PROJECT WILL TAKE PLACE DURING THE ORAL EXAM</p>
<p>FURTHER QUALIFICATIONS THAT MAY BE ATTACHED TO THE APPLICATION, IF IN POSSESSION OF THE APPLICANT (only qualifications attested by a document drawn up in Italian or in English)</p>	
Statement of Research interest	Short text – maximum 1 page – in Italian or in English, aimed at explaining the candidate's reasons to attend the PhD program and at describing her/his specific research interests

Scientific Publications	Articles on national and international journals, contributions presented at conferences or symposia, book chapters. It is necessary to attach a copy to online application	
Reference Letters	A maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities (to be attached to the online application)	
Other Academic qualifications and other experiences (training, work, research, teaching, etc.)	<ul style="list-style-type: none"> - First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program - Periods of study abroad, outside the country of origin (e.g. Erasmus programme or other similar mobility programmes) - Scholarships, awards, etc.) - Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covered by research grant, and as a staff member of research units - Working activity - Professional and/or training internship - Language proficiency certificates - Other qualifications attesting the suitability of the applicants 	
EVALUATION CRITERIA		
QUALIFICATION	EVALUTATION CRITERIA	POINTS
Curriculum Vitae et studiorum	Including academic career and postgraduate experience, accompanied by a statutory declaration in lieu of the certification of the exams passed with the relevant marks, as well as the final graduation mark.	Up to 10 points
Graduation mark	Score related to the final mark: <ul style="list-style-type: none"> - 110 with honours (magna cum laude): 8 points; - 110: 7 points; - From 105 to 109: up to 6 points; - From 100 to 104: up to 3 points; - From 66 to 99: 0 points The scores will be proportionally renormalized in case of equivalent evaluations	Up to 8 points
Average of the exam marks (if the candidate will attain the degree no later than 31 October 2021)	Score related to the average of the exam marks: <ul style="list-style-type: none"> - 30/30: 8 points; - From 28/30 to 29/30: up to 5 points; - From 25/30 to 27/30: up to 3 points; - From 18/30 to 24/30: 0 points; The scores will be proportionally renormalized in case of equivalent evaluations	Up to 8 points
Graduation thesis	Scientific value of the Master's Degree thesis and consistency with the doctoral program research topics	Up to 10 points
Statement of Research Interest	Evaluation of the candidate's motivations to attend the doctoral course and congruity of the research interests with the research topics of the doctoral course.	Up to 7 points
Scientific publications	Articles on national and international journals, contributions presented at conferences or symposia, book chapters. It is necessary to attach a copy to online application	Up to 5 points
Reference Letters	a maximum of 2 written by professors or researchers at the University of origin of the candidate or from other universities or from experts in the research areas working in public or private research facilities	Up to 5 points

<p>Other Academic qualifications and other experiences</p>	<ul style="list-style-type: none"> – First or second level Master's degree obtained in Italy and/or specialization degree in subjects consistent with the research topics of this PhD program – Periods of study abroad, outside th country of origin (e.g. Erasmus programme or other similar mobility programmes) – Scholarships, awards, etc.) – Research activity (basic, applied, translational, etc.) carried out in any capacity, including when covered by research grant, and as a staff member of research units – Working activity – Professional and/or training internship – Language proficiency certificates – Other qualifications attesting the suitability of the applicants 	<p>Up to 5 points</p>
<p>ORAL EXAM</p>	<p>EVALUATION CRITERIA</p>	<p>POINTS</p>
<p>The ORAL EXAM includes the presentation and discussion of the research project and is intend to assess the suitability of the applicant to pursue scientific research as well as the general knowledge of issues connected to the related topics</p>	<ul style="list-style-type: none"> ○ scientific value and originality of the proposal: up to 20 points ○ articulation of the proposal: up to 10 points ○ feasibility of the proposal: up to 15 points ○ consistency with the related issues: up to 10 points ○ project presentation: up to 10 points ○ Knowledge of the foreign language: up to 5 points 	<p>Up to 70 points</p>
<p>SCHEDULE OF THE ADMISSION EXAMS</p>		
<p>ORAL EXAM</p>	<p>DATE</p>	<p>26 October 2021</p>
	<p>TIME</p>	<p>09:00 am (Italian time)</p>
	<p>PLACE</p>	<p>Meeting Room – Building 10 – Ground Floor Department of Engineering and Architecture Parco Area delle Scienze, 181/A - Campus 43124 PARMA - ITALY</p>
<p>OTHER INFORMATION</p>	<p>For foreign candidates, the admission examinations may be held in English at the candidate's choice.</p>	