INFORMATION TECHNOLOGIES	
CYCLE	**XXXVII**
COORDINATOR	Prof. Marco LOCATELLI email: marco.locatelli@unipr.it Department of Engineering and Architecture
DURATION	3 anni
STARTING DATE OF THE PHD PROGRAM	01/01/2022
TRAINING OBJECTIVES	
The course aims at educating the future Ph.D.'s so that they will enter the research world with an active role, within both universities and industries.	
ADMISSION REQUIREMENTS	Regardless of age and citizenship, applicants holding at least one of the following academic qualifications can apply for admission: – 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	**6**	**With Scholarship** - Action IV.5 - "Doctorates on Green issues of the PON R&I 2014-2020"	**6**

Position with Scholarship LINKED TO SPECIFIC TOPICS

During the Oral Exam, applicants may express and / or confirm their interest to the Examination Board in being assigned a scholarship dedicated to a specific research topic.. The Board will express its judgement on eligibility to be assigned the scholarship in consideration of the specific competences, experience and specific aptitudes of the applicants.

N°	*ACTION*	*BOUND RESEARCH TOPIC*
6	Action IV.5 - "Doctorates on Green issues of the PON R&I 2014-2020"	• Development of innovative batteries charging systems for automotive applications • Smart drives, enriched by fusion of real and virtual sensors, control and prognostic algorithms, for the exploitation of reluctance motors in industry efficiency improvement, support to reliable renewable energy generation, green and sustainable mobility (to abandon rare materials). • Novel optical components with low energy-per-bit consumption and low cost, based on silicon photonics and graphene-enhanced silicon photonics, for next-generation high-speed telecommunications • SPA: Smart distributed systems for Precision Agriculture

		• GreenIoT: innovative technologies and techniques for the design and implementation of large scale IoT systems with high energy efficiency • Study and development of machine learning methods to monitor the status of renewable energy production plants

ADMISSION PROCEDURES	**Assessment of QUALIFICATIONS:** up to 70 points (a minimum score of 35 points shall be required to be admitted to the Oral Exam) **ORAL EXAM:** up to 50 points **Minimum score for ELIGIBILITY**: 70/120
Foreign Language	Language the fluency of which shall be assessed during the Oral Exam: **ENGLISH**. The evaluation of the knowledge of this language will be oral and will consist of a brief interview on a technical topic (for example a translation of a scientific text).
CANDIDATES ADMITTED TO THE ORAL TEXT CAN TAKE THE EXAM IN PRESENCE OR REMOTELY IN AUDIO AND VIDEO TELECONFERENCE (Candidates who intend to take the Oral Exam remotely must submit request, to this purpose, as per the model attached to the competition notice)	
THE INTERVIEW MAY BE HELD ALSO IN ENGLISH	
LIST OF QUALIFICATIONS TO BE SUBMITTED AND THEIR ASSESSMENT	
MANDATORY DOCUMENTS TO BE ATTACHED TO THE ON-LINE APPLICATION	
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	**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).
Research Project	Drawned up according to the format attached to the competition announcement **THE EVALUATION OF THE PROJECT WILL TAKE PLACE DURING THE ORAL EXAM**
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)	
Scientific Publications	Articles on national and international journals, papers presented at conferences or symposia, book chapters etc.

Other experiences (training, work, research, teaching, etc.)	– **Periods of study abroad**, outside the country of origin (e.g., Erasmus programme or other similar mobility programmes) – **Other qualifications** attesting the suitability of the applicants (scholarships, awards, etc.)

EVALUATION CRITERIA		
QUALIFICATION	**EVALUTATION CRITERIA**	**POINTS**
Curriculum Vitae et studiorum	Evaluation of the marks of the exams and of the master's degree mark (if available). The candidate is required to provide the average of the marks of all the exams of the master's degree, in addition to the details of the same It will also be evaluated the congruence of the degree obtained with the PhD themes.	**Up to 45 points**
Abstract of the Master's degree thesis	Consistency of the Master's Degree thesis with the doctoral program research topics	**Up to 15 points**
Scientific publications	Evaluation of the editorial position of the publication and its impact on the scientific community on the basis of the available indicators.	**Up to 5 points**
Other experiences	Duration evaluation (for scholarships and internships), score (for the GRE test), prestige (for awards)	**Up to 5 points**
ORAL EXAM	**EVALUATION CRITERIA**	**POINTS**
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	Project evaluation score: • scientific value and originality of the proposal: points 10 • articulation of the proposal: points 10 • feasibility of the proposal: points 10 • consistency with the related issues: points 15 ○ Knowledge of the foreign language: points 5	**Up to 50 points**

SCHEDULE OF THE ADMISSION EXAMS		
ORAL EXAM	**DATE**	22 October 2021 (with possible extension in the following days)
	TIME	10:30 am (Italian Time)
	PLACE	Scientific Headquarters Department of Engineering and Architecture Parco Area delle Scienze, 181/A – Campus Universitario 43124 PARMA - ITALY
OTHER INFORMATION		For foreign candidates, the admission examinations may be held in English at the candidate's choice. **For foreign candidates all documents written in a language other than Italian will have to be translated into English, otherwise they will not be evaluated**