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# Graduate Program in Information and Communication Technologies

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## *Call for applications – Academic Year 2011-2012*

### **Art. 1 – Description and Objectives**

1. The University of Trento (from now on UniTN) and the Sant'Anna School of Advanced Studies (from now on SSSA) offer a **two-year** (132 ECTS credits) Joint Master's Programme, named Graduate Program in Information and Communication Technologies.
2. The objective of the programme is to educate high profile professionals and researchers in Information and Communication Technology (ICT in the following sections). The perfect candidates for this course are highly motivated young students wishing to pursue a higher educational path that will lead to either industrial or academic research positions. The programme aims to train students in emerging research domains with a high potential impact to shape the future of ICT disciplines. It prepares students for employment in such multidisciplinary domains and/or for continuing their studies within PhD programmes. The student will achieve knowledge in both theoretical and applied Information and Communication Technology and Engineering, which will allow him/her to adapt quickly to the changes in this constantly evolving field. During his/her studies, the student will work within research groups of two leading European universities, and will interact with professors, researchers and scholars working in advanced research in telecommunications and associated enabling technologies.
3. The programme will form telecommunications engineers, with specific research focus on networking.
4. All courses are taught in English. Non-Italian students will also undertake courses in Italian culture and language. The programme is residential.
5. The programme will start in September 2011 with duration equal to two academic years. Roughly half of the admitted students will spend their first year at UniTN (located in Trento) and their second year at SSSA (located in Pisa). The other half of the students will spend their first year in Pisa and the second year in Trento. Work towards the thesis will be jointly supervised and evaluated by two professors, one from each partner institution. At the end of the programme, the student that has complied with all the requirements described in Art.7, will be awarded with:
  - a. A Master of Science in Telecommunications Engineering (*Laurea Magistrale in Ingegneria delle Telecomunicazioni*) issued by UniTN
  - b. A Master of Engineering in Computer Network Engineering (*Diploma di Formazione alla Ricerca in Computer Network Engineering*) issued by SSSA.

### **Art 2 – Selection of Applicants**

1. Candidates are admitted to the programme through a public competition. The competition is divided in two sessions as follows:
  - a. The **first session** will be reserved to citizens of countries outside the European Union and not resident in Italy (from now on **non-EU candidates**). At most 5 positions are reserved to non-EU citizens, depending on the number of candidates and the results of the selection process. The selection process for the first session is described in Art 5.

- b. The **second session** is reserved to citizens of European Union (from now on **EU candidates**). 5 positions are reserved for this selection. The selection process for the second session is described in Art. 6.
2. At most 10 students will be selected with the public competition. If less than 5 students are selected in any of the two sessions, the number of position available on the other session will include the positions left vacant. The selection aims to evaluate the candidates' background and education, assessing their potential skills and attitude to attend an interdisciplinary and innovative educational program.
3. The Selection Committee, the same for both sessions of selection, will be jointly nominated by the Dean of the Faculty of Engineering of UniTN and the Dean of the Class of Experimental Sciences of SSSA, and appointed by decree of the SSSA Director.
4. Students of SSSA (*allievi ordinari*) are allowed to access the programme through a special selection process, according to the internal SSSA regulation.

### Art 3 – Tuition Fees and Scholarships

1. The Tuition fee depends on the family income of the applicant, according to the rules of the University of Trento (please consult the website <http://international.unitn.it/fees-and-funding/undergraduate-twoyear-mc>).
2. Scholarships provided by the *Opera Universitaria* of Trento are available depending on the family income, up to 4700 euros per year. The applicants that are eligible to the scholarship are also exonerated from paying the tuition.
3. In addition, the first 8 admitted students in the admission rank will be offered
  - a. free housing at SSSA and UniTN premises regardless of their financial situation;
  - b. students not entitled to any scholarship will be offered free meals at SSSA and UniTN premises, or in alternative 2500 euros per year.
4. All students will be provided access to the facilities of SSSA and UniTN (library, computers, laboratories, Internet).

### Art 4 – Admission Requirements

1. Applicants must possess a first level degree (Bachelor of at least three years, or “Laurea di I° livello”). Applicants who have not yet completed their first degree, but who expect to graduate before October 31 2011, are allowed to apply *sub-condicio*: if selected, their admission will be conditional on the receipt of the degree certificate not later than October 31 2011.
2. Applicants must hold one of the following degrees:
  - a. Laurea di I livello (Bachelor of Science – First Level Degree) awarded by an Italian University in one of the following subjects:
    - a.i. Telecommunications Engineering (corresponding to Classe 9 – Ingegneria dell’Informazione, according to the Italian system of first cycle degrees classes as per DM 509/99);
    - a.ii. Electronics Engineering (corresponding to Classe 9 – Ingegneria dell’Informazione, according to the Italian system of first cycle degrees classes as per DM 509/99);
    - a.iii. Information Engineering (corresponding to Classe 9 - Ingegneria dell’Informazione, according to the Italian system of first cycle degrees classes as per DM 509/99);
    - a.iv. Telecommunications Engineering (corresponding to Classe L-8 – Ingegneria dell’Informazione, according to the Italian system of first cycle degrees classes as per DM 270/04)
    - a.v. Electronics Engineering (corresponding to Classe L-8 – Ingegneria dell’Informazione, according to the Italian system of first cycle degrees classes as per DM 270/04)
    - a.vi. Information Engineering (corresponding to Classe L-8 – Ingegneria dell’Informazione, according to the Italian system of first cycle degrees classes as per DM 270/04).
  - b. Laurea di I livello (Bachelor of Science - First Cycle Degree) awarded by an Italian University in other subjects will be also accepted only in case of completion of at least the following Courses:
    - b.i. 12 CFU overall in one or more of the following scientific-disciplinary sectors MAT/01,

- MAT/02, MAT/03, MAT/04, MAT/05, MAT/06, MAT/07, MAT/08, MAT/09, FIS/01, FIS/02, FIS/03);
- b.ii.60 CFU overall in one or more of the following scientific-disciplinary sectors, ING-INF/03, ING-INF/02, ING-INF/01, ING-INF/05, INF/01.
- c. Bachelor of Science or equivalent first cycle degree awarded by a foreign University after the completion of at least three-year course of study, in one of the subjects previously listed in a) and b) or equivalent (Bachelor in Telecommunications Engineering, Electronics Engineering, Information Engineering, etc.).
3. In addition to the academic degree, applicants must also have a good knowledge of the English language, at least corresponding to the intermediate level (B2 Level in the European Framework for foreign languages, equivalent to IELTS 6.0, TOEFL 550 (paper-based) / 217 (computer-based) / 81 (internet-based), or CAE level C).

## Art 5 – Applications and selection for non-EU candidates

1. The first session of the selection concerns the non-EU candidates. The selection of non-EU candidates will be based on the submitted documents and on a phone interview with the candidates.
2. Candidates are requested to apply on-line at [www.unitn-sssa.org/eng](http://www.unitn-sssa.org/eng) by **March 15, 2011**. In the application form candidates must state (self declaration):
  - a. family name, first name, place and date of birth, and nationality
  - b. declaration that the candidate holds an academic degree equivalent to at least a 3-year Bachelor program (as described in Art. 4).
  - c. declaration of knowledge of English (and other foreign languages) specifying the duration of studies and declaring the certification held;
  - d. the permanent address and the mailing address (if different) where applicants wish to receive paper communications concerning the application. Applicants should immediately contact the graduate programme secretariat ([info-ict@sssup.it](mailto:info-ict@sssup.it)) if these addresses change as far as the e-mail address, that is compulsory for the purposes of this application;
3. In the electronic application on the website the following documentation will have to be uploaded:
  - a. a copy of their complete Curriculum Vitae et Studiorum covering their education program, cultural and professional experiences and all other information that might help in the evaluation of the candidate;
  - b. the academic transcript with the full list of courses and grades (in English, in French or Italian). This list should contain information regarding credits, units (or equivalent) received, the grades received for each class taken, and the date when the final examination (if applicable) was taken, provided by attaching the copy of the University Transcript or completing the template provided by the application form;
  - c. a copy of the English Language Certification as required in Art.4 - point 3.
  - d. a copy of any other document or information that they deem suitable (documents written in languages other than Italian, English, or French must be accompanied by a summary in one of the above languages);
  - e. copy of valid passport;
  - f. a recent photo (passport size);
4. The Commission will evaluate the documents of all candidates, and each candidate will be assigned a numerical score between 0 and 70. The candidates scoring more than 50 points are *eligible*.
5. The eligible candidates will be further examined by a phone interview (e.g., using skype). Based on the result of the interview each eligible candidate will be assigned a score between 0 and 30, which will be summed up to the score assigned in the evaluation of the documents. The candidates will be ordered by decreasing score in a ranking list. Candidates whose cumulative score is between 70 and 100 are eligible.
6. The first 5 candidates in the ranking list will be *selected* to participate in the programme. If the number of eligible candidates is lower than 5, then only the candidates in the eligible list will be *selected* to participate in the program. In case of candidates declining, the next candidates in the ranking list will be invited until 5 candidates have accepted, or there are no more candidates in the

- eligible list.
7. The selected candidates will be requested to send their written assent along with the documentation required for the enrollment.
  8. The selected candidate willing to give his/her assent will have to pay an acceptance fee of 100 Euros by a bank transfer or by credit card (as detailed in the letter of admission).
  9. The calendar for the first session is as follows:
    - a. **March 31st for evaluation of curricula**
    - b. **April 15th for publication of the ranking list**

## **Art 6 – Application and selection for EU candidates**

1. The second session of the selection concerns with EU candidates (as described in Art.2). Selection of EU candidates will be based on the submitted documents, a written test and an interview.
2. Candidates are requested to apply on-line at <http://www.unitn-sssa.org/eng> by **June 27th 2011**. In the application form candidates must state (self declaration):
  - a. family name, first name, place and date of birth, and nationality
  - b. declaration that the candidate holds an academic degree
  - c. declaration of knowledge of English (and other foreign languages) specifying the duration of studies and declaring the certification held;
  - d. the permanent address and the mailing address (if different) where applicants wish to receive paper communications concerning the application. Applicants should immediately contact graduate programme secretariat ([info-ict@sssup.it](mailto:info-ict@sssup.it)) if these addresses or the e-mail address change, that is compulsory for the purposes of this application.
3. In the electronic application (on the website) the following documentation will have to be uploaded:
  - a. a copy of their complete Curriculum Vitae et Studiorum covering their education program, cultural and professional experiences and all other information that might help in the evaluation of the candidate;
  - b. the academic transcript with the full list of courses and grades (in English, in French or Italian). This list should contain information regarding credits, units (or equivalent) received, the grades received for each class taken, and the date when the final examination (if applicable) was taken, provided by attaching a copy of the University Transcript or completing the template provided by the application form;
  - c. a copy of the English Language Certification as required in Art 4 – point 3.
  - d. a copy of any other document or information that they deem suitable (works written in languages other than Italian, English, or French must be accompanied by a summary in one of the above languages);
  - e. copy of valid passport;
4. Each candidate will be assigned a score based on his/her curriculum, up to 40 points. All candidates that obtain more than 24 points will be invited to the written test examination.
5. The written test will consist of questions on general topics concerning engineering, telecommunications, and computer science. The test will be performed at SSSA premises in Pisa or at UNITN premises in Trento. The test will be evaluated assigning up to 40 points. All candidates that obtain a cumulative score of at least 48 points in the curriculum examination and in the written test will be invited to the interview.
6. The interview will consist of questions on general topics concerning engineering, telecommunications and computer science, and the candidate curriculum. The interview will be performed at SSSA premises in Pisa or at UNITN premises in Trento. After the interview each candidate will be assigned up to 20 points.
7. The final ranking list will be based on the cumulative scores obtained in the three steps (curriculum, written test, interview). Candidates whose cumulative score is between 70 and 100 are *eligible*. Eligible candidates will be ranked in a list according to their cumulative score.
8. The first 5 candidates in the eligible list will be *selected* to participate in the programme. If the number of eligible candidates is lower than 5, then only the candidates in the eligible list will be *selected* to participate to the programme. In case of candidates declining the invitation, the next candidates in the list will be invited. In case of vacant positions in the first session, the same

- number of additional positions will be made available to EU candidates.
9. The selected candidates will be requested to provide their written assent along with the documentation for the enrollment.
  10. The calendar for the second session is as follows:
    - **July 10th for evaluation of curricula**
    - **July 15th for the written test**
    - **July 16th for the interview**

## **Art. 7 – Requirements for completing the programme**

1. To successfully complete the programme, all students must comply with the following special rules:
  - a. The student must complete all exams in due time;
  - b. The student must pass every exam with a mark not less than 24/30
  - c. The student must achieve an average mark at the end of every year no less than 27/30.
2. Except for special cases listed in internal official regulation of the programme, a student not complying with the rules listed in point 1 is not allowed to complete the programme and loses all the benefits (lodging and free meals).
3. A student that does not comply with the rules listed in point 1 can complete her/his education in Telecommunications Engineering (Laurea Magistrale in Ingegneria delle Telecomunicazioni) at UniTN. The University will acknowledge all exams already passed. However, she/he will not be granted the Master in Engineering in Computer Network Engineering (Diploma di Formazione alla Ricerca in Computer Network Engineering) by SSSA.

## **Art. 8 - Treatment of Personal Data**

1. The personal data supplied by the applicants will be mainly processed by the Scuola Superiore Sant'Anna in an automatic procedure in accordance with Art. 11 of the Legislative Decree No. 196/2003 (“Code concerning the Protection of Personal Data”), for the management of competition procedures. The data - made anonymous - may also be used for statistical processing purposes. To participate in the Competition the data have to be disclosed to the School.
2. Any interested person can, at any time, exercise the rights provided for by Art. 7 of the above-mentioned Legislative Decree, in writing to Scuola Superiore Sant’Anna - Divisione FUR, Piazza Martiri della Libertà, 33 – 56127 Pisa - tel. 050/883273.

## **Art. 9 - Person in charge of the Procedure**

1. The person in charge of the competition procedure, as per this Announcement, is the Coordination Manager of the Research and University Education Department, Scuola Superiore Sant’Anna, Piazza Martiri della Libertà, n. 33 – 56127 Pisa – tel. 050/883273 - fax 050/883250 - e-mail: chiara.busnelli@sssup.it.