

*Manifesto of Studies
Academic Year 2020 - 21*

STRUCTURE OF THE PHD PROGRAMME

Doctoral students must earn **180 learning credits** to complete the Doctoral programme. **The learning credits measure the knowledge level, the skills acquired by the student, and the quality of the research results achieved.**

With the exception of decisions taken by the Doctoral School Committee on a case by case basis, the organisation of educational activities and the assignment of credits must satisfy the requirements described in the following table

| Year | Education in research and innovation | Course credits | Development of the specific research and/or innovation | Credits |
|------|--------------------------------------|--|---|------------|
| 1 | Doctoral courses | 6 | Research work <ul style="list-style-type: none"> • State-of-art analysis • Research problem definition • Research Plan • Individual and team work | 45 |
| 2 | Doctoral courses | 6 | Research work <ul style="list-style-type: none"> • State-of-art analysis • Research objectives definition • Preliminary research results • Individual and team work | 45 |
| | | | Qualifying exam | 18 |
| 3 | | | Research work Foreign research centre Research results Conference presentations | 40 |
| | | | Thesis evaluation | 20 |
| | TOT credits | 12 for PhD students from 36° and 35° cycle 15 for PhD students from 34° cycle | TOT credits | 168 |

The **first year** is mainly devoted to the **acquisition of scientific knowledge** at both basic and high level.

During the **second year** the doctoral student identifies the objectives and research activities to be developed within his PhD. He/She deepens his/her scientific knowledge and starts producing research contributions. At the beginning of the second year, the student must pass the **Qualifying exam** (see Annex B for the regulations of the exam). The exam includes submitting a Ph.D. proposal and making a presentation to a selected Examination Committee. The Examination Committee evaluates the student's work and based on this evaluation the Executive Committee decides if the student can continue his/her Ph.D. programme or whether s/he should be excluded.

During the **third year**, the student focuses on delivering his/her personal novel research contributions on the chosen research topic and/or to the development of the proposed technological innovation. The activity ends with the submission of a **Doctoral thesis**.

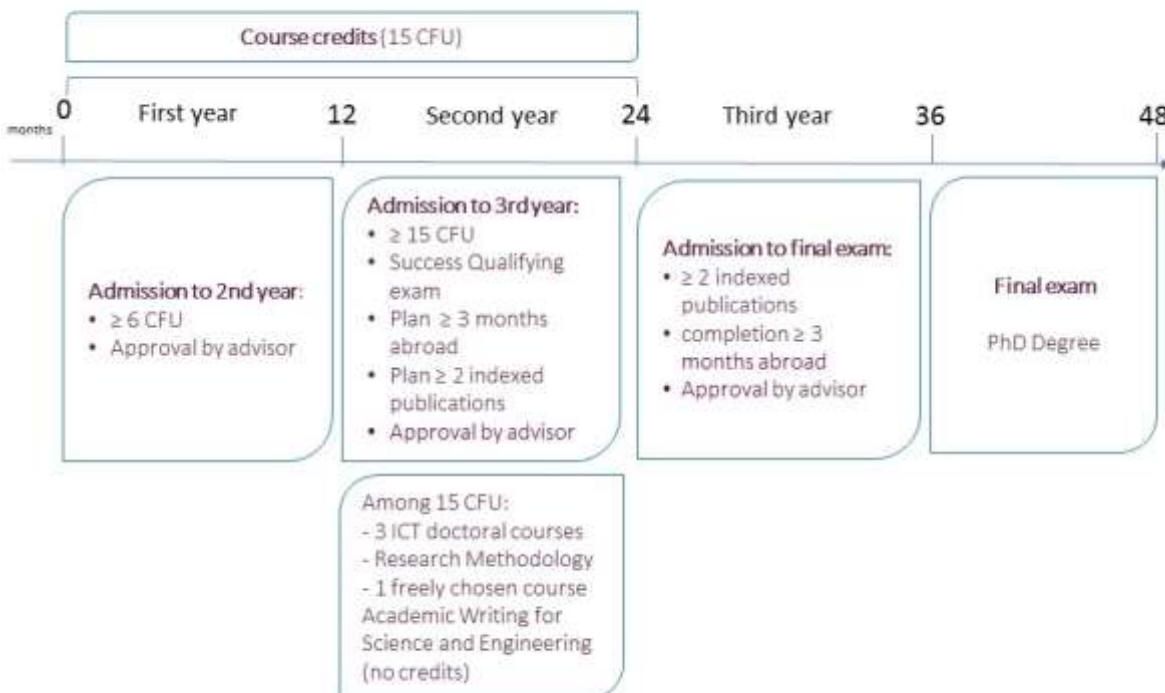


TIMELINE OF THE PHD PROGRAMME

PhD students 36th-35th cycle



PhD students 34th cycle



PHD TRAINING PROGRAMME

➤ FOR PHD STUDENTS FROM 36° AND 35° CYCLE

Doctoral students are required to acquire at least 12 course credits during the first two academic years, with a required minimum of 6 credits during the first year.

Each educational activity, if successfully completed, gives the student a total of 3 credits.

By the end of the **FIRST year at least 6 course credits MUST** be obtained by passing:

- a) Research Methodology (3 credits)
- b) Academic Writing for Science and Engineering (3 credits)

By the end of the **SECOND year at least 12 course credits** must be obtained by passing:

- a) Research Methodology (3 credits) – first year
- b) Academic Writing for Science and Engineering (3 credits) – first year
- c) at least 2 technical courses (6 credits) chosen among:
 - doctoral courses offered by the Doctoral Programme;
 - doctoral courses offered by other Doctoral Programmes of UniTrento;
 - doctoral courses offered by other universities;
 - Master's degrees courses offered by UniTrento: no more than one Master's degree course can be recognized (credits);
 - online courses that satisfy some quality requirements (i.e., be of at least 40 hours, include a formal final exam, content-wise be at PhD level)

By the end of the **THIRD year**: participation in **at least 3 seminars offered by the PhD Programme/DISI Department or in a Summer / Winter school.**

Only for Doctoral students enrolled in the 35th cycle, this educational requirement is integrated with the participation in the course offered by HIT, "From research to business: a technology transfer approach" (offered in May 2020) or in a course of soft skills to identify.

Participation in the latter type of course must be first authorized by the Executive Committee.

➤ FOR PHD STUDENTS FROM 34° CYCLE

Doctoral students are required to acquire at least 15 course credits during the first two academic years, with a required minimum of 6 credits during the first year.

Each educational activity, if successfully completed, gives the student a total of 3 credits.

The 15 required credits must be acquired by passing:

- 3 courses offered by the Doctoral Programme
- Research Methodology course
- 1 freely chosen course: doctoral/ Master's degrees course or Summer/Winter School. These courses can be offered externally to the PhD Programme as well.
- "Academic Writing for Science and Engineering" course does not give any credit. However, passing such a course is mandatory.

CREDIT RECOGNITION

All credits are acquired upon approval by the PhD student's tutor/advisor.

Any variation in how course credits are assigned must be approved by the Executive Committee.

Courses must be followed after enrolment in the Ph.D. Programme. Exceptions may be approved by the Executive Committee.

Courses that have contributed to other degrees that the student has completed do not apply.

Completed doctoral courses offered by other UniTrento PhD programmes or universities, Summer/Winter Schools, Master's degrees courses, seminars and online courses need to have their credits recognised.

Requirements that must be fulfilled in order to the get credits recognized from the following completed courses.

Seminars must be offered by the Doctoral Programme/DISI Department.

Summer/Winter School must be at least 20 hours long.

Master's degrees course

The following requirements are valid for students from cycles 37°, 36° and 35°.

- a) **no more than one Master's degree course can be recognized (credits);**
- b) offered by UniTrento;
- c) final examination/test at the end of the course;
- d) the lecturer of the course must not be the advisor of the doctoral student requesting the recognition of the course credits
- e) the request for credit recognition must be motivated by the advisor
- f) approval by the Executive Committee

Online courses.

Due to the COVID-19 health emergency the following requirements are valid for the next two academic years (2020/21; 2021/22) and only for students from cycles 37°, 36° and 35°.

- a) topic not overlapping with courses offered by the Doctoral Programme;
- b) must be offered by a university
- c) final examination/test at the end of the course;
- d) at least 20 hours long;
- e) content must be equal to the level of "post graduate";
- f) approval by the Executive Committee

Students have to send an email to the PhD Programme Secretariat - ict.school@unitn.it, with their advisor in CC, and with the following information/documents for recognition of the credits by the Executive Committee:

- name of the doctoral course/ Master's Degree course /online course/seminar/Summer/Winter School
- organising University/Institution
- place where it was held
- starting and ending date
- content
- total amount of hours
- grade
- certificate issued by Summer/Winter School/doctoral course/online course (attached to the email)

ADMISSION TO THE SUBSEQUENT YEARS

Admission to the subsequent year is approved by the Doctoral School Committee in October each year.

ADMISSION TO THE SECOND YEAR

By the end of the first year PhD students must fulfill the following requirements:

- a) completion of all 6 mandatory course credits.
All requirements concerning the acquisition of credits must be fulfilled. The requirements are described at pg. 3.
- b) positive assessment of the advisor on the activity carried out by the PhD student

The admission to the second year and the number of credits granted are conditional on the student's regular attendance on the PhD educational programme.

In the case of:

**Doctoral Programme in
Information and Communication Technology**

| | | |
|----|---|---|
| a. | <ol style="list-style-type: none"> 1. completion of all 6 mandatory course credits; 2. positive assessment of the advisor on the activity carried out by the PhD student | the PhD student is admitted to the second year |
| b. | <ol style="list-style-type: none"> 1. completion of all 6 mandatory course credits; 2. negative assessment of the advisor on the activity carried out by the PhD student | the PhD student will take the Qualifying exam |
| c. | <ol style="list-style-type: none"> 1. failure to complete all 6 mandatory credits; 2. negative assessment of the advisor on the activity carried out by the PhD student | the PhD student will be not admitted to the second year and therefore he/she will be excluded from the Doctoral programme |

Information on the Qualifying exam is described at Annex B

ADMISSION TO THE THIRD YEAR

By the end of the second year PhD students must fulfill the following requirements:

- a) recognition of no fewer than **12 course credits for PhD students from 36° and 35° cycle (15 course credits for PhD students from 34° cycle)**.
All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3;
- b) success in the Qualifying exam;
- c) submission of a plan illustrating the scheduling of a period of research of at least 3 months which must be spent abroad by the end of the Ph.D. programme;
- d) submission of plan to achieve at least two ISI- or SCOPUS-indexed publications within the duration of the study programme;
- e) positive assessment about the conducted research by the advisor;

The admission to the third year and the number of credits granted are conditional on the student's regular attendance on the PhD educational programme.

In the case of:

| | | |
|----|--|---|
| a. | <ol style="list-style-type: none"> 1. completion of all 12 course credits. All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3; 2. success in the Qualifying exam; 3. submission of a plan illustrating the scheduling of a period of research of at least 3 months which must be spent abroad by the end of the Ph.D. programme; 4. submission of plan to achieve at least two ISI- or SCOPUS-indexed publications within the duration of the study programme; 5. positive assessment of the advisor on the activity carried out by the PhD student | the PhD student is admitted to the second year |
| b. | <ol style="list-style-type: none"> 1. completion of all 12 course credits. All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3; 2. success in the Qualifying exam; | the procedure described in the Annex C will be activated |

| | |
|--|---|
| <ol style="list-style-type: none"> 3. submission of a plan illustrating the scheduling of a period of research of at least 3 months which must be spent abroad by the end of the Ph.D. programme; 4. submission of plan to achieve at least two ISI- or SCOPUS-indexed publications within the duration of the study programme; 5. negative assessment of the advisor on the activity carried out by the PhD student | |
| <p>c.</p> <ol style="list-style-type: none"> 1. failure to complete all 12 course credits. All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3; 2. success in the Qualifying exam; 3. submission of a plan illustrating the scheduling of a period of research of at least 3 months which must be spent abroad by the end of the Ph.D. programme; 4. submission of plan to achieve at least two ISI- or SCOPUS-indexed publications within the duration of the study programme; 5. negative assessment of the advisor on the activity carried out by the PhD student | <p>the PhD student will be not admitted to the third year and therefore he/she will be excluded from the Doctoral programme</p> |

Instructions and deadlines regarding the Qualifying exam are described in Annex B.

Information on the activation of the procedure in the event of a negative assessment of the advisor for the admission of doctoral students to the third year is described in Annex C.

ADMISSION TO THE FINAL EXAM / PHD DEFENCE

By the end of the third year PhD students must fulfill the following requirements:

- a) completion of all the first two years credits;
- b) completion of a period of research of at least 3 months spent abroad;
- c) publication of at least two ISI- or SCOPUS indexed publications
attendance at either at least 3 seminars offered by the Doctoral Programme/DISI Department or a Summer/Winter school (only for PhD students from 36° and 35° cycle);
- d) positive assessment of the advisor about the research contributions of the PhD student

Due to the COVID-19 health emergency PhD students from 34° cycle are waived from the requirement of a period of research of at least 3 months spent abroad;

In the case of:

| | |
|--|---|
| <p>a.</p> <ol style="list-style-type: none"> 1. completion of all 12 course credits. All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3; 2. completion of a period of research of at least 3 months spent abroad; 3. publication of at least two ISI- or SCOPUS indexed publications; 4. <i>attendance at either at least 3 seminars offered by the Doctoral Programme/DISI Department or a Summer/Winter school (only for PhD students from 36° and 35° cycle);</i> | <p>the PhD student is admitted to the Final exam</p> |
|--|---|

| | | |
|----|---|---|
| | <ol style="list-style-type: none"> 5. positive assessment of the advisor about the research contributions of the PhD student | |
| b. | <ol style="list-style-type: none"> 1. completion of all 12 course credits. All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3; 2. completion of a period of research of at least 3 months spent abroad; 3. publication of at least two ISI- or SCOPUS indexed publications; 4. <i>attendance at either at least 3 seminars offered by the Doctoral Programme/DISI Department or a Summer/Winter school (only for PhD students from 36° and 35° cycle);</i> 5. negative assessment of the advisor about the research contributions of the PhD student | <p>the procedure described in the Annex C will be activated</p> |
| c. | <ol style="list-style-type: none"> 1. failure to complete all 12 course credits. All requirements concerning the acquisition of credits must be fulfilled. Requirements are described at pag. 3; 2. completion of a period of research of at least 3 months spent abroad; 3. publication of at least two ISI- or SCOPUS indexed publications; 4. <i>attendance at either at least 3 seminars offered by the Doctoral Programme/DISI Department or a Summer/Winter school (only for PhD students from 36° and 35° cycle);</i> 5. negative assessment of the advisor about the research contributions of the PhD student | <p>the PhD student will be not admitted to the final exam and therefore he/she will be excluded from the Doctoral programme</p> |

Due to the COVID-19 health emergency PhD students from 34° cycle are waived from the requirement of a period of research of at least 3 months spent abroad.

Information on the activation of the procedure in the event of a negative assessment of the advisor for the admission of doctoral students to the final exam is described in Annex C.

The **Final exam** consists of a defence of the thesis in front of a Committee of independent and selected experts on the thesis' research area.

The instructions on the procedure regarding the Final exam are described in Annex D

TRANSDISCIPLINARY PROGRAMMES

In addition to the objectives of the Doctoral Programme in Information and Communication Technology, transdisciplinary programmes are established to pursue the following specific objectives:

- Promotion of cross-disciplinary research within the Ph.D. program;
- Training of PhD students with cross-disciplinary skills;
- Increasing collaborations with the other institutions.

A transdisciplinary programme is a training path that complements the doctoral program (primary program) with an educational and research component on an additional discipline (secondary program). The secondary program integrates the primary one without changing regulations and constraints. It is possible to achieve the primary title without obtaining the secondary one but not the other way around.

At the end of the programme, the PhD student will receive the title of PhD in Information Communication Technology, Expertus/Experta in the discipline of the secondary programme.

PhD students can apply for the programmes within 2 months from the enrollment in the PhD course.

Available transdisciplinary programmes:

- Transdisciplinary Program in Computational Biology
- Transdisciplinary Program in Space Data Science and Technology (SpaDaST)
- Transdisciplinary Program in Quantum Science and Technologies

The list of mandatory courses for the Transdisciplinary Program “Quantum Science and Technologies” is available at <https://www.unitn.it/drphys/en/421/transdisciplinary-program-quantum-science-and-technologies>

The list of mandatory courses for the Transdisciplinary Program “Space Data Science and Technology” (SpaDaST) is available at

<https://www.unitn.it/drphys/en/429/transdisciplinary-programme-space-data-science-and-technology>

All information on transdisciplinary programmes is at:

<https://ict.unitn.it/enrolled-student/phd-career/transdisciplinary-program>

Annex A – COURSES OFFERED BY THE DOCTORAL PROGRAMME IN INFORMATION AND COMMUNICATION TECHNOLOGY

Courses' scheduling is available within each course's webpage from: <https://ict.unitn.it/enrolled-student/courses>
PhD students will attend the doctoral courses remotely.

| Course | Lecturer |
|--|---|
| Academic Writing for the Sciences and Engineering | Fliss Hope |
| Answer Set Programming for Knowledge Representation | Loris Bozzato |
| Computing in Communication Networks | Fabrizio Granelli, Frank Fitzek |
| Deep models for Spoken Language Translation | Marco Turchi |
| Digital Forensics and Computer Crimes From research to business: a technology transfer approach <i>This course does not give any credits</i> | Antonio Barili Organized by HIT - Hub Innovazione Trentino - Fondazione |
| Geometric Computer Vision: from Images to 3D Models | Federica Arrigoni, Luca Magri |
| Metamaterials and Metasurfaces | Andrea Alu |
| Modern Weather Radar Technology and Systems | Jeffrey Herd |
| Requirements Engineering | Anna Perini, Angelo Susi |
| Research Methodology | Carlo Ghezzi |
| Security and privacy in socio-technical systems | Mattia Salnitri |
| Surface Electromagnetics | Fan Yang |

Annex B - REGULATIONS OF THE QUALIFYING EXAM

The goal of the Qualifying exam is twofold. Its first purpose is to enable the advisor and the doctoral programme to assess whether the student has the potential to become a successful PhD candidate. Its second purpose is to give the PhD students a first experience of the kind of "examination"/presentation that they will have to face later in their careers.

FIRST EXAM

By October: PhD students must upload the research proposal complete in all its parts (for details see below) to the students' web portal according to the instructions provided by the Doctoral Programme Secretariat.

Non-submission of the research proposal results directly in a FAIL, i.e. failure to pass the Qualifying exam and consequent exclusion from the doctoral programme, unless there are serious and justified reasons for such non-submission that the Executive Committee reserves the right to evaluate.

Guidelines for the research proposal (paper) draft

PhD students are required to produce a document amounting to a maximum of 10 pages in ACM two-column style which must comprise:

- Contextualization of the research problem identified (why it is important, its impact, etc.)
- State of the art (concerning the research problem identified)
- Identification and specification of the research problem addressed by the student's doctorate, setting it in relation to the current state of research (e.g. specifying existing limitations)
- Methodology and the approach required to solve the problem identified
- Any preliminary results

November – December: students make a presentation of their research proposal to the examination committee. The exam is open to the public and consists of a 20-minute presentation by the student, followed by questions - 25 minutes – from the committee. Upon the session's conclusion, the committee discusses the outcome of the exam (PASS / FAIL / RETRY) and will submit its judgement according to an evaluation form provided by the student's web portal. The outcome of the evaluation is made available to the student and his/her advisor.

Evaluation form for examination committee and advisor

The research proposal (paper) and the presentation will be evaluated by the examination committee according to the criteria listed in the table below. For each criterion, the committee must insert a comment regarding the judgment assigned.

The advisor must also provide an evaluation according to the same criteria. The advisor must submit the evaluation grid for his/her student to the portal before his /her student's examination within the deadlines indicated by the Doctoral Programme Secretariat.

| | | Insufficient | Sufficient | Good | Excellent |
|--|---|--------------|------------|------|-----------|
| Content of the research proposal and presentation (oral exam) | a) Contextualization, motivation and potential impact of the research problem | | | | |
| | b) State of the art (coverage, quality, good knowledge) | | | | |
| | c) Problem statement and objectives (clarity, depth, novelty, feasibility) | | | | |
| | d) Proposed methodology and expected outcomes (correctness, feasibility, soundness) | | | | |
| | e) Preliminary Results (quality, own contribution) | | | | |

| | | | | | |
|-----------------------|---|------------------------|--|--|--|
| Presentation | f) Organization, structure, timing, content, visual aspects of the presentation. Language and presentation skills. Quality of the research proposal w.r.t. writing skills | | | | |
| Overall Result | | PASS/RETRY/FAIL | | | |

On the basis of the student's submitted research proposal and of the presentation, the examination committee proposes to the Executive Committee one of the following verdicts. The Executive Committee approves the examination committee's evaluation.

PASS if the results for criteria b), c) d) and f) were all rated as at least "Sufficient".
The PhD student may continue his/her PhD studies.

FAIL if at least three of the criteria b), c) d) and f) were rated "Insufficient".
The PhD student will be excluded from the doctoral programme.

RETRY if two of the criteria b), c) d) e) f) were rated "Insufficient".
The PhD student must submit a new version of his/her research proposal and make a presentation before a different examination committee within 3 months from the day of the notification of the first exam outcome unless justified exceptions which will be assessed individually.

If only one of the criteria b), c) d) and f) was deemed "Insufficient", the examination committee will evaluate whether to give the student a RETRY or a PASS in light of the other criteria as well.

Composition of the examination committee

The examination committee consists of three members. Each PhD student is assigned a committee. Besides the members of the Doctoral School Committee, also involved will be the adjunct members, the members of the Department, and the FBK members who are advisors of students of the Doctoral programme.

SECOND EXAM – RETRY

Those PhD students who obtained RETRY from the first exam must submit a new version of the research proposal and make a presentation before a different examination committee within 3 months from the day of the notification of the first exam outcome, unless justified exceptions which will be assessed individually.

PhD students must upload the new version of their research proposal together with a rebuttal letter to the students' web portal. The rebuttal letter will refer to the shortcomings indicated by the committee of the first exam and will list what the PhD student has done to remedy them. The committee will access the document through the web portal.

Before the second exam, the RETRY exam, the advisor must submit an assessment concerning the student. The advisor may also make a 10-minute presentation on his/her student before his/her student's presentation. The presentation is not public and requires the presence of the student. The committee will also examine the opinion expressed by the committee during the first exam.

The RETRY exam is open to the public and includes a 30-minute presentation: 20 minutes for the presentation and then 10 minutes during which the PhD student will respond to the reasons for his/her RETRY stated by the previous commission. There will follow 25 minutes of questions from the committee. At the end of the session, the committee will deliberate its final judgment on the exam (PASS / FAIL) and will submit it by means of an evaluation form provided by the student's web portal, so that it is then known to the student and his/her advisor. The RETRY exam committee may also suggest the confirmation of the advisor, which will then be discussed by the Executive Committee.

On the basis of the student's submitted research proposal and the presentation, the examination committee will propose to the Executive Committee one of the following results. The Executive Committee approves the examination committee's evaluations.

PASS if the results for criteria b), c) d) and f) were all rated as at least "Sufficient".
The PhD student may continue his/her PhD studies.

FAIL if at least three of the criteria b), c) d) and f) were rated "Insufficient".
The PhD student will be excluded from the doctoral programme.

Composition of the examination committee

The Executive Committee is a single committee for all the PhD students. It is composed of at least five members whose requirements are the same as those applied for the committees of the first exam.

EXAM RESULT – FAIL

According to art.13, paragraph 7 of the Regulations of PhD Programme "ICT International Doctoral School" "In the event that a student fails to pass the examination, s/he will be excluded from the "ICT International Doctoral School" from the date decided by the Executive Committee, no later than two months from the date of failure, resulting in loss of the following benefits: study grant, apartment of the Opera Universitaria, canteen card, workstation and any other facility related to the status of a student on the PhD Programme. In particular, those who have not passed the examination are not entitled to benefit from the ordinary endowment from the date of communication of the failure to pass the Qualifying Examination."

Annex C - PROCEDURE IN THE EVENT OF A NEGATIVE ASSESSMENT OF THE ADVISOR FOR THE ADMISSION OF DOCTORAL STUDENTS TO THE THIRD YEAR OR FINAL EXAM

On the occasion of the admission of doctoral students to the third year or to the final exam in the case of completion of all credits and negative assessment of the advisor, the following procedure will be applied.

The PhD student must make a 30-minute presentation of all the scientific results achieved during the current doctoral year, followed by questions from a committee appointed by the Executive Committee. The examination committee consists of three members of the Doctoral School Committee. The presentation can be supported by the use of digital tools.

The doctoral student must send a list stating the documents presented among those listed below and a copy of the documents within a few days before his/her presentation. If any of the documents is not available, the PhD student must send a declaration in this regard.

- a) copy of the papers published since the PhD student started the Doctoral programme;
 - b) copy of the submitted papers, specification of the journal and / or conference and relative reply letter from the reviewers (if at least they have passed the first revision or letter / email from the journal / conference confirming receipt of the first submission);
 - c) copy of posters if accepted at conferences with evidence of the conference program from which they were presented;
 - d) for works produced in collaboration, a short declaration on the contribution of all authors signed by the student.
- The committee reserves the right to request confirmation from the other authors.

The doctoral programme Secretariat will communicate to the student the conditions and terms for submitting the documentation as well as the date and instructions regarding the exam no later than 15 days before the exam date.

The committee has access to the advisor's assessment, to the documentation presented by the student and to the judgments relating to exams taken during the current year (e.g. Qualifying exam for the second year).

The advisor may present any additional information he/she consider appropriate on the performance of his/her student during the current year to the committee.

The committee will assess whether or not the work carried out during the year by the student is sufficient and will produce a single judgment which must also contain a suggestion concerning admission to the following year. The committee must draw up a report containing a description of the exam performance and a final judgment.

The Secretariat will send the doctoral student the minutes with the judgment of the committee and, in the case of negative judgment, will invite the doctoral student to submit observations and documentation useful for the decision by the Executive Committee within a few days before the Committee meeting. This documentation will be brought to the attention of the Executive Committee.

Taking into account the regulations in force, the judgment of the examination committee, the previous judgment of the advisor, any further documentation presented by the PhD student and the previous resolutions of the PhD programme bodies, the Executive Committee, will decide on the admission of the student to the following year.

If the doctoral student is admitted to the following year by the Executive Committee, he/she will continue with the doctoral programme.

The Executive Committee will not admit the PhD student to the following year if it does not identify the elements and conditions suitable for his / her admission. Consequently, the doctoral student will be excluded from the doctoral programme.

Annex D - DEADLINES AND INSTRUCTIONS REGARDING FINAL EXAMINATION FOR PHD STUDENTS AND ADVISORS

PhD students who have been admitted to the final examination by the Doctoral School Committee shall submit their thesis for evaluation to two external referees.

Both referees will propose either admission to the final examination/PhD defence or resubmission of the thesis for a period of no longer than six months in the case of major revision.

In the case of major revision, the student must submit a new version of the thesis together with a rebuttal letter before the deadline. The referees will then submit a new evaluation according to the changes made to the thesis by the student. In any case the student is admitted to the final examination before the final examination committee.

In the case of negative judgement by the final examination committee the PhD student is excluded from the Doctoral Programme.

| DEADLINES FOR PHD STUDENTS | | |
|----------------------------|--|--|
| Step | Activity | Deadline |
| 1. | Request for admission to the final examination and for the award of the label "Doctor Europaeus" | By mid-September 2020 |
| 2. | Submission of the thesis and of a report on the PhD activities | By the end of January 2021 |
| 3. | Delivery of the final version of the thesis to the final examination committee and to the referees | No later than 10 days before the date of the final examination |
| 4. | Upload of the final version of thesis and of the Deposit Disclaimer | No later than 10 days before the date of the final examination |
| 5. | Delivery of the abstract of the final version of the thesis | No later than 10 days before the date of the final examination |
| 6. | Return of the university computer | On the day of the final examination |
| 7. | Final examination | By 31 October 2021 |

For those PhD students who obtained a period of suspension during their PhD Programme, all deadlines concerning their final examination will be postponed for the same period of their suspension. The ICT School Secretariat will send them all new deadlines.

| | |
|---|------------------------------|
| Step 1- Request for admission to the final examination and for the award of the label "Doctor Europaeus" | By mid-September 2020 |
|---|------------------------------|

➤ Request for admission to the Final examination

Before applying, the student must discuss the state of the thesis with his/her advisor.

Mandatory for admission to the final examination is completion of a period of research of at least 3 months' duration spent abroad and publication of at least two ISI- or SCOPUS-indexed publications.

The request for admission to the final examination must be submitted online by means of the **Esse3 system** <http://www.esse3.unitn.it/Start.do>

The request implies the payment of a contribution ("final examination contribution") of € 72,00 (which includes two duty stamps of € 16,00). PhD students must have regularly paid all the three-year PhD course fees when they submit the online final examination form.

Information about the online application is available at <https://www.unitn.it/en/ateneo/1932/final-examination>

PhD students are asked to fill in the AlmaLaurea questionnaire together with the request for admission to the final examination, in order to gather their opinions about the services provided by our university.

➤ **Award of the label "Doctor Europaeus"**

The additional label of "Doctor Europaeus" may be awarded to those PhD students who fulfil the prerequisites proposed by the European University Association as follows:

1. positive judgement on the thesis by two referees from two higher education institutions of two European countries, other than the one where the doctoral thesis will be defended;
2. at least one member of the final examination committee comes from a higher education institution in a European countries other than the one where the doctoral thesis will be defended;
3. period abroad of at least 3 months spent in another European country;
4. the doctoral thesis must have been partly prepared as a result of a period of research of at least one trimester spent in another European country.

PhD students interested in obtaining the title of "Doctor Europaeus" should indicate their interest in the AlmaLaurea questionnaire (see previous point)

Information is available at <http://www.unitn.it/en/ateneo/50322/doctor-europaeus>

Step 2 - Submission of the thesis and of a report on the PhD activities

By the end of January 2021

The ICT School Secretariat will send PhD students all details about their referees as well as the instructions on the submission of the required documents

PhD students have to upload to **EasyChair a single pdf file** (file extension .pdf) containing:

1. thesis;
2. a report on the research/study activities that he/she has carried out during his/her Doctoral Programme and a list of his/her publications. The report should contain:
 - list of publications
 - periods spent abroad for study/research reasons
 - Summer/winter schools, Conferences
 - participation in research projects
 - other

A template will provided by the ICT School Secretariat

As soon as the student has uploaded the required file to EasyChair, he/she informs both his/her referees, as well as the ICT School Secretariat, about his/her submission.

Referees submit their evaluation for the thesis within 30 days from when the thesis is available on EasyChair. The latest date for the submission of the reviews is 28 February.

As an **overall evaluation of the student's thesis**, referees may propose one of the following results:

- MINOR Revision: admission of the student to the final examination/PhD defence
- MAJOR Revision: the student must resubmit to EasyChair a new version of the thesis with a rebuttal letter within 3 months

- MAJOR Revision: the student must resubmit to Easychair a new version of the thesis with a rebuttal letter within 6 months

Each PhD student will receive the reviews via email from Easychair as soon as both referees have submitted their evaluations.

Step 3 - Delivery of the final version of the thesis to the final examination committee and to the referees

No later than 10 days before the date of the final examination

PhD students send the final version of the thesis (.pdf) to each member of the final examination committee and to both the referees via e-mail.

No hard copy must be submitted

Step 4 - Upload of the final version of the thesis and of the Deposit Disclaimer

No later than 10 days before the date of the final examination

PhD students must upload the **final version of the thesis** (.pdf) and the **Deposit Disclaimer** to the **online open-access archive IRIS** <https://iris.unitn.it/>

PhD students may decide to let the thesis be made public or to restrict its access. 'Embargo' is a period during which the thesis is kept secret. Only bibliographic metadata are made visible. PhD students can request a period of embargo (up to 24 months).

NB: PhD students who have been awarded a scholarship funded by other institutions (e.g. research centres, companies, European Commission) should contact the ICT School Secretariat to determine whether any imposing secrecy restriction is foreseen.

Once the thesis has been submitted to the online University archive, it can no longer be replaced with another version. Those PhD students who do not self-archive both their thesis and Deposit Disclaimer in the online University archive, will not receive the PhD diploma on the date of the final examination.

The Guidelines for uploading Doctoral theses in IRIS is available in the Box Download on the web page Research outputs management <https://www.biblioteca.unitn.it/en/404/research-outputs-management>

Intellectual property rights: <https://www.unitn.it/en/ateneo/53545/intellectual-property-rights-basic-info>

All materials regarding the upload of the required documents to the online University archive and the copyright issues are available from the box "Download" at the following link <https://www.unitn.it/en/ateneo/1932/final-examination>

Step 5 - Delivery of the abstract of the final version of the thesis

No later than 10 days before the date of the final examination

PhD students should send title and abstract of the thesis to the ICT School Secretariat.

The PhD defence will be advertised via Facebook and on the ICT School and DISI website.

Step 6 - Delivery of the university computer

On the day of the final examination

PhD students who have received a computer from the university must return it to the ICT School Secretariat on the day of the final examination.

The computer must be formatted before being returned.

Step 7 - Final examination

By 31 October 2021

The Final examination will take place before the examination committee and will consist of a public discussion of the thesis.

The PhD School organizes a proclamation ceremony for each PhD student who concludes the doctoral programme. The committee members and the advisors will wear the academic dress made available for the ceremony. Candidates will wear the academic dress as well, soon after the committee has read the judgement.

The advisor should introduce the candidate as well as the committee members. The candidate will then present his/her thesis (around 40 minutes), which will be followed by questions from the committee (around 20-30 minutes). The defence is open to the public.

In the case of negative judgement by the final examination committee, the PhD student is excluded from the Doctoral Programme.

PhD students on a co-tutelle programme

In order to obtain the double doctoral degree, PhD students must fulfill the requirements foreseen by both institutions. PhD students are therefore invited to check with the hosting institution in regard to any further requirement which must be fulfilled in order to be awarded the degree.

| DEADLINES FOR ADVISORS | | |
|------------------------|---|--|
| Step | Activity | Deadline |
| 1. | Admission to the final examination of their PhD students and suggestion of two referees | By October 9, 2020 (at 12:00 PM) |
| 2. | Communication of the final examination committee and date of the final examination | No later than 45 days before the date of the final examination |
| 3. | Final examination | By 31 October 2021 |

Step 1 - Admission to the final examination of PhD students and suggestion of two referees

By October 9, 2020 (at 12:00 PM)

Advisors should approve their PhD students' admission to the final examination. They must therefore:

1. submit an evaluation on the thesis proposal of their PhD students to <http://dsc.disi.unitn.it/>
2. send all the details below concerning the **two referees** who will review their PhD students' thesis to ict.school@unitn.it:
 - surname, name;
 - affiliation;
 - academic/work position;
 - email contact

- if either of the referees will be part of the final examination committee as well. In this case they may be reimbursed (only travel expenses); otherwise it is not possible.

Advisors should suggest referees who have already confirmed their availability.

Referees eligibility criteria:

- experts selected among highly qualified tenured academic staff or tenured lecturers belonging to other institutions (NO UniTrento)
- researchers who work for companies that deal with research
- no previous collaborations with the student (e.g. thesis co-tutorship, internship, research collaboration)
- adjunct lecturers/instructors are not eligible
- possessors of titles such as Emeritus Professor, Emeritus Reader, Senior Fellow are not eligible unless they have a teaching contract or are in service at a foreign research institute or university.

Referees submit their evaluation for the thesis within 30 days from when the thesis is available. The latest date for the submission of the reviews is 28 February.

The two referees may be part of the final examination committee as well. In this case they may be reimbursed (only travel expenses)

Step 2 - Proposal of the final examination committee and date of the final examination

No later than 45 days before the date of the final examination

Once the student has been admitted to the final examination by the two referees, the advisor should send to ict.school@unitn.it:

- composition of the final examination committee;
- date of the final examination.

The final examination committee should be composed of:

- three members selected among tenured academic (university) staff and/or researchers at Italian and/or foreign institutions, specialized in the topics of the dissertation;
- up to two external experts may be added. They can be lecturers/researchers or experts selected from universities and public and private research centres.

NB:

- Advisors should suggest a committee whose members have already confirmed their availability.
- The advisor cannot be part of the committee.
- Referees can be part of the committee (they can be any of the 3 + additional 2 members, see above two points).
- Researchers who work for companies that deal with research may be part of the committee (they can be any of the 3 + additional 2 members, see above two points).
- Possessors of titles such as Emeritus Professor, Emeritus Reader, Senior Fellow are not eligible unless they have a teaching contract or are in service at a foreign research institute or university.

Step 3 - Final examination

By 31 October 2021

The advisor should support the committee during the entire proclamation ceremony of the candidate.

The ICT School Secretariat will send advisors all details on the ceremony and in particular on the advisor's duties.