# Guidelines for achieving credits and writing the
# PhD Personal Career Development plan (PCDP) (VALID FOR ALL CYCLES)

PhD candidates must submit a **study plan (Personal Career Development Plan, PCDP),** which is revised periodically (normally, year by year) in order to accommodate for possible modifications motivated by the development of their PhD career.

The study plans must be **co-signed by the Supervisor(s) and approved by the PhD Board** at the beginning/end of every academic year.

The PCDP contains **two Sections.** Section 1 contains the *planned* research and training activities for the year and must be filled in **at the beginning of every academic year**; Section 2 must be completed **at the end of each academic year**, before the yearly auditions, and contains the details on the *actually achieved* research and training activities and related credits.

The overall number of credits (ECTS) that must be achieved by a PhD candidate <u>over the 3-year</u> program is 180 ECTS, **60 ECTS per year**. Credits can be earned *through research and training* activities, as detailed in the following.


## 1. Research study plan and credits

PhD students are dedicated to research activity in a **continuous** way, following the lead of their supervisor(s). They can earn credits by doing research.

The number of achieved research credits must be **certified by the supervisor(s) at the end of every year, before the yearly PhD auditions, and approved by the PhD Board.** Such information is included in Section 2 of the PCDP.

Research credits can be gained based on the PhD candidate's **individual study and autonomous research** aimed at: acquiring knowledge on the topic, writing scientific papers **(highly recommended!)**, developing the thesis work, etc. The activity to which credits can be assigned also includes **periods of stay in accredited laboratories/universities in Italy or abroad (6 months on average).**

**Some types of PhD scholarship include a mandatory period in industry or abroad, so the PhD student has to check carefully the rules of the call to which he/she applied.**

<u>How many credits for research activities?</u> It is up to the supervisor(s), considering that 1 ECTS corresponds to 25 hours of individual work and remembering that the upper bound is 60 ECTS per year, which must include both research and training credits. A **minimum** number of **20 (1st year), 30 (2nd year), and 40 (3rd year) ECTS** is expected to be assigned to research activities. A possible, but not mandatory, ECTS division per year could be for example: 30 (1st year), 40 (2nd year), 60 (3rd year).

## 2. Training study plan and credits

For every PhD programme cycle, the PhD Board fixes the **minimum number of training credits out of the 180 ECTS** for the three-years. **The <u>minimum</u> number of training credits for the 3-year period is fixed to 30 ECTS.** PhD students are however recommended to achieve their training credits in **the first two years,** in order to let the third year entirely focused on the research and PhD thesis writing.

Candidates must earn a **minimum of 30 ECTS** from courses/seminars offered within the PhD programme in Information Engineering and by the PhD School (section 2.1(a) and (b1)) or also by external Institutions (section 2.1(c)), and from communication/dissemination activities to improve soft/transversal skills (section 2.1(b2) and (b3)), consistent with their PhD research program.  More credits than the minimum can (are recommended to) be earned.

**For any type of research or training activities, which are not explicitly considered in this document, the Board must be convened to decide the possible allocation of credits, under request from the PhD student and his/her supervisor(s).**

### 2.1    Details on the types of training activities

#### (a) Training program organized by the PhD course in Information Engineering

This section includes the training program offered every year within the PhD course in Information Engineering (i.e., ad-hoc mini-courses, seminars, etc.).

#### (a1) Mini-courses characterizing the PhD programme

**<u>Mandatory. Minimum 20 ECTS (and min 10 ECTS with evaluation).</u>**

**The PhD students are recommended to gain this type of credits in the first two years** from characterising PhD courses (**mini-courses**) offered by the PhD Programme in Information Engineering.

The list of mini-courses is specified at the time of PhD programme accreditation for each cycle. Usually, at least **40 mini-courses** are planned, each one last **8 hours (2 ECTS)** or **12 hours (3 ECTS).**

A subset of these mini-courses includes a final (**mandatory**) **evaluation**. The instructors of the mini-courses with non-mandatory evaluation are free to propose an (optional) evaluation at the end of their mini-course.

Mini-courses may have an A/B/C/D evaluation or a Pass/Fail evaluation, based on the decision of the instructor.

During the PhD program, the PhD student has to pass a **minimum of 10 ECTS** of mini-courses **with evaluation**.

The calendar of the mini-courses for the each academic year will be shared by the Coordinator.

PhD students will be asked to choose the mini-course(s) of interest **at the beginning of every academic year** by filling the shared xls sheet and filling in **Section 1 of their PCDP** accordingly.

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Each mini-course **is offered only once per academic year;** it could be repeated in the next years. Obviously, re-selecting the same courses of the previous year(s) is not allowed and, in any case, will not be counted in terms of achieved credits.

**The attendance of all the lessons of the selected mini-courses is mandatory in presence, unless the instructor cannot be at UNIRC or the PhD student is away with the permission of the PhD Board.**

At the end of the given course, **the instructor is required to fill in a register of lessons,** reporting the content of the lectures, the names of the PhD students attending the mini-course, and the results of their evaluation (if planned).

At the end of each attended mini-course, the PhD student has to pre-fill the **certificate of attendance** (template available in the PhD repository/Instructors) of each mini-course and ask the instructor to sign it. This certificate must be attached to the PCDP when filling **Section 2** before the yearly auditions.

### (a2) Seminars organized/advertised by the PhD programme

**Optional. At any year. No lower/upper bound on the N° of achievable credits**

Besides mini-courses that are planned in advance every year, **seminars or cycles of seminars** by experts from Universities/research centres/companies can be organized on specific innovative topics linked to the main theme of the Doctoral program in Information Engineering, and offered to the students during the year. Seminars are generally optional and correspond to an assignment of credits-per-hours that is the same as for mini-courses (**1 ECTS = 4 hours**), unless differently specified when the seminars are advertised.

For attended seminars, PhD students have to produce a **statement of attendance** (template available in the PhD repository/Students) pre-filled with his/her personal data and then signed by the seminar organizer, to be attached to the PCDP when filling Section 2 before the yearly auditions.

### (a3) Master courses

**Optional. Max 6 ECTS (recommended only in the first year)**

The PhD Board may assign extra courses to candidates, in case they need to complete their preparation in specific topics relevant for their research projects. Courses from the **Master Degree(s)** may be inserted in the curriculum of the student, in agreement with the Supervisor(s) and the Board. **At most 6 ECTS** can be recognized for this activity; further courses can be attended if necessary but they do not contribute to the acquisition of credits. These courses must be preferably attended during the first year.

**Max: 2 Master-level courses** (this is to be intended as a recommended max, additional courses are allowed in case of necessity). These courses are included in the PCDP as extra-curricula activities and are rated in terms of credits up to a **maximum of 6 ECTS.**

At the end of the course, the student will pre-fill the **statement of attendance** (template available in the PhD repository/Instructors) and then ask the instructor to sign it. This certificate must be attached by the PhD student to the PCDP when filling Section 2 before the yearly auditions.

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## (b) Common inter-doctoral courses; Soft/transversal skills; Communication and Dissemination

<u>Mandatory. Minimum 15 ECTS over the 3 years period.</u>

**At least 15 credits for the 3-year period (5 per year are recommended)** must be obtained for soft and transversal skills, including common inter-doctoral courses organized by the PhD School and other communication/dissemination activities (items b1, b2 and b3).

## (b1) Inter-doctoral courses organized by the PhD School at University Mediterranea

The PhD School of the University Mediterranea every year organizes common courses for all the PhD programmes of the University, to be followed preferably in the first two years. The calendar of the available courses is published every year on the official website of the School.

These educational **inter-doctoral activities** are offered by the PhD school to complement the curricula with a number of courses of common interest (e.g., basis of project management; how disseminate and exploit research results; how managing intellectual property rights and open science; principles of ethics, integrity and gender balance), or to improve the English language knowledge.

<u>How many credits for this type of activities?</u>

Credits associated to each attended **inter-doctoral course** offered by the PhD School at UNIRC are normally assigned based on the School decision. If not specified, the assignment will be **1 ECTS for 4 hours** like for case (a1). **A certificate of attendance or any other form of attendance notification is necessary and will be attached to the PCDP (Section 2) before the yearly audition.**

## (b2) Communication activities (e.g., on social networks, at public events)

PhD students are requested to develop their *soft and transferable skills and communication capabilities* by a number of means (e.g., advertising their research on social media; presenting their research to general public; etc.).

<u>How many credits for this type of activities?</u>

**Communication activities** (e.g., on social networks and to general audience) are **recommended** for PhD students. Every student is asked to publish regularly **scientific posts** (recommended 1 post/year) advertising his/her research activity/results on social networks, after approval of the supervisor(s) (e.g., DIIES Facebook page; personal LinkedIn, etc.). A scientific post may have the form of a news, an interview, a video (e.g., TED talk like) presentation, etc. Scientific (multimedia) posts may be assigned by the PhD Board **up to 1 ECTS. The final PDCP must contain the links to the posts.**

PhD students are also called **to present their research activities to the general audience** (e.g., to high-school students visiting the Department or visited by Department's delegations, to general public during the European Researchers' Night and similar events, etc.). **Up to 1 ECTS** can be granted for these types of communication activities if involving the PhD student for **more than 8 hours** in total, unless differently specified when the events are advertised.

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To certificate the activity, the PhD student has to pre-fill the **statement of attendance** (template available in the [PhD repository/Students](#)) of the event and ask the organizer to sign it as a proof to be attached to the PCDP when filling **Section 2** before the yearly auditions.

### (b3) Dissemination activities through given seminar/talk/presentation, and students tutoring

PhD students are requested to present their research by e.g., giving seminars/talks/presentations to different types of audience (e.g., at conference; in Master classes, etc.); and to develop their skills through student tutoring activities and support to teaching.

### How many credits for this type of activities?

**Seminars** given **by the PhD students are highly recommended as a means of dissemination**; they are different from the seminars given during the yearly audition, but they can include **conference presentation**, specialised **seminars in Master-level classes**, or invited seminars in other institutions/schools, mid-term presentation or other types of organized scientific events, etc. The seminars given by a PhD student will be rated as **1 ECTS per hour; 1 ECTS will be assigned to conference (oral/poster) presentation** even if the duration is lower than 1h.

**Evidence of the given seminar/talk/presentation is necessary (e.g., presentation material/description, link to the seminar/conference, etc.) and must be included in the PCDP.**

In addition, **PhD students can be assigned up to** 2 **ECTS for student tutoring/co-supervising and support to the teaching activities on topics related to the conducted research activity**, e.g., by co-supervising students in the development of their project works/thesis (up to 40 hours).

An evidence of the conducted activities is necessary and must be certified by the supervisor(s), who has/have to **preliminarily ask the authorization to the PhD board** before activities start (template in the [PhD repository/Supervisors](#)).

### (c) Other external PhD courses/schools/seminars

Optional. Max 10 ECTS (recommended in the first 2 years).

**At most 10 credits** (preferably in the first 2 years) can be obtained by choosing **external courses/seminars** provided by other national or international **PhD programmes/Schools** on relevant topics.

### How many credits for this type of activities?

**PhD School and other external course** participation **must be approved by the supervisor as necessary to the formation of the student** and then confirmed by the Board at the yearly auditions meeting. To obtain such approval, the PhD student must present the course program, the timetable and the list of lecturers, if available. **The approval from the supervisor must be attached to PCDP Section 2.**

**To obtain registration of ECTS, a final exam must be taken at the Institution offering the course, or ECTSs must be certified by the School itself. In any case, a certificate of attendance is necessary, and will be attached to the PDCP (Section 2) before the final year**

**audition.** In case the School does not provide ECTS, the supervisor can propose an equivalent **number of ECTS up to 2** (template in the [PhD repository/Supervisors](#)).

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Summary: types of research and training activities and related number of credits in the 3-year program. Overall, <u>minimum</u> 30 ECTS must be earned in 3 years for training.

| Category | Subcategory | Description | ECTS requirements | Required documents/notes |
|---|---|---|---|---|
| **Research** | - | Individual study, bibliographic research, thesis writing, article preparation, periods in external laboratories/institutions. | Up to the supervisor(s).<br><br>Min 20 ECTS (1st year)<br><br>Min 30 ECTS (2nd year)<br><br>Min 40 ECTS (3rd year) | ECTS is expected to be assigned to research activities and certified by the supervisor(s) in PCDP Section 2. |
| **(a) Training program organized by the PhD course in Information Engineering** | (a1) Mini-courses characterizing the PhD program | Multidisciplinary mini-courses offered every year by the PhD programme.<br><br>Calendar shared by the Coordinator.<br><br>**1 ECTS per 4 hours.** | **Min 20 ECTS** over 3 years (highly recommended in the first 2 years).<br><br>**At least 10 ECTS with evaluation.** | Instructors must fill in the record of lessons.<br><br>PhD students have to produce a statement of attendance/evaluation result signed by the instructors (template available in the PhD repository/Instructors). |

| | (a2) Seminars organized/advertised by the PhD programme | Seminars by experts from Universities/research centres/companies on innovative topics relevant to the PhD program.<br><br>**1 ECTS per 4 hours** (unless differently stated). | Normally optional, unless differently stated.<br><br>No lower/upper limit on the number of ECTS to be earned in the 3-year program. | PhD students have to produce a statement of attendance signed by the organizer (template available in the PhD repository/Students). |
|---|---|---|---|---|
| | (a3) Master courses | To fill gaps in the PhD's background knowledge.<br><br>Assigned under the supervisor's and/or PhD Board's advice.<br><br>**ECTS are the same as for the Master course (@UNIRC 1 ECTS per 8 hours).** | Optional, max 2 courses, **max 6 ECTS** (recommended in the first-year).<br><br>More courses can be attended but not rated in terms of ECTS. | The PhD student has to produce a statement of attendance signed by the instructor (template available in the PhD repository/Instructors). |
| **(b) Common inter-doctoral courses; Soft/transversal skills; Communication and Dissemination** | (b1) Inter-doctoral courses organized by the PhD School of University Mediterranea (including English courses) | Inter-doctoral courses organized by the PhD School aimed at improving communication, language, and other soft skills (e.g., | **(b1)+(b2)+(b3) min 15 ECTS over the 3 years** (recommended 5 credits per year) | Any form of attendance statement is required. |

| | | project management; dissemination and exploitation of research results; intellectual property rights management and open science; principles of ethics, integrity and gender balance, etc.).<br><br>**1 ECTS per 4 hours** (if not differently stated by the School). | | |
|---|---|---|---|---|
| | (b2) Communication activities (e.g., on social networks, at public events) | Recommended: at least 1 scientific post/year on social networks (e.g., news, interviews, video talk, etc.). **Up to 1 ECTS per (multimedia) post.**<br><br>Communication activities during events addressed to the general audience (e.g., high-school students, public events such as European Researchers' Nights, etc.). | | Links to the posts must be provided. Original material must be provided on demand.<br><br>PhD students have to produce a statement of attendance signed by the supervisor or the event organizer (template available in the PhD repository/Students). |

| | | **1 ECTS for > 8 hours** totally accumulated (if not differently stated). | | |
|---|---|---|---|---|
| | **(b3) Dissemination activities through given seminar/talk/presentation and students tutoring** | **Highly recommended!** Seminars given by PhDs in scientific events/venues: **1 ECTS per hour.** Conference (paper/poster) presentation: **1 ECTS** Tutoring and support to teaching activities: **up to 2 ECTS**, up to 40hours | | Seminar advertisement and/or material must be provided. The venue and the title of the paper should be clearly indicated. Link to the programme of the conference can be added. The activities should be certified by the supervisor(s) (template available in the PhD repository/Supervisors). |
| **(c) Other external PhD courses/schools/seminars** | - | **External courses/seminars** provided by other national or international **PhD programmes/Schools** on relevant topics. Attendance must be | **Min 0 - Max 10 ECTS** over the 3 years (preferably in the first 2 years) | The approval for attendance from the supervisor must be attached to PCDP Section 2 (template available in the Supervisor repository). |

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| | | approved by the supervisor(s) as necessary to the formation of the student.<br><br>Credits must be certified by the external institution or the PhD supervisor. | | Certificate of attendance and/or credits achievement from the organizer/instructor of the PhD School/seminar/course is necessary.<br><br>Otherwise, statement must be provided by the supervisor(s) in the PCDP Section 2 (template available in the PhD repository/Supervisors). |

| ANNUAL SUMMARY | |
| --- | --- |
| | **Min ECTS required** |
| **TOTAL PART 1 (Research)** | 20(I) / 30(II) / 40(III) |
| **TOTAL PART 2 (a+b+c) (Training)** | - |
| **TOTAL PART 1 + PART 2** | 60 |

| 3-YEARS SUMMARY | |
| --- | --- |
| | **Min ECTS required** |
| **TOTAL a1 (Mini-courses)** | 20 |
| **TOTAL a1 with evaluation** | 10 |
| **TOTAL b (b1+b2+b3)** | 15 |
| **TOTAL c** | 10 (max) |
| **TOTAL PART 2 (a+b+c)** | 30 |
| **TOTAL PART 1 + PART 2** | 180 |

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| --- | --- |
| a1 | 1 ECTS x 4 hours |
| a2 | 1 ECTS x 4 hours (unless differently stated) |
| a3 | As for MS courses (@UNIRC, 1 ECTS per 8 hours) |
| b1 | 1 ECTS x 4 hours (unless differently stared by the School) |
| b2 | Up to 1 ECTS per (multimedia) post. |
| | 1 ECTS per 8 hours (unless differently stated) for social events participation |
| b3 | 1 ECTS per 1 hour (delivered seminars) |
| | 1 ECTS per presentation/poster at conferences |
| | Up to 2 ECTS per tutoring/teaching support (up to authorized 40hours) |
| c | ECTS must be certified by organizers or tutor |