



**Università
di Catania**



Di3A
Dipartimento di Agricoltura
Alimentazione e Ambiente

Dottorato di ricerca internazionale in:

Agricultural, Food and Environmental Science

Student's Guide

XXXVIII cycle (October 2022- October 2025)

Dear PhD student,

as you may know, one of the most important missions of the Di3A is to produce high-quality scientific research in the fields of Agriculture, Food and Environmental Sciences with a specific focus on the Mediterranean area. As a PhD student you are expected to be fully involved in this mission. The quality of the research that you will be able to produce will contribute to the quality of research in the whole Di3A. We perfectly understand that starting a research career is not just exciting, but also a challenging experience. Therefore, these guidelines have been prepared to assist you in planning and organising your 3-year work. You will find here the answers to a number of questions that may arise from now on. Final year's reports and Thesis preparation guidelines are also included in this guide.

The Supervisor

The Supervisor is an academic, expert in the field of your PhD project, who will serve as a guidance and will help you to plan your research and to settle at the University; your supervisor will give you suggestions and will encourage you. However, please keep in mind that you are responsible for your research. The supervisor can also choose one or two co-supervisor(s) at the University of Catania or elsewhere, who will work closely to you and will also be available for your needs.

The supervision committee

The supervision committee is composed by two experts on the field of your doctorate (external to the University of Catania) together with your supervisor. The members are proposed by your supervisor and have to be accepted by the Collegio dei docenti (Board of Teachers). You will present all your progress to the supervision committee in a physical or web meeting, every year. The committee will provide suggestions and comments to your research activities and will positively or negatively advise, producing a written report, the Board of Teachers on your advancement to the following year of doctorate.

Your schedule for the next three years

First year – from 31st October 2022 to 30th October 2023: Together with your supervisor you have to decide the focus of your Doctorate. You will start studying all the literature on the field. You will write a bibliographic review on the topic of your doctorate. Such text could eventually serve as the introductory part of your PhD thesis. You will plan your experiments and prepare a precise schedule. In summer 2023, a workshop will be organised together with other doctorates (namely from the University of Foggia and the University of Udine) and you will publically present the focus of your Doctorate and your advancements. The workshop will probably have a duration of three or four days. By the 21st September 2023, you are required to submit a report including your bibliographic review, the aims and a detailed workplan to the supervision committee and to the coordinator of the Doctorate. The supervision committee can decide if you will present it also on a video-conference. The supervision committee report will be sent to the Board of Teachers who will decide on your admission to the second year.

Second year – from 31st October 2023 to 30 October 2024: During the second year you will develop most of your research following the plan defined in accordance with the supervision committee. Probably part of your research will be carried out abroad (see details below). In June 2024, you will know exactly what your

PhD thesis will contain. You will therefore publically present the whole thesis project during a workshop organised together with PhD students from the Universities of Foggia and Udine. By the 20th September 2024 you will present your advancement to the supervision committee and to the coordinator (antonio.biondi@unict.it) The supervision committee can decide if you will present it also on a video-conference. A first scientific manuscript from your work will be typically submitted to an international peer reviewed journal (ISI and/or Scopus databases) during the second year.

Third year – from 31st October 2024 to 30 October 2025: You will devote most of this year to the writing up of your thesis. Probably at the beginning of the year you will need some time to finish your experiments and to gather the last results. You are required to submit your thesis (pdf) to the coordinator by September 9th 2025. Your thesis will be forwarded to two referees for evaluation.

* IMPORTANT: this schedule is set up for students that will start the PhD on October 31st 2022, however, it may happen that students will formally begin later on. This means that the schedule and all deadlines will be postponed to the same amount of days between October 31st 2022 and the formal PhD starting.

Training abroad

An experience in an Institution outside Italy is mandatory during your Doctorate. You will experience different ways of approaching research and will learn how to work and solve problems in different environments. Your grant will be increased when you will be abroad, by 50%. Additional funding opportunities may come from other fellowships funded by the University of Catania and/or by the receiving institution. The PhD course is associated with the Federal Univeristy of Viçosa (Brazil), so you are encouraged to choose such Institution for your experience abroad, eventually to pursue a double-degree.

A minimum of 6 months abroad (not necessarily in one trip) is compulsory. Only exception are students that do not have a regular scholarship, for which the training abroad is not compulsory but highly recommended.

Language

The PhD in Agricultural, Food and Environmental Science is an international Doctorate. English is the official language and your thesis as well as your scientific papers will be written in English. Therefore, a B2 equivalent English level at the end of your PhD is the minimum expected achievement.

Thesis

As stated above, the thesis will be written in English and the specific guidelines are given below. A template can be downloaded in the web site of the Doctorate (<https://www.di3a.unict.it/dottorati/agricultural-food-and-environmental-science>) and will be sent to all of you by the coordinator. Please check for the most updated version of the template.

Educational activities

A number of educational activities are organised by the PhD programme. Each student is required to follow educational activities for 30 credits; each student is required to attend the meeting with UniFG and UniUD at least in two different years. Students can follow other seminars/activities apart from those directly organised by the PhD course. These activities are eligible for credits under approval of the Board of Teachers. For a complete plan of the activities go to the Doctorate website.

Minimum requirements to be admitted to the final exam

By October 10th 2025 at least one of your research papers has to be accepted in an international peer reviewed journal and a second paper needs to be submitted (in both cases ISI and/or Scopus databases). You are required to be the first and/or the corresponding author in at least one of these papers. If you fail on these requirements but you have a justification you may ask to postpone your thesis defence according to the general rules of the University of Catania. Only exception are students that have an Innovative PhD grant cofounded by a company (PNRR 352), for which the accepted and submitted publications are not compulsory but highly recommended.

Deadlines for your thesis

Deadline	Who	What
October 15 th 2024	The Collegio dei docenti	will admit the students to the third year and will choose two referees to evaluate each Thesis
September 9 th 2025	You	Are required to send your thesis (pdf) to the coordinator
October 10 th 2025	The Referees	will report to the coordinator on their evaluation of your thesis
October 10 th 2025	You	will give to the coordinator evidence about your accepted and submitted papers
October 15 th 2025	The Collegio dei docenti	will decide on your admission to the final thesis defence
October 20 th 2025	You	are required to submit your online request to participate to the thesis defence (istanza di ammissione all'esame finale)
November 30 th 2025	You	Have to upload your thesis on the online system (unict.it)

Information on your thesis defence will be given in due time.

Useful services

As a student you will have access to a number of electronic resources that will be very important for your work. The most useful links are (you can access only when connected from the University):

<http://www.webofknowledge.com/>

<https://www.scopus.com/>

<http://www.sida.unict.it/content/periodici-elettronici/>

As a student you can also request a Unict email account. Ask your supervisor.

Note:

If you have a specific grant (e.g. industrial innovative doctorate) you may be asked to meet further requirements. Details will be given at the beginning of your programme.

First year report – 21 September 2023

As reported in the student's notes, by the 21th September 2023 you are required to submit a report including your **bibliographic review**, the **aims of your Doctorate and a detailed work-plan** to your supervision committee and to the coordinator. Please remember that one or both members of the supervision committee may ask you to report orally in a videoconference. **Please submit the report including annexes in only one pdf file < 20 Mb.**

Contents of the report

- Review on the state of art of a specific topic in line with your Doctorate (please follow author guidelines for preparing a review article in a scientific journal of your choice; do not forget to clearly indicate the name of the selected journal; please make sure that the journal is included in the [Scimago journals list](#)). You will not be obliged to publish your review in that or in any other journal.
- Formulated hypotheses and/or aims of your doctoral project (300-500 word).
- Experimental risk analysis and Contingency plan. Provide a table for listing the potential specific experimental risks that could be faced during the 2nd and 3rd year of the project, as well as the potential actions that could be implemented to overcome them. Please, see the examples in the Annex 1.
- Detailed work plan for the 2nd and 3rd year. Please, see the example of Gannt chart reported in the Annex 2.

The report should also include a brief description of other activities (if any) directly or indirectly related to the PhD project

- Experimental research and preliminary results achieved during the 1st year of the course (max 800 words and 4 illustrations, i.e., tables or figures).
- Participation to scientific meetings (national and international congresses and workshops); please, provide full citation for each event.
- Attendance to seminars and courses; please, provide a list of relevant information.
- Trainings in national or international universities and/or research institutions; please, provide a brief description of the activities carried out during the training (max length 300 words).
- Other scientific or institutional activities, e.g., peer review of scientific articles, given seminars, other institutional activity, such as for example tutoring of master thesis, member of working groups, participation to congress organization and so on.

Second year report – 21 September 2024

By the 21th September 2024 you are required to present your **advancement** to the supervision committee and to the coordinator. . **Please submit the report including annexes in only one pdf file < 20 Mb.**

Contents of the report

- **Detailed report of the research activities**, implemented contingency plan (if necessary) and main results (max 1000 words and 8 illustrations, i.e., tables or figures).
- **Updated** (if necessary) **Gantt chart**: it will include any possible variations in the planned activities for the 3rd year.
- At least **one scientific manuscript** you authored or co-authored on a topic related to your PhD project. Please provide the full manuscript and specify its status on a given date: draft (please, follow author guidelines of a scientific journal and clearly indicate the name of the selected journal), submitted (please, indicate the name of the selected journal), accepted (please, provide the authors, title, journal, acceptance date and Doi if available) or published (please, provide the full citation).
- List of the participation(s) to **scientific meetings** (national and international congresses and workshops); provide full citation for each event and contribution.
- List of the attendance to seminars and courses; please, provide a list of relevant information.
- Trainings in national or international universities and/or research institutions. Please, provide a brief description of the conducted activities carried out during the training (max length 300 words).
- Other scientific or institutional activities, e.g., peer review of scientific articles, given seminars, other institutional activity such as for example tutoring of master thesis, member of working groups, participation to congress organization and so on.

Annex 1

THIS TABLE IS JUST AN EXAMPLE. PLEASE ADAPT TO YOUR PROJECT

Experimental risks	Contingency plan
Low or no willingness of farmers to provide information on their farming practices. (e.g.).	Increase farmers' collaborations by involving farmer associations. Promote research activity by organizing workshops where stakeholders will be involved. Other options
Unsatisfactory scientific results on the proposed model (e.g.)	From those tasks that are not satisfactory, alternative methodology and/or model will be considered.
Low organism abundance and diversity in the field (e.g.).	Increase the amount and the frequency of the samplings.
Difficulties in obtaining laboratory data in due time (e.g.).	Increase the undergraduate and master thesis to co-supervise in the framework of the PhD thesis.
Rejections of the submitted manuscripts	Involvement of other qualified co-authors.
...	...
...	...

Guidelines for PhD thesis preparation

These guidelines for PhD thesis preparation are divided into two main sections. The first has the objective to explain how to structure the thesis (e.g., language, style, main sections and subsections); the second section provides general rules for thesis formatting. For your convenience, all the formatting are applied in the thesis template.

Language

- All contributions should be written in English, either American or British spelling. The spelling should be consistent within the whole manuscript.

Thesis length

- There are no length requirements for the thesis nor for its chapters. However, concise chapters are warranted. Please consider also the option to attach supplementary material(s) as annex(es) of the thesis.

Manuscript structure

Cover page

- Logo and name of the University of Catania (please use the provided word file as template).
- Department name, doctoral program name and cycle.
- Title: very concise and informative. Do not use capital letters for the first letter or each word of the title.
- First the given name, the initial(s) of the middle name(s), then the surname of the student.
- *Advisor and co-advisor(s)*: First the given name, the initial(s) of the middle name(s), then the surname.
- *PhD Course coordinator*: First the given name, the initial(s) of the middle name(s), then the surname.
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Acknowledgements

- This section may refer to any technical, scientific or linguistic help received for the work by colleagues, and/or by professionals and/or by the editor(s), advisor/co-advisor and anonymous referees. More importantly, authors should use this section to acknowledge any funding, citing the funding source, the project title/acronym and grant number (if any). Personal non-academic acknowledgements are also allowed.

Index

- An index indicating all the heading of the main sections and related subsections (until the third level) of the manuscript should be clearly listed together with their page number (please, use the template).

Table index (optional)

- Please provide the full list of table captions.

Figure index (optional)

- Please provide the full list of figure captions.

Research highlights

- Highlights are mandatory and consist of a short collection of bullet points that convey the core findings of the thesis. Please include 4 to 8 bullet points. Each bullet point should be maximum 95 characters, including spaces.

Abstract

- Provide an abstract of 250 to 400 words. The abstract should be self-standing and should bring the conceptual framework and aim of the work, the main results and conclusions. Moreover, it should not contain any undefined abbreviations or unspecified references.

Riassunto

- A version of the abstract in Italian of 250 to 400 words is also mandatory.

Keywords

- Provide 5 to 10 keywords which can be used for indexing purposes. Please, avoid words already present in the title.

Thesis outline (optional)

- Provide one short (5 to 8 lines) paragraph per each thesis chapter for providing very generic information on the chapter aim and on its development (e.g., main collaborations, methodology, mobility abroad, grants received, etc.). Please avoid repeating the same text of the abstracts.

Main body

- Divide your manuscript into clearly divided and numbered main sections and related subsections (see section “General rules for manuscript formatting” letter f). Each heading should appear on its own separate line.
- Subsections should have a brief title and should be numbered hierarchically. Use this numbering also for internal cross-referencing (see section “General rules for manuscript formatting” letter g).
- 1. Introduction. This chapter should include 3 or 4 subsections
 - Preface. Provide a short description of the theoretical framework of the study context.
 - State of the art. Avoid a detailed literature survey or a summary of their results. It can be divided in more subsections and it could include the (mini)review article written during the first year. In the latter case, please (i) include the full citation of the article both in the cases of published, accepted or submitted article (i.e., authors, title, journal, status of the paper on a specific date); (ii) provide the article in the same format of the thesis.
 - Aim of the thesis. Please formulate clear hypothesis(es).
 - Thesis outline (optional). Briefly describe how the thesis manuscript is arranged.
- 2. Experimental activities. The student can follow one of the two options reported below.
 - Option 1. Provide two main sections:
 - 2.1. Material and methods. Please provide sufficient details to allow the work to be reproduced or expanded. Methods already published should be indicated by a reference, only relevant modifications should be described.
 - 2.2. Results. Please, do not repeat all the data presented in the figures and/or tables but mention only the most important ones). Each section can have as many subsections as needed. Tables and figures (if any) should be provided within the text.
 - Option 2. Provide as many single and self-standing chapters as needed (chapter 2, chapter 3, ...Chapter n). Each chapter can be a submitted, accepted or published scientific paper, in these cases the specific full citation (i.e., authors, title, journal, status of the paper on a specific date) should be reported in the first page of the chapter. All experimental chapters should therefore report its own sections according to the journal guidelines for authors. However, articles should be in the same format of the thesis (use the template), including the references in the text, and should not report its own reference list.
- 3. General discussions and conclusions. Provide a final chapter that summarizes the results of the whole thesis by connecting the formulated hypothesis(es) with the results and a final paragraph/section with the conclusions. This chapter may be composed by as many sections as needed. The length of this chapter may depend on the option chosen for the previous chapter, i.e., this chapter can be relatively short if option 2 have been chosen.
- Bibliography
 - Please use the software Mendeley, as plugin of Microsoft Word, and the style “American Sociological Association”.
 - Citation in the text. Cite references in the text by using the command ‘Insert citation’. Examples: (Dai et al. 2013) (Zappalà et al. 2013) (Porto and Cascone 2013).
 - Reference list. Provide a unique (i.e. for all chapters) list of chapters at the end of the thesis (see the template).
 - The list of references should only include works that are cited in the text and that have been published, in press or accepted for publication. Personal communications and unpublished works should only be mentioned in the text and kept to the very minimum.

- Reference list entries should be alphabetized by the last names of the first author of each journal paper, book, book chapter or website in a single list. List multi-author publications of the same first author in chronological order. When authors cite multiple papers authored by the same first author and published in the same year, the year should be followed by a letter, using a for the first cited paper, b for the second and so on.

- Journal articles

Dai, P., L. Z. Liu, C. C. Ruan, L. S. Zang, and F. H. Wan. 2013. "Effect of the Primary Host for Production of Both Sexes on the Mating Interaction in an Autoparasitoid Species." *BioControl* 58(3):331–39.

Porto, S. M. C. and G. Cascone. 2013. "A Building Characterization-Based Method for the Advancement of Knowledge on External Architectural Features of Traditional Rural Buildings." *Informes de La Construcción* 65(532):481-496.

Tochen, Samantha, Vaughn M. Walton, and Jana C. Lee. 2016. "Impact of Floral Feeding on Adult *Drosophila Suzukii* Survival and Nutrient Status." *Journal of Pest Science* 89(3):793–802.

Zappalà, L., A. Biondi, A. Alma, I. J. Al-Jboory, J. Arnò, A. Bayram, A. Chailleux, A. El-Arnaouty, D. Gerling, Y. Guenaoui, L. Shaltiel-Harpaz, G. Siscaro, M. Stavrinides, L. Tavella, R. Vercher Aznar, A. Urbaneja, and N. Desneux. 2013. "Natural Enemies of the South American Moth, *Tuta Absoluta*, in Europe, North Africa and Middle East, and Their Potential Use in Pest Control Strategies." *Journal of Pest Science* 86(4):635–47.

- Books

Morales-Ramos, J. A., M. G. Rojas, and D. I. Shapiro-Ilan. 2014. *Mass Production of Beneficial Organisms: Invertebrates and Entomopathogens*. USDA-ARS, National Biological Control Laboratory, Stoneville, MS, United States.

- Web-pages:

ISTAT (2019). Censimento dell'agricoltura 2010, Consistenza degli allevamenti. <http://dati-censimentoagricoltura.istat.it/Index.aspx?lang=it> [accessed on 08 May 2019]

IPCC (2019). Greenhouse Gas Protocol, Calculation Tools. <https://ghgprotocol.org/calculation-tools> [accessed on 09 May 2019]

Annexes

- Mandatory annexes
 - 1. List of papers and abstracts published on Journals, Books, Meeting proceedings
 - 2. List of stays in national or international universities and/or research institutions. Please, provide a brief description of the conducted activities carried out during each stay.
 - 3. Attendance to congresses, workshops, seminars and courses.

- Optional annexes
 - Supplementary material. Please provide a number (e.g., SF1.1, SF2.1 for supplementary figure referring to chapter 1 and 2, respectively. ST1.1, ST2.1... for supplementary table referring to chapter 1 and 2, respectively) full caption per each item. Make sure to cite in the main text all supplementary material.
 - Supplementary electronic material. Please provide the link to a website or online database where the material can be accessed and/or downloaded. Provide a number (e.g., SV1.1, SV2.1 for supplementary video referring to chapter 1 and 2, respectively. SXS1.1, SXS 2.1... for

supplementary excel file referring to chapter 1 and 2, respectively) full caption per each item. Make sure to cite in the main text all supplementary electronic material.

General rules for manuscript formatting

- a) Acceptable files: file should be prepared with any text editing software, but at the moment of the submission check the requirements UniCT online system.
- b) Page size should be A5, margins should be 2.0 cm the superior, the left and right, and 1.5 cm the bottom.
- c) 'Times-New-Roman' types and size 11 pt should be used throughout all parts of the typescript.
- d) Page numbering should start from 1 and beginning in the introduction page (please, see the template).
- e) Lines spaced by 1.15 and the text should be justified on both margins.
- f) The manuscript should be subdivided in sections, one for each main section of the thesis (see thesis template). Each main section could be subdivided in related subsections. Use section break to start new section. Use page break to start new page. Please, avoid space bar to intend paragraphs and enter key to subdivide paragraph. Indentation and space lines should be modified by using the Microsoft Word styles (see thesis template).
- g) The titles of each main section and the related subsections should be formatted according to the manuscript template. This will help you to navigate manuscript during the editing as well as to:
 - number each main section and related subsections, automatically
 - compile the index of the thesis (arranged in main section and related subsections), automatically;
- h) The title of each main section should be repeated in the page header (in word processing, a page header, or simply header, is text that is separated from the body text and appears at the top of a printed page) (see thesis template).
- i) Use the Equation Editor or MathType for equations (see thesis template).
- j) Please, install Mendley software and activate the plugin for Microsoft Word. This app will automatically compile the list of references while you are citing authors during the manuscript writing. Use in Mendely the style "American Sociological Association" (ASA). See below for more details.
- k) Captions should be numbered with Arabic numbers, continuously throughout each chapter of the manuscript. E.g., the figures of chapter 1 should be named as 1.1, 1.2, 1.3. etc.; while those of the second as 2.1, 2.2., and so on. Caption labels (i.e., Figure, Table, Equation, Graph or others you will use) should be added and numbered automatically in the manuscript by using the command "Caption (*didascalia*)". You have to add new labels of captions in order to cite them in the main text as Figure, Table. (see thesis template). This will help you to obtain figure and table index to be provided in the manuscript, automatically. Furthermore, all captions should be cited at least once in the manuscript by using the command "Cross-reference (*Riferimenti incrociati*)". This will assist you in updating the number of captions cited in the text when a Figure, a Table, an Equation or a Graph with the related caption is removed from the body of the manuscript.

All tables and figures should have its own concise title (in bold). Moreover, a main figure could be divided in several subfigures that need to be named with capital letters, likewise, to be cited in the caption.
- l) Genus and species names must be set in 'italics'. Spell out the genus name and the first mentioning in the main text and when at the sentence beginning.