



Doctoral studies at ATCS

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Rules & Regulations

- Two relevant *doctoral schools*
 -  Computer Science. Dean of Studies: Denis Kalkofen
 -  Mathematics and Scientific Computing. Dean of Studies: Peter Grabner
- Styling indicates differences between the two doctoral schools
- **Curriculum** sets ground rules for all doctoral schools
- **Statutes** add to these rules and are doctoral school specific
- Two doctoral programmes (and curricula) that only change title
 - Natural sciences (Dr. rer. nat.)
 - Technical sciences (Dr. techn.)
- Changing between the programmes is possible (but requires a lot of paperwork)

The PhD journey

In the first year

-  Educational agreement or  Doctoral proposal (after 2026-03)

During the PhD

- Taking classes
- Writing yearly progress reports
- Main work (Research, teaching, training, writing papers, etc.)

The End

- Dissertation
- Doctoral examination



The first year

Supervision and mentoring

- Different kinds of supervision
 - One supervisor, co-supervision or joint supervision
- A doctoral candidate has the right to one or more mentors
 - Additional advisor/guide
 - Nominated by the doctoral candidate

The first year

Educational agreement

- Between supervisor and student
- Preliminary thesis title and short description of topic
- Upload on TUGraz online under "My Doctoral Project"
- needs approval from Dean of Studies
-  If educational agreement not completed before 2026/03:
-  Subsumed by **Doctoral proposal**







Doctoral proposal

- to be completed 9-12 months after starting the PhD
- **Written part:** Proof of scientific work (presentations, papers, drafts, ...)
- **Oral part:** 60-minute "Mini-doctoral examination":
 - Presentation of progress and future plan + questions from committee
- Possible outcomes:
 - Positive (most likely): Continue as planned
 - Positive with conditions: Committee gives measurable goals to be fulfilled in the next six months
 - Negative: Committee sees severe problems on the path towards graduating
- Note that the result from the committee is not binding: Supervisor and student can always decide to continue with the project







During PhD

- Yearly progress report
 - To prove to others that you made progress, but also good for reflection
 - Upload in "My Doctoral Project" in TUGraz online
- Classes (18 ECTS in total)
- The other stuff
 - Research
 - Teaching
 - Training

During PhD - Classes

- 18 ECTS in total
 - Subject specific courses:  9 - 12 ECTS or  Exactly 12 ECTS
 -  Any master-level courses within the doctoral school
 -  Other courses require approval from the dean of studies
 -  9 ECTS from "Grundthemen"-lectures, but 2 different Grundthemen
 -  Other 3 ECTS from any "Grundthemen"-course or mathematics course aimed at a master level.
 - Scientific methods and communication (4-7 ECTS)
 - Privatissimum (2 ECTS)

During PhD - Classes

- 18 ECTS in total
 - Subject specific courses (9-12 ECTS)
 - **Scientific methods and communication (4-7 ECTS)**
 - Scientific methods (2 ECTS)
 -  503.957 Scientific communication (Giving talks)
 -  700.011 Scientific methods (course to be redesigned next year)
 - Doctoral Seminar (2 x 1 ECTS)
 - Mandatory attendance + Two talks per doctoral candidate
 -  501.998 Doctoral Day - Entirety of doctoral school
 -  ATCS Seminar (to be made official)
 - Soft skills  0 - 3 ECTS or  0 ECTS
 - Privatissimum (2 ECTS)

During PhD - Classes




- 18 ECTS in total
 - Subject specific courses (9-12 ECTS)
 - Scientific methods and communication (4-7 ECTS)
 - **Privatissimum** (2 ECTS)
 - For learning from supervisors

The last few weeks




To finish the PhD, need to complete three things:

1. Curricular workload, see previous slides
2. Doctoral thesis (Dissertation)
 - Handed in at least **2 months** before doctoral examination
3. Doctoral examination (Defense/Rigorosum), only after proof of
 - Curricular workload
 - Positive assessment of doctoral thesis
 - Annual reports

The last few weeks - Doctoral thesis

- Submitted at least 2 months before defense
- Thesis may contain copies of publications ("kumulative Dissertation")
 -  Need at least three publications (typically A/A*)
 -  Requires detailed introduction and summary (~30 pages)
 -  **Untypical, no clear requirements**
- Contribution by candidate clearly marked in parts that come from work in groups
- AI-tools allowed in the same manner as involvement of other humans. Should **not** undermine the scientific work *or the independent writing*
- Check curriculum and statutes for additional rules on
 - the styling of the thesis or
 - what the thesis needs to contain



The last few weeks - Reviews for thesis

- Need ≥ 2 reviewers and ≥ 3 without international publication
 -  Need ≥ 3 reviewer reports, when fewer than two accepted publications at peer-reviewed conferences or journals
 -  Two reviewers need to be external
- At least one reviewer should be external
 -  At least two reviewers need to be external
- Reviewers should be pre-selected at least **two months** before **thesis submission**
 - So, at least **four months** before **defense**
 - From this point on they should be supplied with the current version of the thesis

The last few weeks - Doctoral examination

 30-45 min /  30 min presentation

Oral examination

- Conducted by board of examiners, not allowed to be from same institutes
-  3 members
 - One chair, who leads the discussions.
 - Two examiners, who perform a 20-25 minutes oral examination each
-  3-5 members
 - Dean of studies plus 2,3,4 examiners (For ≥ 3 , 2, ≤ 1 publications)
 - 60 minute examination total
 - Recommendation that one examiner is the supervisor

Resources

- [Curriculum Dr. techn.](#) and [Curriculum Dr. rer. nat.](#) (identical but in name)
- Statutes of [📄 Doc. School Informatik](#) and [📄 Doc. School Mathematik](#)
- PhD-Union: [Doctoral Programme Guide](#) and [Supervisor Guide](#)
- TUGraz Online: [My Doctoral Project & My Degree Programme](#)
- [📄 ISEC Checklist](#)
- [📄 Road to PhD \(CSBME\)](#)