Konstanze Zwintz, 13.8.2024

A Guide To The Master In Physics

All information about the master programme in physics including the detailed curriculum can be found here: https://www.uibk.ac.at/de/studien/ma-physik/2020w/

Compulsory Part:

Modern Physics (VO3)

- Lecture series with a different lecturer every week that starts with an introductory lecture.
- You will be introduced to the research conducted in Innsbruck.
- It opens the possibility to connect to your fellow master students.
- The course should help you to select your specialization (see below).

Specialization (dt. „Vertiefung“):

Select your specialization (dt.: “Vertiefung”) from the following list:

a. Quantum Science (modules 1, 2, and 4 or modules 2, 3, and 4 from the curriculum)
b. Quantum Engineering (modules 5, 6, and 7 from the curriculum)
c. Ion- and Applied Physics (modules 1, 8, and 9 from the curriculum)
d. Many-Body Physics (modules 10, 11, and 12 from the curriculum)
e. Computational Physics (modules 13, 14, and 15 from the curriculum)
f. Astro- and Particle Physics (modules 1, 16, and 17 from the curriculum)

⇒ You need to collect **30 ECTS in the 3 modules associated to the specialization**: Introductory Module, advanced module, special topics.
⇒ Experimental specializations include a laboratory course (i.e., module 1 in the curriculum).
⇒ Modules are widely interchangeable within the specialization.
⇒ Contact me as associate dean of studies for recognition of the courses for the selected modules!

Studying without a specialization is possible (but not recommended).
For this you must choose and fill several of the modules 1 to 23 (“Wahlmodule”) listed in the curriculum under point (3) and obtain a total of 60 ECTS.

Elective Courses:

You need to collect **additional 30 ECTS from your specialization or from other ones**.

Interdisciplinary Competences (dt.: “Interdiziplinäre Kompetenzen“): 10 ECTS
Courses must be on master level as well!

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Individual Choice of specialization (dt.: “Individuelle Schwerpunktsetzung”): 20 ECTS
Courses on master level from the Faculty of Mathematics, Computer Science and Physics (MIP).
Not allowed: Courses from the “Erweiterungsstudium Informatik”.

Modules do not need to be complete if you have completed a specialization. Pick the courses you are interested in and that match the requirements of the curriculum!

Contact me as associate dean of studies for recognition of your selected courses!

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Master Thesis:

Conduct original research in one of our research groups!

Step 1: Find a supervisor for your thesis!
If you are not sure which topic would be most interesting or who you would like as a supervisor, contact potential supervisors, make an appointment and ask them for possible master thesis topics and their availability to supervise!

Step 2: Register your thesis!
Once the decision is made, register your thesis immediately by filling out this form (LINK) and providing it to the Examination Office ("Prüfungsreferat").
We require a **minimum of 6 months** between registering the thesis and handing it in!

Step 3: Collect the ECTS points for starting your master thesis
The course "Preparation of the master thesis" ("Pflichtmodul: Vorbereitung der Masterarbeit") gives you 2.5 ECTS.
Your supervisor needs to grade you for the course "Research study" ("PJ Forschungsstudie") that gives 12.5 ECTS.
Participation in the group seminar will give you 5 ECTS for the "Research seminar" ("SE Forschungsseminar").
There are several options for the course "Research Analysis" ("VU Forschungsanalyse") that gives you 5 ECTS. It is best to discuss with your supervisor which one to take.

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Finishing the Master:

Step 1: Check a semester before you finish, if you have enough ECTS in all modules.
You can check with the Examination Office ("Prüfungsreferat") and with me, the associate dean of studies, if you are not sure.

Step 2: Fill in the form with the Examination Office ("Prüfungsreferat").

Step 3: Hand in the thesis with the Examination Office ("Prüfungsreferat").
You supervisor should grade it as fast as possible after this.

Step 4: Organize your thesis defense committee
Typically, your supervisor will be your first examiner. Then you must choose your second examiner and a chairperson. The chairperson should be chosen from a different field in physics (e.g., if you are doing a master in quantum science, please choose the chairperson from any of the other fields).

Step 5: The date of your master thesis defense
Please note an important compulsory deadline:
From the moment, the grade for your master thesis has been given by your supervisor, the ***earliest day of your defense is 4 weeks later***. This is a requirement given by the university (https://www.uibk.ac.at/fakultaeten-servicestelle/pruefungsreferate/studieninfos/) which cannot be loosened.

Step 6: Master Defense
Procedure: On the day of your master thesis defense, you will first give a talk about your project that should last about 25-30 minutes. Then the audience will ask you questions. And at the end, your thesis committee will ask you the exam questions. After this, the committee will discuss the grade in private and let you know the outcome.
Recommendation: in case of special circumstances – such as a planned presentation that needs to be longer than 30 minutes or an online participation of supervisor(s) – please contact the chair of your defense and talk with him/her about these issues.

Congratulations – you mastered the Master in Physics!

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Frequently Asked Questions:

How can I get the recognition of courses for the Interdisciplinary Competences and the Individual Specialization?

Please come to my (virtual) consultation hour where we will discuss if the recognition you planned, is possible. If we agree, you must send me an email in which you describe which courses (LV number, title) you want to put into which of the two modules. If I agree, I will forward this email to the Examination Office ("Prüfungsreferat") and authorize them to carry out the recognition. I will put you in copy and the recognition will be done for you. This emails is like my signature – without it you will not get the recognition.