

## **Regulations of the final exam for the Master's Degree in Astrophysics and Space Physics**

### **Regulations**

In order to obtain the Master's Degree in Astrophysics and Space Physics, the completion of a thesis is required. In accordance with the academic regulations (Articles 8 and 9) the thesis contains an original contribution by the student carried out and discussed under the guidance of a supervisor. As per the regulations, 45 ECTS credits are assigned to this activity, and it typically requires a duration of at least 8 months from the date of assignment. The thesis is assigned by submitting a form to the teaching office of the Department of Physics that is available at the following link: <https://www.fisica.unimib.it/it/didattica/moduli-richiesta-tesi>. The form needs to be signed by both the supervisor and, if present, the co-supervisor.

If the student carries out and/or completes the thesis in a foreign or international institution applying to a call for a 6-month stay (such as an Erasmus), the internal supervisor must arrange for an extension (either by increasing the time abroad or by including work at Milano Bicocca university) in order to meet the 8-month duration specified by the regulations.

The thesis committee evaluates the assignment, and if the evaluation is positive, the assignment is approved by the Department of Physics at the first available department board meeting following the submission.

The thesis must be written in English.

The following individuals may serve as internal supervisors:

1. A faculty member or researcher (permanent or temporary) affiliated with a Department of the School of Sciences;
2. Structured personnel in a research role at a partner research institution who holds a teaching position in one of the three programs offered by the Department of Physics;
3. Structured personnel in a research role at a partner research institution where the collaboration agreement allows for it.

The following individuals may serve as external supervisors:

1. Structured personnel from companies, other universities, or research institutions not affiliated with the Department of Physics. In this case, the student must also propose an internal supervisor. If the student is unable to find one, the thesis committee will appoint the internal supervisor;
2. A faculty member or researcher (permanent or temporary) affiliated with the university but not with a Department within the School of Sciences. Again, an internal supervisor must be identified.

The following individuals may serve as co-supervisors:

- Anyone qualified to act as a supervisor;
- Structured personnel from external research institutions or companies;
- Personnel with postdoctoral research contracts, students in the PhD program in Physics and Astronomy, research fellows or scholarship holders from the university, other universities, or research institutions.

To take the final exam, the following steps are required:

- Complete the thesis application form within the specified deadlines (for more information, visit <https://www.unimib.it/servizi/servizi-segreteria/laurearsi/scienze>)

- Send a maximum 2-page abstract of the thesis in English to the email address [didattica.fisica@unimib.it](mailto:didattica.fisica@unimib.it), according to the deadlines and graduation session calendar listed on the Department's website;
- Upload the thesis document to the online portal (for more details, visit <https://www.unimib.it/servizi/studenti-e-laureati/segreteria-studenti/laurearsi/scienze>) at least 7 days before the start of the graduation session.

The summary table with the graduation session dates and deadlines for access to those sessions is available at: <https://elearning.unimib.it/course/view.php?id=39341>. For information regarding the degree award (e.g., title changes, exam verifications, extensions, etc.), contact the Career Management Office at [sgr.studenti.scienze@unimib.it](mailto:sgr.studenti.scienze@unimib.it).

### **Thesis Committee for the Final Exam**

The thesis committee is composed of at least 5 members, in accordance with the university's academic regulations (Article 26). Committee members must meet the qualifications to act as supervisors, be recognized external experts in the field according to the list approved by the Department of Physics, or be employees of partner research institutions if the collaboration agreement permits it.

It is the responsibility of internal supervisors to communicate the schedule of the final exam to the external supervisors and provide their names to the secretariat if they agree to participate in the graduation session, either as external committee members or as associated members. The name must be submitted to the secretariat at least fifteen days before the graduation session.

Co-supervisors may attend the session as associated members in an informal capacity. It is the responsibility of internal supervisors to communicate the session schedule to co-supervisors.

If external supervisors and co-supervisors are unable to attend, they may send their assessment of the graduate to the internal supervisor.

Associated members actively participate in the oral defense of the candidates and in the closed-door discussion aimed at evaluating the graduate.

### **The procedure of the final exam**

The final exam consists of an oral presentation in English of the thesis's work, in front of the committee, using a tool for its presentation. The presentation lasts 20 minutes, followed by a Q&A session with the committee members.

### **Evaluation of the Final Exam and Degree Grade**

The criteria for assigning the final grade are as follows:

a) The activity that constitutes the thesis is assigned a grade from 0 to 6, as determined by the following rules:

- From 0 to 4 points, with increments of 0.25, awarded by the supervisor.
- From 0 to 2 points, with increments of 0.25, awarded by the committee.

The grades are assigned by evaluating the quality and originality of the work and of the thesis, the understanding of the topics discussed, and, for the grades assigned by the committee, the clarity of the presentation. If the supervisor(s) is (are) absent, he/she (they) must send the score to the President, who is in charge of communicating it to the committee during the final evaluation.

b) 1 point is awarded to students who graduate within the standard duration of the degree program, i.e., by April 30 of the academic year following the second year of enrollment. The point is also awarded to students who graduate 6 months after the official end of the academic year they would have been enrolled in, if they have completed a documented study period abroad (with exams taken or the thesis written abroad).

c) The weighted average of the grades obtained in the exams, weighted by the number of credits, is also taken into account.

The final grade is determined by summing the points from a), b), and c) without rounding.

If this sum is smaller than 110, the final degree grade is determined by rounding the score to the nearest whole number (rounding up if the decimal part is 0.500 or more). In this case, no honors (lode) are awarded.

If the total grade (without rounding) is 110 or more, the degree grade is 110.

If the total grade, without rounding, exceeds 112, the committee will evaluate the awarding of honors (lode), which will be given unless one or more regular committee members (excluding associated members) give a reasoned negative opinion. If the candidate has not received any honors in previous exams, the threshold for honors is 113.

If the committee, in specific cases, deems it necessary to deviate from the rules outlined in this regulation for assigning the degree grade, it must provide the justification, through the committee President, to the Department's Academic Board (CCD).