## AstroMundus

## Erasmus+: Erasmus Mundus Joint Master Degree in Astronomy & Astrophysics The Programme

AstroMundus is a 2-years Erasmus+: Erasmus Mundus Joint Masters Degree programme in Astronomy and Astrophysics (120 ECTS). The programme was initiated in 2009 as an Erasmus Mundus Masters Course and is now continuing within the framework of the new Erasmus+ programme of the European Union. The Masters Course is offered by a consortium of 5 partner universities in Austria, Italy, Germany, and Serbia, with the participation of 4 research institutions as associated partners in Italy. Serbia, and Germany. Open to carefully selected, top-ranked students of any nationality, the Master is entirely taught in English, features a joint curriculum of studies across the partner universities, and awards a Joint MSc Degree to successfully graduated students, as well as a Joint Diploma Supplement that facilitates the recognition of the degree in other universities and/or countries. AstroMundus students carry out their master studies in at least two and up to four of the participating countries, in a stimulating and scientifically excellent international environment.



## Why an international Master in Astronomy & Astrophysics?

Astrophysics is developing at a very fast pace, accompanied by increasingly sophisticated and powerful instrumentation that allow researchers to embark in ever more ambitious projects. These require the wide variety of expertise that only large international collaborations can provide. In this context, it is important to train students since the beginning to work within an international research network and also to offer them training in the widest possible set of topics to prepare them adequately to all aspects of modern research. This goal can only be achieved by combining the expertise of several universities and research institutions at international level and by carefully organising the study path across these institutions.





## **The Programme**

The main objectives of the Master are initiation in scientific research and applied training in Astronomy and Astrophysics. Emphasis is put on the application of modern techniques both in the observational and theoretical/computational domain. The various specialities of the partner institutions result in an increased offer of pathways for the students: Theoretical Astrophysics, Models, Simulations and Computation, as well as Observational Astrophysics based on data from the ground and from space and on the exploitation of modern data archives.

The programme lasts for two years. The AstroMundus consortium adopts the European Credit Transfer System (ECTS). Students will earn a minimum of 120 ECTS during their master studies.

The programme is regulated by a Consortium Agreement and the student participation is regulated by a Student Agreement.

During the first semester the students attend courses at the entrance university (University of Innsbruck). The second semester is spent at a second University of choice among the 2 Italian partner Universities (Padova and Rome "Tor Vergata"). The third semester is spent in one of the three partner institutions in Rome, Göttingen, or Belgrade depending on the astrophysical branches which the students will select to specialise on. Finally the fourth semester is mainly devoted to the Master's thesis (30 ECTS) that can be accomplished in any of the partner institutions, with the possibility of joint supervision by a member of another of the partner universities. Students are given the possibility to attend additional advanced courses/seminars during the 4th semester, especially on topics related to their thesis work. The first semester is focused on basic learning in Astronomy and Astrophysics, while the subsequent ones offer to the students the possibility to specialise in different branches. The organization in semesters is summarised in the table below. Events of great importance in the programme are annual Retreats, when the entire Consortium come together in a 3-day meeting, rich of scientific and cultural experiences.

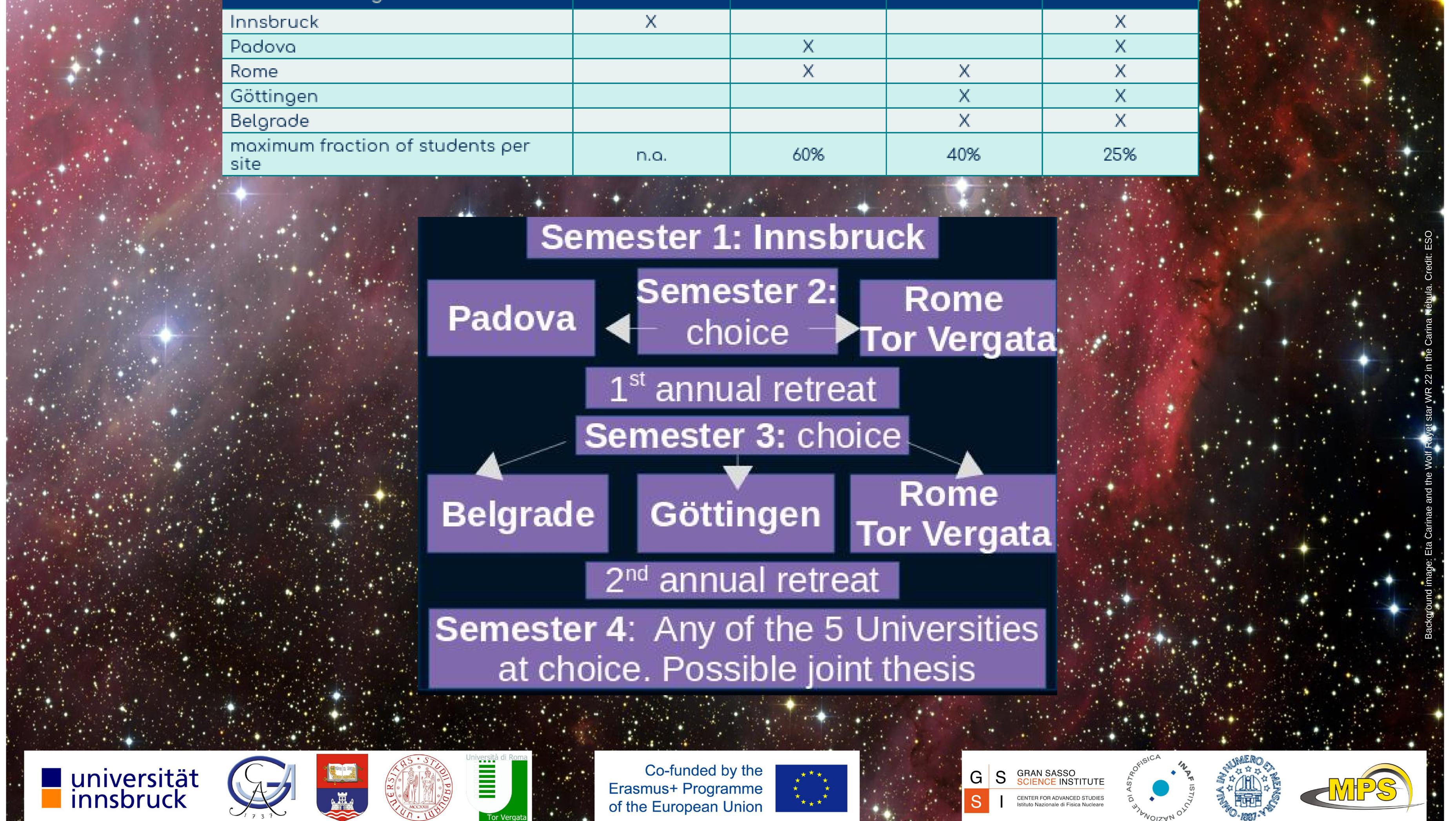
Hosting Institution

1<sup>st</sup> term

2<sup>nd</sup> term

3<sup>rd</sup> term

4<sup>th</sup> term



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