

# MASTER IN SPACE STUDIES (ADVANCED MASTER)

MAJORS: SPACE LAW, POLICY, BUSINESS AND MANAGEMENT • SPACE SCIENCES • SPACE TECHNOLOGY AND APPLICATIONS  
Jointly offered by Catholic University of Leuven and Ghent University

60 ECTS CREDITS – LANGUAGE: ENGLISH – DEGREE: MASTER OF SCIENCE

## COURSE CONTENT

Human activities in space play an ever increasing role in our society. Space missions have evolved from merely showcase events that explore new technologies in new environments to utilitarian operations that serve various purposes such as telecommunications around the globe, weather prediction or advanced research in zero gravity. In order to illustrate this, the European Space Agency (ESA) has estimated that only 5% of the space related industry is involved with the manufacture and launch of satellites! Therefore, space industry has grown over the past 50 years from a high profile niche activity to an economically very significant player in our society. As a consequence, it is also an important employer.

Whereas in the early years the industry trained its staff on an ad hoc basis in a developing and growing research environment, nowadays new employees enter a well-established technological and business world. This implies that the space industry preferably recruits people that already have acquired the basic skills and knowledge that the industry itself has developed over the past decades. This is a considerable challenge since the space industry estimates that in the coming years over 40,000 people belonging to the pioneer generation will retire and consequently will have to be replaced by new employees.

In order to help fill this need, the KU Leuven and the UGent have joined efforts in offering a Master of Space Studies. This master is intentionally not an exclusively technological study, but is set up interdisciplinary. It is intended to form people who have at the end of their study basic knowledge of all aspects of space activities, and who are qualified to enter the space industry where they will acquire the more specific skills necessary for their particular job. The master has an international scope and audience and is taught in English.

## COURSE STRUCTURE

This advanced master's programme addresses students who have successfully completed an initial master's programme in either the humanities and social sciences, exact sciences and technology, or biomedical sciences.

The interdisciplinary nature of the programme is set by the requirement that all students follow a common trunk of 30 credits of introductory courses. The goal is to get the students acquainted with the different aspects that form the foundation of space-related activities. Special attention goes to the combination of a high level of knowledge transfer with the diverse backgrounds of the students.

Depending on their background and interest students have the opportunity to deepen their knowledge through more domain specific optional courses, for a total of 15 credits, covering the three domains of (A) Space Law, Policy, Business and Management, (B) Space Sciences, and (C) Space Technology and Applications.

For the master's dissertation (15 credits) students are embedded in a research team of one of the organising universities, or in an external institute, organisation or industrial company, in which case an academic supervisor is assigned as a coordinator. The master's dissertation should form a final piece of work of the interdisciplinary programme, in which the acquired knowledge and abilities are applied to a complex and specific project.

## CAREER PERSPECTIVES

The technological challenges and innovative programmes that typically characterise space projects make the space industry an essential vehicle to help keep our society at the forefront of innovation and research. The international character of many space projects makes the space industry also a very important element in the positioning of Europe worldwide. Therefore space industries will, for the foreseeable future, remain a growing and in some areas even booming business, with many career opportunities.

On the Flemish level, there is the 'Vereniging van Vlaamse Ruimtevaartindustriëlen' (VRI), which fosters the growth of the local industries. As already mentioned, there is ESA that works on a European level, but there is also growing involvement of the EU, in particular on policy issues and earth observation, telecommunication, global positioning and defense.

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## TOELATINGSVOORWAARDEN VOOR HOUDERS VAN EEN VLAAMS DIPLOMA

### Na geschiktheidsonderzoek:

- masterdiploma

Van de kandidaat-studenten wordt verwacht dat zij:

- met succes een initiële masteropleiding hebben gevolgd waarvan de kandidaten de relevantie in het domein van ruimtevaartstudies kunnen motiveren;
- het potentieel hebben om succesvol hun opleiding te verbreden naar andere relevante disciplines toe;
- een overtuigend beeld kunnen voorleggen over het belang van het programma voor hun professionele verwachtingen.

Deze verwachtingen zullen worden getoetst aan de hand van een intake gesprek.

### TAAL

Zie [www.kuleuven.be](http://www.kuleuven.be)

## PRAKTISCHE INFORMATIE

### Studieprogramma:

<https://studiegids.ugent.be>

> faculteiten > opleidingstypes > ga naar de opleiding van je keuze

### Infomomenten

Masterbeurs

[www.ugent.be/masterbeurs](http://www.ugent.be/masterbeurs)

### Inschrijving en administratie

KU Leuven - MSSapplication@ster.kuleuven.be

[www.kuleuven.be/application](http://www.kuleuven.be/application)

### Studiegeld

Meer informatie vind je op:

[www.kuleuven.be/tuitionfees](http://www.kuleuven.be/tuitionfees)

### Contact

Ghent University – Faculty of Sciences

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## ADMISSION REQUIREMENTS FOR INTERNATIONAL DEGREE STUDENTS

Students should possess already a 'disciplinary' master's degree. Candidate students are specifically expected to:

- have obtained an initial master's degree for which the candidates can motivate the relevance for space studies;
- have the potential to successfully broaden their formation towards other relevant disciplines;
- present a convincing view of the importance of the programme for their professional expectations.

These expectations will be evaluated through an intake interview. Interested candidates are invited to send their CV and a comprehensive motivation to [MSSapplication@ster.kuleuven.be](mailto:MSSapplication@ster.kuleuven.be). The selection with respect to the initial master's degree is designed to increase the student's chances for success. However, students with an initial master that does not have a direct apparent connection with space studies can still apply, and could be accepted depending on the power of conviction of their background and argumentation.

### LANGUAGE

Good knowledge of the English language, both written and spoken, is essential. All international students must meet the language requirements set by the International Admissions & Mobility Unit of KU Leuven.

[www.kuleuven.be/english/admissions/lang/lang-test](http://www.kuleuven.be/english/admissions/lang/lang-test)

## PRACTICAL INFORMATION

### Study programme

[www.ugent.be/coursecatalogue](http://www.ugent.be/coursecatalogue)

> by Faculty > Programme types > select your programme

### Application deadline for international degree students

All international students must meet the requirements set by the International Admissions & Mobility Unit of KU Leuven.

### Enrolling institution

KU Leuven

### Application procedure

[www.kuleuven.be/application](http://www.kuleuven.be/application)

### Tuition fee

Separate amounts apply.

[www.kuleuven.be/tuitionfees](http://www.kuleuven.be/tuitionfees)

### Contact

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