Astronomy (MSc)

Discover the world at Leiden University

Specialisations
- Astronomy and Cosmology (MSc)
- Astronomy and Data Science (MSc)
- Astronomy and Education (MSc)
- Astronomy and Instrumentation (MSc)
- Astronomy and Science Communication and Society (MSc)
The master's programme Astronomy covers observations using the world’s most powerful ground- and space-based telescopes, theoretical astrophysical and astrochemical modeling, large scale simulations, and laboratory experiments that mimic conditions in space.

**What does this master's programme entail?**

In this two-year master’s programme in Astronomy you get access to cutting edge research in modern astronomy. Main focus areas include galaxies and the structures in which they are embedded, exoplanets, and star and planet formation. With seven challenging specialisations to choose from, you will be prepared for a wide variety of careers within academia, industry and the public sector.

Read more about our Astronomy master's programme.

**Discover why our students choose the Astronomy master's programme**

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**Why study Astronomy at Leiden University?**

- We offer you a tailor-made master’s programme with many opportunities to match your study path with your interests and ambitions.
- You have access to a cutting edge research infrastructure with strong international partners and top facilities.
- Leiden University offers a welcoming environment and an open international community with highly approachable renowned staff, a buddy system and individual student support.

Find out more reasons to choose Astronomy at Leiden University.

**Astronomy: the right master’s programme for you?**
Are you interested in astronomy research within or outside academia? Do you want to add value to society through scientific and technological progress? Are you keen on solving complex matters and are you up for a challenge? Then our Leiden University Astronomy master’s programme is designed for you.

Read more about the entry requirements for Astronomy.

**Why Leiden University?**

By effectively integrating world-class scientific research and excellent education, you will become a professional astronomer with an internationally recognized degree.

**Education at a world class research institute**

Leiden Observatory has a strong international reputation and is widely known to turn out masters and doctoral students of the highest quality. Students are trained by world-renowned astronomers including Kavli and Spinoza prize winner Prof. Ewine van Dishoeck, further Spinoza prize winners Prof. Marijn Franx and Prof. Xander Tielens, European Research Council (ERC) grant holders Prof. Ignas Snellen and Prof. Huub Röttgering and NWO-Vici grant holders Prof. Joop Schaye and Prof. Henk Hoekstra. Therefore, you can expect research at the cutting edge of modern astronomy as an integral part of the Astronomy master’s programme.

**Strong skill set**

During the programme, you learn to perform academically sound research and evaluate scientific information independently and critically. Without exception, you actively participate in current research within the institute and are individually supervised by our international scientific staff. Students with a Leiden degree in Astronomy become strong communicators and collaborators and can easily operate in an international setting. You will acquire extensive astronomical research experience and highly advanced analytical and problem solving skills.

**Access to the world’s best observational facilities**

Leiden astronomers have access to the foremost observational and computer facilities in the world, including the Hubble Space Telescope, ESO’s Very Large Telescope, ALMA,
Westerbork Synthesis Radio Telescope, XMM-Newton, Chandra, JVLA, LOFAR and others. On a daily basis, Astronomy master’s students work with data directly obtained from Leiden research at these facilities. The Leiden Observatory also hosts unique astrochemistry and optics laboratories that are also open for master student’s research projects.

**Faculty of Science**

The Faculty of Science is a first-class research faculty with an excellent position in the basic disciplines of science. The current research and education programmes span the entire spectrum of science ranging from Mathematics and Statistical Science, Computer Science and Data Science, Astrophysics, Physics, Chemistry and Bio-Pharmaceutical Sciences to Biology and Environmental Sciences. Our science community is driven by their curiosity and desire to increase basic knowledge, for science and to contribute to the great societal challenges of today and tomorrow. Core values are scientific impact, technological innovation and relevance to society.

**Study at a world-class university**

Leiden University is the oldest university in the Netherlands and enjoys an excellent worldwide reputation built up over more than four centuries. Since 1575 we’ve provided sound personal education for hundreds of thousands of students. We’ll do our utmost to give you the best possible support. And if you can and want to do more, we’ll challenge you every step of the way. For many years, we’ve been among the leaders in Dutch university rankings and we are currently to be found in a variety of top international rankings too.

More reasons to choose Leiden University

**About the programme**

Within the two-year Astronomy master’s programme, you can choose from seven specialisations, ranging from fundamental or applied astronomy research in cosmology, instrumentation or data science, to combinations of astronomy research with education, management or science communication.

**Overview of the Astronomy programme**
The two-year Astronomy master’s programme offers seven specialisations:

- **Astronomy Research**: you follow a tailor-made programme to become an independent and resourceful scientist.
- **Astronomy and Instrumentation**: obtain in-depth knowledge of state of the art approaches to develop high tech astronomy instruments.
- **Astronomy and Data Science**: focus on development and application of new data mining technologies, fully embracing modern astronomy as a data rich branch of science.
- **Astronomy and Cosmology**: discover all aspects of modern astrophysics, including extensive observation, interpretation, simulation and theory.
- **Astronomy and Business Studies**: combine training in astronomy with education in management and entrepreneurship.
- **Astronomy and Science Communication and Society**: combine research with all aspects of science communication, such as journalism and universe awareness education.
- **Astronomy and Education (taught partly in Dutch)**: prepare yourself for a career in teaching science at high school level.

All Astronomy master’s specialisations have their own curriculum with a wide variety of in-house Astronomy courses to tailor your own study path:

- **Origin and Evolution of the Universe**
- **Interstellar Medium**
- **Galaxies: Structure, Dynamics and Evolution**
- **Stellar Structure and Evolution**

- **Computational Astrophysics**
- **Large Scale Structure and Galaxy Formation**
- **Star and Planet Formation**
- **Interacademy Courses of NOVA research school for astronomy**

- **Astronomical Telescopes and Instruments**
- **Astronomy from Space**
- **Detection of Light**
- **High Contrast Imaging**
- **Observational High-Energy Astrophysics**
- Project Management for Scientists
- Radio Astronomy

- Observational Cosmology
- Astrochemistry
- Databases and Data Mining in Astronomy
- High-energy Astrophysics
- Gravitational Lensing
- Compact Objects and Accretion

**Educational methods**

- Lectures
- Working groups
- Practical classes
- Excursions
- Research

**Assessment methods**

- Written, oral and take home exams
- Homework assignments
- Presentations and colloquia
- Reports (scientific paper, literature study)

**Student support**

The favorable student–staff ratio guarantees a high degree of interaction with and personal attention from the (senior) staff. The Astronomy study advisor is available for individual and confidential study support. In addition, Astronomy master’s students get their own desk and computer during their master research project. Therefore, close collaboration with supervisors and group members is guaranteed. Moreover, the Astronomy master’s programme provides an informal atmosphere and a welcoming research community, in which social activities flourish.

**Extra-curricular**
Are you interested in taking up an extra challenge during your Astronomy master’s programme? Have you thought about applying for our Summer School programme or are you interested in developing your personal leadership style?

**Leiden Leadership Programme**

Do you like a personal challenge in leadership? Then join the Leiden Leadership Programme. In this one-year programme, you work on developing your personal leadership skills through an assessment, training, seminars and a practice assignment in an organisation. You discover and develop your qualities in the context of an organisation. The goal is to learn how to work intensively with other professionals and learn how to use their qualities. With the Leiden Leadership Programme, a Dutch-based honours programme, you will be able to follow 20 EC next to your Leiden, The Hague or Delft master's programme. Read more about Leiden Leadership Programme

**International Leiden Leadership Programme**

Curious about your personal leadership style? The International Leiden Leadership Programme is a 5 EC honours programme for master’s students looking to understand leadership, train and develop their leadership skills and acquire an insight into their personal strengths and weaknesses. Thanks to its small-scale approach and supportive tutor-mentor system, you’ll be working on your development on a very personal level. During this interdisciplinary programme you will attend seminars and skills-training sessions, which will give you more insight into the effect that your behaviour has on others. The programme involves the creation of a Personal Leadership Roadmap, a five-year plan for reaching and developing your own leadership style. For more information: International Leiden Leadership Programme

**Summer School**

The Leiden/ESA Astrophysics Programme for Summer Students (LEAPS) is an opportunity for students with an interest in astronomy and astrophysics to perform a 10 - 12 week summer research project in collaboration with a research scientist from Leiden Observatory or ESA. If you are interested in the Astronomy master’s programme, taking this summer course is a good opportunity to get acquainted with the educational and research opportunities within the institute. Read more

**Study abroad**
Gain international experience by taking courses or perform your Master’s Research Project at a university abroad. Leiden Observatory has many international contacts and the institute is setting up exchange collaborations with universities in the United Kingdom, Poland and China.

**Extra internship**

Explore the world outside academia without missing out on any research in an extracurricular business internship within a company. You can also take the opportunity to perform an extra astronomy research internship at another university in the world.

**Teaching assistant**

We encourage you to support our teaching activities as a paid student teaching assistant. You will assist our lecturers in organising courses, practical classes and excursions for Astronomy bachelor’s students. As a teaching assistant, you gain valuable experience to add to your resume. Also, it is a unique opportunity to get more familiar with the staff.

**Career prospects**

With a master’s degree in Astronomy you are well prepared for jobs in research, industry and the public sector, including technological, financial and consultancy companies, research institutes, governments and science communication organizations.

**Acquired skills and competence**

With a Leiden degree in Astronomy you obtain an impressive skill set leading you to a top-level job quickly after graduation (see Beste Banen 2016). As a strong communicator and collaborator you can easily operate in an international setting. You have acquired extensive astronomical research experience and highly advanced analytical and problem solving skills. Their helicopter view and ability to prioritise enable astronomers to successfully engage in large multidisciplinary projects.

**Career**

Most graduates holding a MSc degree in Astronomy from Leiden University find work in many different capacities, including:
• Research: universities, observatories, research institutes
• Industry and consultancy: ICT, R&D, telecom, high technology, aerospace
• Finance: banking, insurance, pension funds
• Public sector: governments, policy makers, high schools
• Science communication: journalism, popular writing, museums

Typical jobs for Astronomy graduates include:

• Scientific researcher (postdoc, research fellow, professor)
• R&D engineer
• Consultant
• Data scientist, statistician
• Policy advisor, public information officer (e.g. Ministry of Foreign Affairs)
• High school physics teacher
• Scientific editor for magazines, newspapers and other media

Research at Leiden Observatory

If you want to get more deeply involved in research after graduating in Astronomy, consider pursuing a PhD at Leiden Observatory. If you have completed the Leiden master’s degree programme in Astronomy, you are directly eligible for admission to our PhD programme. Read more.

Career preparation

Leiden University offers you several services related to career orientation and job application skills

Preparation for the job market is integrated in the Astronomy master’s programme. You will learn what skills and competences are needed for finding a future job that fits you. We guide you in getting to know yourself and help you to develop your personal and professional skills. You can also participate in astronomy-specific career events to find out what job sector appeals to you the most. In addition, our Study Advisor is always available to help you in shaping your study and career path.

Astronomy Career Information Meetings
Learn how to get a PhD at an astronomical research institute, find out what it takes to get hired by a company as an engineer or a consultant and ask questions to PhD students, CEO’s, lecturers and job coaches. These meetings are organized twice a year by the Education Office Astronomy.

**Science Career Service**

Are you looking for career advice? Get in touch with our science career advisor. The Science Career Service supports students of the Science Faculty in their career orientation and making effective career decisions during their study. We offer services such as consultation hours, individual appointments with the career counselor and advice on your CV or motivation letter.

**Science Career Event**

Whether you are actively looking forward to meet interesting employers, or even if you have no idea what you career will look like yet, the Science Career Event gives you a chance to speak with a large number of employers. Every year the Science Career Event is organized by students of the Faculty of Science. During this event you can get your resume checked, participate in a workshop or speed date with a potential employer to discuss possibilities in the near future. The Science Career Event is the ideal day to orient yourself on career possibilities.

**The Mentor Network**

If you have questions about the job market, you can get in touch with Leiden alumni who are happy to offer their advice. On the Mentor Network platform you can view the profiles of around 650 alumni. Once you have found someone you would like to contact for advice, you can send him or her a request for assistance.

**Master's application and admission**

Find out how to apply for Astronomy at Leiden University by following our step-by-step guide.
Step-by step guide

This guide clearly explains the steps you need to take to apply, and the subsequent admission process.

- Step 1: Check the admission requirements.
- Step 2: Check the application deadlines.
- Step 3: Collect the required documents.
- Step 4: Start your application.
- Step 5: Pay your tuition fees
- Step 6: Prepare for your studies at Leiden University

Admission requirements

To be eligible for Astronomy at Leiden University, you must meet the following admission requirements.

Diploma requirements

You are eligible to apply if you have

- a bachelor’s degree in Astronomy (Sterrenkunde) from any research university in the Netherlands
  OR
- a bachelor’s degree in an Astronomy-related programme from a research university in the Netherlands.

Admission to this master is under the provision that you have in-depth knowledge comparable to undergraduate courses of the Leiden Astronomy curriculum, i.e. with:

- a theoretical and mathematical emphasis, including quantum physics, electrodynamics, statistical physics, and complex analysis
- and with proficiency in programming, preferably in the Python language.
Astronomy and Cosmology: For this specialization, you must additionally have knowledge of “Physics of elementary particles” at undergraduate level.

Astronomy and Instrumentation: For this specialization, it is recommended to have knowledge of “Solid State Physics” at undergraduate level.

The Board of Admissions will assess whether your degree and background are sufficiently related to the BSc degrees in Astronomy (and, if applicable, whether you meet the additional requirement for certain specialisations).

If you have a bachelor’s degree that does not meet the requirements specified above, you may be eligible for an individual bridging programme tailored to your individual background. If you have successfully met the requirements of the imposed bridging programme, you will be admitted to the master’s programme.

For more information, please contact the Astronomy study advisor.

If you have a degree in Dutch higher vocational education (hbo) in a related field of science, you are eligible to apply.

The Board of Admissions will assess whether your degree and background are sufficiently related to the BSc degrees in Astronomy (and, if applicable, whether you meet the additional requirement for certain specialisations).

If you have a bachelor’s degree that does not meet the requirements specified above, you may be eligible for an individual bridging programme tailored to your individual background. If you have successfully met the requirements of the imposed bridging programme, you will be admitted to the master’s programme.

For more information, please contact the Astronomy study advisor.

If you have a bachelor’s degree in Astronomy or in an Astronomy-related programme from a foreign research university with a level similar to Dutch universities, you are eligible to apply under the condition that you have in-depth knowledge (comparable to undergraduate courses of the Leiden Astronomy curriculum) with:
• a theoretical and mathematical emphasis, including quantum physics, electrodynamics, statistical physics, and complex analysis.
• and with proficiency in programming, preferably in the Python language.

Astronomy and Cosmology: For this specialization, you must additionally have knowledge of “Physics of elementary particles” at undergraduate level.

Astronomy and Instrumentation: For this specialization, it is recommended to have knowledge of “Solid State Physics” at undergraduate level.

The Board of Admissions will assess whether your degree and background are sufficiently related to the BSc degrees in Astronomy (and, if applicable, whether you meet the additional requirement for certain specialisations).

If you have a bachelor’s degree that does not meet the requirements specified above, you may be eligible for an individual bridging programme tailored to your individual background. If you have successfully met the requirements of the imposed bridging programme, you will be admitted to the master’s programme.

For more information, please contact the Astronomy study advisor.

**Language requirements**

In order to successfully participate in this programme, you must be proficient in English. The following requirements apply*:

• IELTS: minimum 6.5, with a minimum of 6.0 for each of the components Listening, Reading, Writing and Speaking
• TOEFL: internet based 90
• Cambridge Certificate of Advanced English (CAE), minimum grade C

*Please note: You do not have to submit proof of proficiency if you have

• An International Baccalaureate diploma (or other with English A);
A diploma of secondary or higher education completed in the US, the United Kingdom, Ireland, New Zealand, Australia or Canada (with the exception of French-taught education in Canada);

A diploma of an English-taught university degree programme completed at a Dutch research university;

A pre-university education (vwo) diploma;

A high school (or higher) diploma determined by SEA (Admissions Office) in an EER country, where English has been studied up to and including the final year of the programme, and where the level of English can be considered comparable to Dutch vwo (pre-university education).

For detailed information about which English qualifications are accepted, as well as the relevant exemption criteria, refer to English language proficiency.

The education component of this master's programme is taught in Dutch. All applicants that have not achieved a Secondary Education qualification in the Netherlands, have to demonstrate their Dutch communication skills. The level of Dutch is assessed through an advanced Dutch language exam. For more information about the exam: Admission Exam TUL Advanced. For the speaking (fluency) part of the exam, at least a 7.5 must be achieved.

Mind: after completion of the Education specialisation you obtain a qualifications to be a teacher in the Netherlands.

>> Go to the next step: Check the application deadlines

Application deadlines

Application deadlines

• If you need a visa or residence permit, you must apply for admission before 1 April.
• If you do not need a visa or residence permit, you must apply for admission before **15 June**.

• If you need a visa or residence permit, you must apply for admission before **15 October**.

• If you do not need a visa or residence permit, you must apply for admission before **1 December**.

**Apply early!**

If you don’t have a Dutch diploma that grants direct admission, you’ll have to complete a two-part application procedure:

• First register your application(s) in the national system Studielink.
• A day later you will receive log-in details for Leiden University’s application system (uSis), where you can complete your application.

You must submit your application via Leiden University’s application system (uSis), before the deadlines mentioned above. So don’t delay; if you haven’t registered in Studielink and activated your uSis account in time to apply by the deadline, you’ll miss out!

**Other deadlines**

If you want to request accommodation via Leiden university Housing Office, apply early! Accommodation is allocated on a first-come first-served basis and there is limited availability, which means the Housing Office cannot guarantee accommodation. Submit both your application for admission and your housing request well before the deadlines. You don’t have to wait for a decision on your application before submitting your housing request. Read more about when to arrange housing.

If you want to apply for a scholarship, grant or loan, please bear in mind that different deadlines apply, and these deadlines can often be earlier. Deadlines vary per scholarship. Visit the scholarship website for more details.

>> Go to the next step: Collect the required documents
Required documents

When you apply for admission, you’ll be asked to submit several documents.

Note: If you have a Dutch diploma that grants direct admission, you will generally not be asked to submit additional documents.

Required application documents

You’ll need to submit the following documents:

Please upload a copy of the page(s) in your passport containing your personal details and photograph. If you are from the EU/EEA, you can submit a copy of your identity card instead. Please upload copies of both sides.

If you are a non-EU/EEA national already living in the Netherlands, upload copies of both sides of your Dutch residence permit.

Your CV (curriculum vitae) must be written in English and should contain your basic personal data, as well as a clear overview of your educational and professional history to date.

You can apply for admission before receiving the results of your English language test. However, a sufficient result will then be a condition of your eventual admission. Of course, if you already have your English language test results, you can upload them directly.

- Digital copies of diplomas and transcripts are initially required. Once you have been admitted, we will inform you how to submit certified copies.
- The documents must be in the original language. If they are not in English, Dutch, German or French, they must be accompanied by official translations into one of these languages.
- If you have not yet completed your current programme, state your expected graduation date and submit copies of all transcripts obtained to date.
**Additional documents for this programme:**

You should provide two letters of recommendation. At least one letter must be from an academic staff member.

- Letters of recommendation must be written on letterhead paper, signed and (for verification purposes) they must bear the full contact details of the applicable referee.
- Your referee should describe your skills, qualities and competencies.

**Option 1. Uploading the letter yourself**

You can upload the letter(s) of recommendation in the online application portal (uSis).

**Option 2. Sent by your referee**

Your referee can send the letter directly to the university, as follows:

1. Your referee must clearly state your name and application number in the letter.
2. He or she should send the letter to us, either:

   - digitally, by uploading the letter in our contact form
   - by posting it to:

   **Leiden University Admissions Office**
   “Gravensteen” Pieterskerkhof 6
   2311 SR Leiden, the Netherlands

3. Complete this form and upload it in the online application system (uSis), instead of your letter of recommendation.

>> Go to the next step: Step 4: Start your application

**Application procedure**
The application procedure is broken down into three parts.

**Part 1. Application in Studielink**

All students applying for a degree programme at Leiden University must start the application process in Studielink, the national online registration system for students wishing to follow a degree programme at a Dutch university. Studielink is open for applications from 1 October in the year preceding the academic year in which you wish to start.

1. Go to Studielink and enter your details according to the instructions provided.
2. Within two days you will receive:
   - an email with information on the next steps you'll need to take;
   - your university ULCN student account details (unless, of course, you already have a ULCN account)
   - the link to Leiden University’s online application portal (uSis)

After receiving your ULCN student account details, log into Leiden University’s online application portal (uSis), using the link provided. Here you can view the status of your application, which will be one of two possibilities.

1. **You can be directly admitted**
   If your (Dutch) diploma grants you direct admission, Leiden University's online application portal (uSis) will let you know. The portal provides an overview of what you have to do to complete your application, for example arranging housing, scholarships, applying for a visa/residence permit and insurances. Please follow the instructions carefully and proceed to step 3 Student registration.

2. **You cannot be directly admitted: additional action is required**
   If you do not have a (Dutch) diploma that grants you direct admission, we will require additional documents to allow us to decide about your application. The online application portal (uSis) will tell you this and explain how to do so. See also Part 2: Admission to Leiden University.

**Part 2. Admission to Leiden University**
If you cannot be directly admitted, you must apply for admission via Leiden University’s online application portal (uSis). Please follow all steps below.

In our online application portal (uSis) you can finalise your application by uploading the necessary documents and answering a few questions. This portal provides an overview of what you need to do to complete your admission application. Please follow the instructions carefully and make sure to include all the items that are asked for. We strongly recommend that you complete your application well in advance of the application deadline.

All applicants with an international degree must pay a non-refundable €100 application fee, which entitles you to apply for up to three programmes/specialisations in the same academic year. We cannot start processing your application until we receive this application fee, so please pay it as soon as possible. The online application system explains how you can pay it.

**Can I be exempted from paying the application fee?**

You do **not** have to pay the application fee if:

- You are following, or have completed, a bachelor’s degree at a Dutch university (of applied sciences).
- You have previously registered as an exchange, bachelor’s, master’s or pre-master’s student at Leiden University.
- You have previously been admitted to the same degree programme at Leiden University, but you decided to postpone your studies. This does **not** apply if you are applying for a different study programme or specialisation.
- You have refugee status in the Netherlands (with a residence permit for asylum).
- You are an Indonesian student applying for an MSc programme and have been given a “review letter” by the Leiden Science Indonesia Office (LESIO).

Exemptions cannot be granted for any other reasons.

After you have submitted your application, the online application portal (uSis) will, if applicable, ask you if you want to apply for student housing, a visa/residence permit or a scholarship. Be sure to make a careful note of the relevant deadlines for these options.
After receiving your application fee payment (if applicable), the Admissions Office will check whether all the necessary documents have been uploaded and they will inform you by email whether any further items are required. The Board of Admissions of the faculty will then:

- decide whether you meet the admission requirements for the programme;
- strive to issue a decision on your completed application within four to six weeks of the University receiving it.

Once a decision has been reached you will be informed by email. You can view your admission status in the online application portal (uSis).

There are three possible outcomes:

1. **You are admitted**
   You have met all conditions for admission.

2. **You are conditionally admitted**
   You will be admitted, provided that you meet certain conditions. These conditions will be specified in the online application portal (uSis).

3. **You are not admitted**
   The reason(s) for non-admission will be clearly stated in the online application portal (uSis).

If you are informed that you have been (conditionally) admitted, you will have to take a number of additional steps.

The Admissions Office will ask you if you want to accept the offer of (conditional) admission. Please respond via the online application portal (uSis), by going to ‘Application study programme(s)’ then accessing the ‘Confirm’ screen, where you will have three options:

1. Accept
2. Accept, but defer to a later start date
3. Decline
Part 3. Student registration

If you’ve been (conditionally) admitted, follow these steps to register as a student at Leiden University:

Check in the online application portal (uSis) whether you need to submit any documents to meet the conditions of your admission. Instructions on how to do so will be provided in uSis.

Arrange the payment of your tuition fee before the official start date of your programme. You will receive instructions and information on the available payment methods by email.

If you are an international student, go to the Prepare your stay page of our website for information about the practical matters you should take care of before and upon arrival. These include, for example, arranging housing, scholarships, applying for a visa/residence permit and insurances.

>> Go to the next step. Step 5: Pay your tuition fees

Pre-master’s

Are you interested in the master’s programme Astronomy and do you have minor deficiencies in your previous education which keep you from meeting the entry requirements? Then the Astronomy pre-master’s programme might be an option for you.

The Astronomy pre-master’s programme is designed especially for applicants holding a university or HBO degree (applied sciences) in a related field of science with proven experience in the field of astronomy, who lack specific knowledge or experience required for successful participation in the Astronomy master’s programme. These deficiencies usually include astronomy, math and/or physics courses, which can be included in a tailored Astronomy pre-master’s programme.
The pre-master’s a programme can only be imposed by the Board of Admissions, and is therefore not a programme for which students can apply themselves. Upon successful completion of the Astronomy pre-master’s programme within the deadline imposed by the Board of Admissions, students will be admitted to the Astronomy master’s programme.

For more information on courses, application procedures and costs, see the e-Prospectus

**Tuition fees**

Your tuition fee depends on a number of factors, such as your nationality and your previous Dutch higher-education qualifications.

The tuition fees for the academic year 2019-2020 are:

- Dutch, EU/EEA, Swiss and Surinamese students: €2,083 per year
- Non-EU/EEA students €18,300 per year
- Second Dutch master’s programme: €16,500 per year

**More information about tuition fees**

The tuition fee for this programme is €2,083 for the academic year 2019-2020 (statutory fee).

This tuition fee applies if this is your first master’s programme and you are a national of one of the following countries:

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The fee applies for both full-time and part-time study.

**The tuition fee for this programme is €18,300 for the academic year 2019-2020 (institutional tuition fee).**
If you are not a national of an EEA country, Suriname or Switzerland, generally speaking you will have to pay an institutional tuition fee. This fee applies for both full-time and part-time study.

However, if, on the basis of your Dutch residence permit, you are eligible for student finance from the Dutch education agency (DUO) you are entitled to pay the statutory tuition fee. Information on qualifying residence permits can be found in the DUO nationality chart.

*Please note! If you will be studying at Leiden University via a cooperation agreement, the fees quoted in the agreement will apply.*

Only applicable to EU/EEA, Swiss and Surinamese nationals.

**The tuition fee for this programme is €16,500 for the academic year 2019-2020 (institutional tuition fee).**

If you are following a second Dutch master’s programme you will generally have to pay an institutional tuition fee that is higher than the statutory tuition fee. Some exceptions apply.

Consult the tuition fee flowchart for second master’s programmes to find out how much tuition fee you will have to pay.

**Less than 45 EC**

If you are going to follow a pre-master's or conversion programme after completing a bachelor’s programme, and if the programme is less than 45 ECs, you will have to pay €34 per study credit (EC).

**45 EC or more**

For programmes of more than 45 ECs you will have to pay the statutory tuition fee. If the pre-master's or conversion programme is more than 60 ECs – and therefore longer than one
year - or if you are going to follow courses that are not part of your conversion programme, you will have to pay the institutional tuition fee for the programme in question (see second study programme). These fees apply to students of all nationalities.

**Scholarships, grants and loans**

Leiden University offers a wide range of scholarships for students from specific regions of the world, or for specific programmes. Leiden University also offers the Leiden University Excellence Scholarship (LExS), a programme specifically designed for non-EU/EEA students enrolling in a master’s programme. Find out more about scholarships, grants, loans, and deadlines.

If you are an EU/EEA or Swiss national and under 30, you may be eligible for a loan from the Dutch government to cover your tuition fees.

Leiden Observatory is pleased to offer various scholarships to excellent, non-Dutch master’s students. The scholarships are meant for students who have a bachelor’s degree in astronomy or physics, and wish to obtain their master’s (MSc) degree in Astronomy research or instrumentation at Leiden University. Successful candidates must be of outstanding academic merit and in need of financial support.

- Oort scholarship for excellent, non-Dutch students who wish to obtain their master’s degree in Astronomy research

- Walraven scholarship for excellent, non-Dutch students who wish to obtain their master’s degree in Astronomy and Instrumentation

>> Go to the next step. Step 6: Prepare for your studies at Leiden University

**Prepare for your studies**

You’ve been accepted! Leiden University looks forward to welcoming you as a new student. Your next step is to prepare for your studies. Below you
can find some tips to help you get a head start as you embark on your studies at Leiden University.

**For international students**

If you are an international student, a wealth of information can be found on the ‘Prepare your stay’ page of our website. This includes information about visas, housing, financial matters, what to arrange upon arrival, and much more.

**For Dutch students**

- The ‘student website’ page on Leiden University’s student website contains information about practical aspects, introduction weeks and student associations. It’s also a handy source of study-related information and advice.
- For detailed information about courses, schedules and reading materials, check out the Prospectus.

Sign up for an introduction programme! It’s the best way to get acquainted with student life and the student cities of Leiden and The Hague.

Your student card is your proof of registration as a student of Leiden University. It will be sent to you at your Dutch address as soon as you have registered as a student and paid your tuition fee. Alternatively, you can collect it from the Student Affairs Front Office. Read more about your student card [here](#).

As soon as you start studying at Leiden University you should apply for a Leiden University ID card, or LU-Card. It also serves as your library card, print & copy card and access pass. Read more about applying for an LU-card [here](#).

**Student life**

Your time at Leiden is about more than just studying. Some of your best experiences will stem from being a part of our lively and diverse student community, as well as from life in the beautiful city of Leiden.
**Life in Leiden**

Quaint, picturesque and the perfect size, Leiden is an idyllic place to spend your university days. You will soon become familiar with the dozens of cafes, shops and bars that line the leafy canals, as well as its year-round line-up of cultural events. For visits further afield, the major cities of The Hague and Amsterdam are a short train ride away, along with Schiphol Airport, which is just half an hour away by train.

Within the university’s student community, our study and student associations organise a huge variety of social, cultural, and study events to keep you busy all year round. You can also join the University Sports Centre, which offers scheduled group sports and fitness classes amongst other activities.

**Welcome and orientation programme**

In August and February each year, Leiden University hosts the English-language Orientation Week Leiden (OWL), which welcomes both international and Dutch students. The OWL is an excellent way to get to know Leiden University, the city and to meet other students.

**Follow Christine around the city and see what it is like to live in Leiden**

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Accept

**De Leidsche Flesch**

Leidsch Astronomisch Dispuut F. Kaiser is the Astronomy study association. It is part of De Leidsche Flesch, the study association for students of the Physics, Astronomy, Mathematics and Computer Science programmes. Kaiser fosters the integration between Astronomy students and other members of the Leiden Observatory community by organising social activities and events, including guided tours and public events at the Leiden historical observatory Oude Sterrewacht. Study association De Leidsche Flesch arranges the book sale for the Astronomy programme, through which members can easily order their books with a discount.

**Science Buddy Programme**
The Science master’s Buddy Programme has been set up by the Faculty of Science to help all international students who are new to the university to integrate quickly and easily into university life. Through the programme you will learn everything you need to know about the university, the student community, and the practical side of life in Leiden. Your buddy is your first connection in the Netherlands and he or she can help you to find your way around. A few weeks before the start of your studies, you will get an invitation for the programme. After signing up, you will be matched to a student preferably from your own study programme.

**Information activities**

Are you thinking about studying at Leiden University? Come and visit our Master’s Open Day.

**About our Master’s Open Day**

Are you exploring your options for a master’s programme? You can learn a lot by coming to our Master’s Open Days. This event is your opportunity to learn everything you need to know about our master’s programmes and how they can help you reach your goals. Attend presentations by the different programmes, visit the information fairs, and ask lecturers, students, alumni and study advisers all your questions. And you’ll get to know the best student city right in the heart of Europe in the Netherlands.

Read more about the Master’s Open Days

**Impressions Master’s Open Day**

**Contact**

Do you have questions about the Astronomy master’s programme? Please contact us.
Contact the programme

For more information and questions about entry requirements, admissions procedures, tuition fees and scholarships, please contact the Education Office Astronomy.

Astronomy programme coordinator
Arianne Pen MSc
Head of Education Office Astronomy
E-mail: masters@strw.leidenuniv.nl
Phone: +31 (0)71 527 5839

Contact Astronomy alumni

Would you like to talk to someone who knows the Astronomy master’s programme? Who knows how to get around in Leiden and can tell you more about entering the job market after graduation? Then contact one of our Astronomy Ambassadors and feel free to ask anything about their experiences studying at Leiden University.

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<thead>
<tr>
<th>Name</th>
<th>Institute</th>
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<tbody>
<tr>
<td>Isa Oliviera</td>
<td>Optimum Soluções, São Paulo, Brazil</td>
</tr>
<tr>
<td>Roderik Overzier</td>
<td>National Observatory in Rio de Janeiro, Brazil</td>
</tr>
<tr>
<td>Demerese Salter</td>
<td>Pontificia Catolica Universidad de Chile</td>
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<tr>
<td>Thijs Kouwenhoven</td>
<td>Xi’an Jiaotong-Liverpool University, China</td>
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<tr>
<td>AnneMarie Weijmans</td>
<td>School of Physics and Astronomy, University of St. Andrews, UK</td>
</tr>
<tr>
<td>Wouter Vlemmings</td>
<td>Chalmers University of Technology, Sweden</td>
</tr>
<tr>
<td>Frank van den Bosch</td>
<td>Yale University, US</td>
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**Do you have questions about studying at Leiden University?**

Do you want to know more about one or more programmes or about our information activities? The StudyLine is a source of information for students and is staffed by students. You can contact them by mail or by phone on +31 (0)71 527 11 11 on working days between 9.00 am and 17.00 pm.

**Do you have questions on your admission and application?**

For questions about your admission and application, you can contact the Student Information Centre. You can contact them by telephone on +31 (0)71 527 80 11 (daily between 11:00 am and 16:00 pm) or ask your question in the online contact form.