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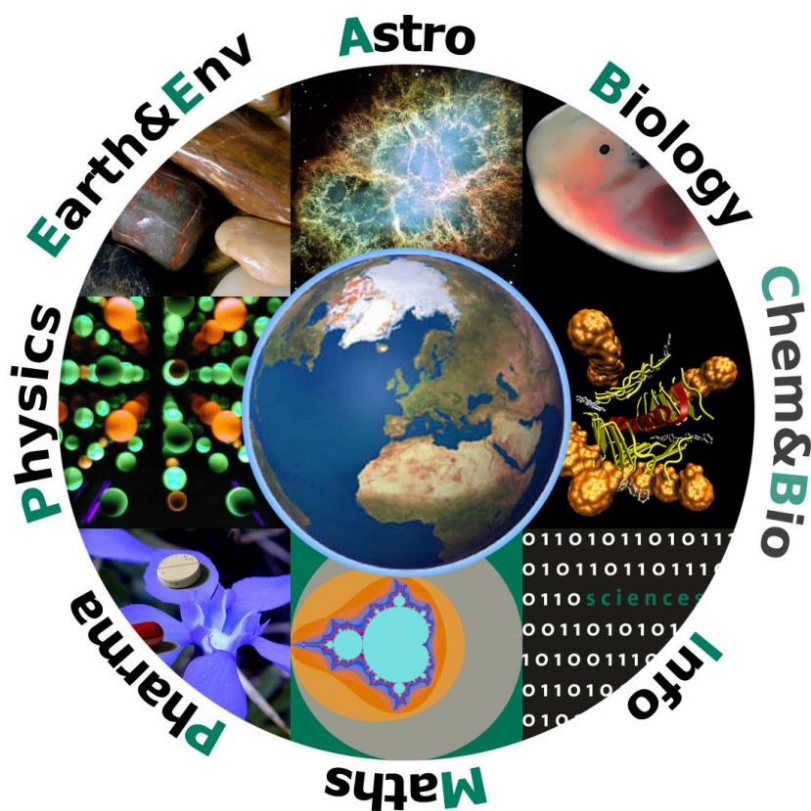


UNIVERSITÉ  
DE GENÈVE  
FACULTY OF SCIENCE

# Studying Astrophysics

2022-2023

Sciences



## IMPORTANT DATES

### **AUTUMN SEMESTER 2022 – 2023**

<i>Astro student welcome</i>	<i>Tuesday 20 September 2022</i>
<i>Start of the courses</i>	<i>Tuesday 20 September 2022</i>
<i>Course registration</i>	<i>Tuesday 18 Oct → Monday 24 Oct 2022</i>
<i>Exam registration</i>	<i>Tuesday 1 Nov → Monday 7 Nov 2022</i>
<i>End of exam cancellation</i>	<i>Thursday 8 December 2022</i>
<i>End of the courses</i>	<i>Friday 23 December 2022</i>
<i>Exam period start</i>	<i>Monday 23 January 2023</i>
<i>Exam period end</i>	<i>Friday 10 February 2023</i>

### **SPRING SEMESTER 2023**

<i>Start of the courses</i>	<i>Monday 20 February 2023</i>
<i>Course registration</i>	<i>Tuesday March 7 → Monday 13 March 2023</i>
<i>Exam registration</i>	<i>Tuesday 21 March → Monday 27 March 2023</i>
<i>End of exam cancellation</i>	<i>Thursday 11 May 2023</i>
<i>End of the courses</i>	<i>Friday 2 June 2023</i>
<i>Exam period start</i>	<i>Monday 12 June 2023</i>
<i>Exam period end</i>	<i>Friday 30 June 2023</i>
<i>Exam registration</i>	<i>Tuesday 18 July → Monday 24 July 2023</i>
<i>End of exam cancellation</i>	<i>Thursday 17 August 2023</i>
<i>Exam period start</i>	<i>Monday 28 August 2023</i>
<i>Exam period end</i>	<i>Friday 8 September 2023</i>

### **HOLIDAYS**

<i>Easter vacation</i>	<i>Friday 7 → Sunday 16 April 2023</i>
<i>Labor Day</i>	<i>Monday 1 May 2023</i>
<i>Ascension Day</i>	<i>Thursday 18 May 2023</i>
<i>Whit Monday</i>	<i>Monday 29 May 2023</i>
<i>« Jeûne Genevois »</i>	<i>Thursday 7 September 2023</i>

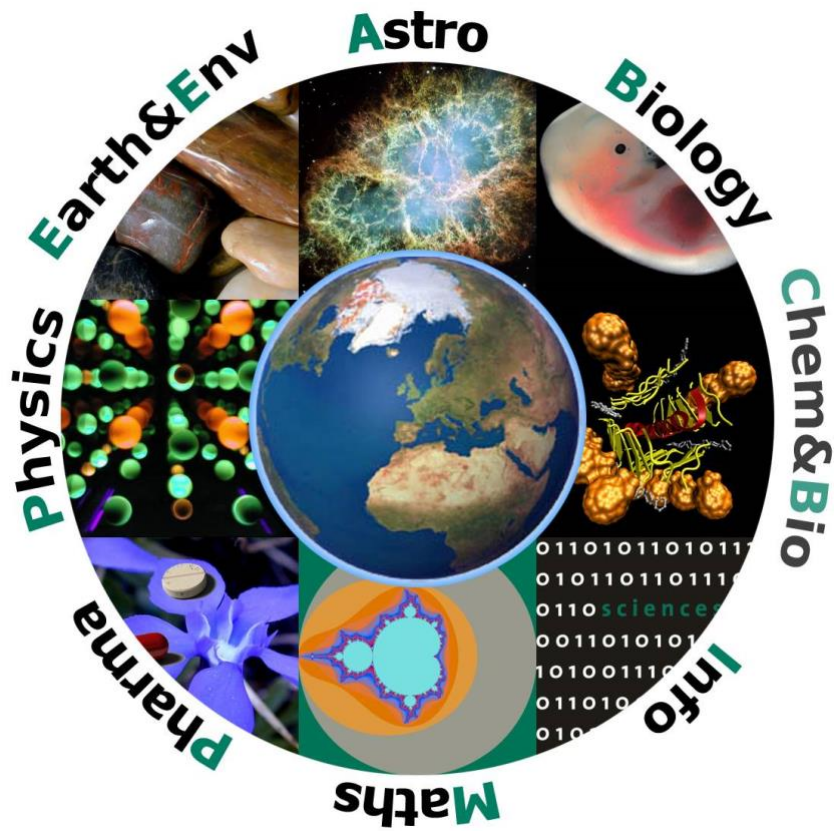
### **AUTUMN SEMESTER 2023 – 2024** *Monday 12 September 2023*

See here:

<https://www.unige.ch/sciences/fr/informationspratiques/dates/>

<https://www.unige.ch/sciences/en/informationspratiques/dates/>

# General Information



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**UNIVERSITÉ  
DE GENÈVE**

**FACULTY OF SCIENCE**

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- Faculty and University Services

### Studying Astrophysics

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## PREAMBLE

The Faculty of Science of the University of Geneva is known worldwide for its research work. The Nobel Prize in Physics in 2019 for the discovery of the first planet outside the solar system, a second Fields Medal, considered the equivalent of the Nobel Prize in mathematics, the achievements in quantum teleportation, and studies of the genetics of embryonic development are just a few examples of intense activity in a wide range of fields: astronomy, biology, chemistry, computer science, mathematics, physics, pharmaceutical sciences, and Earth and environmental sciences. Another important mission of the Faculty of Science is teaching and training. These missions are strongly linked, with teachers expected to be at the forefront of research at the university level.

This document consists of two parts: a first "Faculty" part, containing information on the organization of the University and the Faculty of Science, as well as useful addresses and various practical information on exam sessions, inter-university exchanges, sports and health, and plagiarism. The second part is the student guide, which gives practical information (schedules, course information, etc.) specific to your sector. A reminder of the important dates as well as the site plan of the main buildings is included on the inside pages of the cover. It is our hope that students will quickly feel at home in this Faculty, which delivers the broadest diversity of teaching and titles of the University.

Each branch (Biology, Chemistry, Biochemistry, Computer Sciences/informatics, Mathematics, Physics, Earth and Environmental Sciences, and Pharmaceutical Sciences) is under the responsibility of a subdivision called Section. In addition, Earth and Environmental Sciences, and Astronomy are organized in Departments.

As a student, you are primarily interested in your training. Nevertheless, we encourage you to participate equally in the life of the institution, whether it is to elect members representing you at the various councils or to be part of it. It should be noted that there are councils at all levels, bringing together faculty representatives, teaching and research associates, students, and administrative and technical staff:

- University Assembly
- Participatory Council of the Faculty
- Section/Department Council

You are also encouraged to join the student association of your sector.

Finally, I would like to wish the students success in their studies, which they will undoubtedly find demanding but exciting, as sciences are. In case of difficulties, faculty members, counsellors, and administrative services are also at your disposal.

The Dean

## THE FACULTY OF SCIENCE PRESENTS ITSELF

The University of Geneva is one of thirteen European universities, and the only Swiss university, founding member of the European League of Research Universities. Recently, the University entered the very closed club of the hundred best academic institutions in the world according to the Shanghai ranking. With the University and the ETH of Zurich, the researchers of the University of Geneva also lead in securing competitive research grants from the National Science Foundation. In addition, the University of Geneva offers the opportunity to become science teachers (one of only two Swiss universities with a teaching and research team at the faculty level). Finally, our University is the most international, both in the diversity of its students and teachers.

The Faculty of Science is one of the spearheads of this success. It includes more than 2930 students (47% of whom are female), 178 professors, 1068 teaching and research staff (teaching assistants research masters, lecturers, assistant professors, full professors etc.) and some 510 administrative and technical staff. The Faculty comprises eight subdivisions corresponding to the fields of research and teaching: six Sections and two Departments directly attached to the Faculty. An attached Section or Department often also has its own academic advisor.

The Faculty of Science awards *bachelor*, *master*, and *doctorate* (PhD) degrees in the European Higher Education Area and Bologna Process. This process harmonizes the titles and corresponding study durations. It also introduces a system of transferable credits (ECTS) that allows a European university to recognize full or partial studies at another European university. The training offer of the Faculty of Science is extensive, both in terms of basic and advanced training. The teaching is divided into more than 400 courses, practical work and seminars. Students have access to more than 50 different titles (bachelor, master, bi-disciplinary master's, doctorate, as well as complementary certificates and masters of advanced studies (MAS), including a master's degree in secondary education).

At the Faculty of Science, research occupies a very important place. Approximately 600 students prepare a doctoral thesis, and more than 120 doctoral titles being delivered annually. This research results in more than 1000 scientific publications per year. Regarding teaching and research, the Faculty of Science maintains collaborations with numerous regional, national and international institutions. The Faculty of Science has also developed links with organizations such as CERN, WHO, the European Life Sciences Organisation, and the European Space Agency.

Finally, the annual budget of the Faculty of Science is about 150 million francs. The value of scientific equipment is around 135 million. We should also mention the importance of funds from sources other than the Canton of Geneva, such as the Swiss National Science Foundation, European funds or industry. These resources now make up more than 50 million francs, or 33% of the budget of the Faculty of Science.

## ADDRESSES

### FACULTY OF SCIENCE

30, quai Ernest-Ansermet, 1211 Genève 4  
T 022 379 66 52 – F 022 379 66 98

### DEAN'S OFFICE AND ADMINISTRATION

#### Dean

Prof. Jérôme LACOUR, Sciences II, bureau 4-506  
T 022 379 66 51 et 379 66 52 – F 022 379 66 98

#### Vice-deans

Professor Costanza BONADONNA Maraîchers A, 107b T 022 379 30 55	Professor Jonas LATT Secrétariat des étudiants T 022 379 66 62	Professor Christoph RENNER Ecole de physique, 010C T 022 379 35 44	Professor Jean-Luc WOLFENDER CMU, B06.1716.a T 022 379 33 85
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#### Administrator

M. Bernard SCHALLER, Sciences III, bureau 4-504  
T 022 379 32 30

### SECTION PRESIDENTS AND DEPARTMENT DIRECTORS

<b>Biology Section:</b>	Prof. Michel MILINKOVITCH Quai Ernest-Ansermet 30, 1211 Genève 4 T 022 379 33 38
<b>Chemistry and biochemistry Section:</b>	Prof Nicolas WINSSINGER Quai Ernest-Ansermet 30, 1211 Genève 4 T 022 379 65 52
<b>Mathematics Section:</b>	Prof. Andras SZENES Rue du Lièvre 2-4, 1227 Acacias T 022 379 00 95
<b>Physics Section:</b>	Prof. Giuseppe IACOBUCCI Quai Ernest-Ansermet 24, 1211 Genève 4 T 022 379 62 45
<b>Pharmaceutical sciences Section:</b>	Prof. Gerrit BORCHARD Rue Michel-Servet 1, 1211 Genève 4 T 022 379 68 08
<b>Earth and environmental sciences Section:</b>	Prof. Vera SLAVEYKOVA Rue des Maraîchers 13 bis, 1211 Genève 4 T 022 379 03 35
<b>Department of Astronomy:</b>	Prof. Francesco PEPE Chemin des Maillettes 51, 1290 Versoix T 022 379 23 96
<b>Department of Informatics:</b>	Prof. Bastien CHOPARD Route de Drize 7, 1227 Carouge T 022 379 0219

## QUESTIONS?

### Student Secretariat

The student secretariat is located on the ground floor of building Sciences III, office 0003. It is open every morning from 9.30 am to 12 noon and on Tuesdays and Thursdays from 2 pm to 4 pm. The secretariat manages student files, receives examinations, sets examination schedules, submits diploma request and change of address forms, issues test reports after examination sessions.

T 022 379 66 61/62/63 - F 022 379 67 16 - Secretariat-Etudents-sciences@unige.ch  
<https://www.unige.ch/sciences/en/espaceetudiant/secretariatetudiants/>

### Faculty Advisor

Dr. Xavier CHILLIER is available all year by appointment (registration on his door) in the 0001 office on the ground floor of the building Sciences III. In addition, during class periods, a permanence (without appointment) is set up on Monday between 17-18h and Tuesday from 10-12h.

The student counsellors are open to all students. They propose a personalized orientation on the paths of training offered by the Faculty of Science, present the study plans and the subjects, discuss a possible reorientation. In case of any difficulty in the studies (school, material, health, language, comprehension or other), it is advisable to inform without delay the student advisor/counsellor.

T 022 379 67 15 [Conseiller-etudes-sciences@unige.ch](mailto:Conseiller-etudes-sciences@unige.ch)

For more details the student can contact the academic adviser/counsellor of the corresponding section.

### STUDENT COUNSELLORS OF THE SECTIONS/DEPARTMENTS

<b>Biology Section:</b>	Dr. Audrey BELLIER T 022 379 66 65 – <a href="mailto:conseil-etu-biolo@unige.ch">conseil-etu-biolo@unige.ch</a>
<b>Chemistry and biochemistry Section:</b>	Dr. Didier PERRET T 022 379 31 87 – <a href="mailto:Didier.Perrret@unige.ch">Didier.Perrret@unige.ch</a>
<b>Mathematics Section:</b>	Dr. David CIMASONI T 022 379 11 39 – <a href="mailto:conseil-etu-math@unige.ch">conseil-etu-math@unige.ch</a>
<b>Physics Section:</b>	Prof. Martin KUNZ ( <i>bachelor</i> ) T 022 379 63 50 – <a href="mailto:conseiller-etudes-bachelor-physique@unige.ch">conseiller-etudes-bachelor-physique@unige.ch</a> Prof. Patrycja Paruch ( <i>master</i> ) T 022 379 35 46 – <a href="mailto:conseiller-etudes-master-physique@unige.ch">conseiller-etudes-master-physique@unige.ch</a>
<b>Earth and environmental sciences Section:</b>	Prof. Robert MORITZ T 022 379 66 33 – <a href="mailto:Robert.Moritz@unige.ch">Robert.Moritz@unige.ch</a>



**Pharmaceutical sciences  
Section:**

Dr. Elisabeth RIVARA-MINTEN  
T 022 379 65 82 ou 379 36 55 – [conseil-etu-pharm@unige.ch](mailto:conseil-etu-pharm@unige.ch)

**Department of Astronomy:**

Prof. Daniel SCHAEERER  
T 022 379 24 54 – [Daniel.Schaerer@unige.ch](mailto:Daniel.Schaerer@unige.ch)

**Department of Informatics:**

Prof. Stéphane MARCHAND-MAILLET  
T 022 379 01 54 – [conseil-etu-info@unige.ch](mailto:conseil-etu-info@unige.ch)

## COUNSELLOR OF THE ARMY-UNIVERSITY LIAISON OFFICE

**For the entire Faculty:** Prof Sébastien CASTELLTORT  
Department of Earth Sciences  
13, rue des Maraîchers, 1205 Genève  
*Contact only by e-mail :* [Sebastien.Castelltort@unige.ch](mailto:Sebastien.Castelltort@unige.ch)

### OBJECTIVES

The mission of this office is to assist Swiss nationals in reconciling their studies and military duties, should difficulties arise. More information can be obtained here  
<https://www.unige.ch/sciences/fr/espaceetudiant/liaisonarmeeuni/> .

## MANAGE YOUR STUDIES AND EXAMS

### Registration at the University of Geneva

Office 222, located at Uni Dufour, deals with all matters concerning registration, semester registration and exmatriculation. It provides Faculty change formulas, addresses of foreign universities as well as information for auditors.

<https://www.unige.ch/admissions/en>

### Academic calendar

The academic year consists of two semesters of 14 weeks each, beginning at Monday, September 20, 2021 (Autumn Semester) and Monday, February 21, 2022 (Spring Semester) respectively. Exam periods are 24 January to 11 February 2022, and 13 June to 1 July 2021.

<https://www.unige.ch/sciences/en/informationspratiques/horaires/calendrieracademique/>

### Duration of studies

The duration of the studies is 6 semesters (180 ECTS credits) for the bachelor degree, 3 or 4 semesters (90 or 120 ECTS credits) for a master, 2 to 4 semesters for the MAS and 6 to 10 semesters for a doctorate.

### Regulations and study plans

This document is valid for study plans, deadlines, exams, organisation of studies, from the first semester of studies until the title is obtained. It consists of a general regulation applicable to all students of the Faculty and regulations and study plans valid for each title awarded. It can be consulted on the Faculty's website at

<https://www.unige.ch/sciences/en/enseignements/formations/>

### Schedule of classes and practical work

The schedules are distributed by the secretariats of the Sections, and the Departments of Informatics and Astronomy, as of September.

### Courses

Students must register for courses on the UniGE portail <https://portail.unige.ch/> on specific dates, indicated on the UNIGE website and at the beginning of this guide, in principle:

- in October for autumn and annual courses
- in March for spring classes.

Course registrations determine exam enrolment. Each student must ensure that she/he is correctly registered, no late registration being taken into account. Students taking courses in other faculties must check with the student secretariats concerned as dates and procedures vary from faculty to faculty.

In case of any problems, the student must send an email to the Student Secretariat during the same period - [Secretariat-Etudiants-sciences@unige.ch](mailto:Secretariat-Etudiants-sciences@unige.ch).

## **Exams Sessions**

The exams are divided into three sessions during the year: January / February, June and August / September. Sessions last two or three weeks.

### **Registration**

Students must register for the exams on the portal.unige.ch (<https://portail.unige.ch/>) on the dates indicated at the beginning of this guide. For students, whose course does not allow online registration, exam registration is taken at the Student Secretariat on the same dates. Each student must ensure that he/she is correctly registered, as no late entries are taken into account. Students taking courses in other faculties must check with the student secretariats concerned as dates and procedures vary from faculty to faculty.

In case of any problems, the student must send an email to the Student Secretariat during the same period - [Secretariat-Etudiants-sciences@unige.ch](mailto:Secretariat-Etudiants-sciences@unige.ch).

### **Academic record of examinations**

The Student Secretariat keeps track of each student. The academic record includes, in particular, minutes of examinations, the grades and result of each examination. The original is given to the student and is completed after each session. A final report, signed by the dean, is given to the student upon completion of the title.

### **Application for a change of diploma**

Students wishing to change degrees must complete the Graduation Form, available on the Student Secretariat web pages, at the beginning of the autumn semester.

<https://www.unige.ch/sciences/en/espaceetudiant/secretariatetudiants/>

### **Leave request**

The Dean may grant a leave to students who requests it. With exception, the total duration of the leave cannot exceed 3 semesters for a bachelor and 2 semesters for a master. The leave request form, available on the web pages of the Student Secretariat, must reach the dean at least 1 month before the beginning of the semester.

<https://www.unige.ch/sciences/en/espaceetudiant/secretariatetudiants/>

### **Opposition and appeal procedures**

In case of opposition to a decision or appeal following an opposition-decision taken by the university bodies, refer to the internal rules on opposition and appeal procedures (RIO). This regulation can be consulted on the website [www.unige.ch/rectorat/static/RIO-UNIGE.pdf](http://www.unige.ch/rectorat/static/RIO-UNIGE.pdf)

## PLAGIARISM

While the Faculty of Science's mission is to excel in the fields of research and teaching, it attaches particular importance to the means used to achieve this goal. The Faculty obviously subscribes to the Geneva University Charter of Ethics and Professional Conduct (<https://www.unige.ch/ethique/charter/>), whose four main points are the search for truth, the freedom of teaching and research, responsibility to the academic community, society and environment, and respect for the person. It does not tolerate unethical behaviour.

Thus, we remind you that fraud, plagiarism or even the attempt of fraud or plagiarism are sanctioned by a 0.00 at the evaluation concerned. In addition to the academic sanctions, disciplinary sanctions up to the final exclusion of the University of Geneva can be pronounced. In addition, and in the most serious cases, the Faculty may file a criminal complaint. Conscious that the emergence of the Internet and the development of new computer tools facilitate fraud and plagiarism, either deliberately or by ignorance of certain rules, we strongly encourage you to visit <https://www.unige.ch/universite/politique-generale/plagiat/> as well as the "Plagiarism" module on the InfoTrack self-training website (<https://infotrack.unige.ch/en>).

## NEED SOME HELP?

### Social Security benefits

The social service of the Social Health Centre helps you to manage social problems, understand them and act effectively to solve them. Social workers are trained in social issues that students may encounter.

T 022 379 77 79 - [www.unige.ch/dife/sante-social/](http://www.unige.ch/dife/sante-social/)

Address: rue de Candolle 4, 1211 Geneva 4

### Student Associations of the Faculty

There is an association of students for most Sections; do not hesitate to be part of it!

<https://www.unige.ch/asso-etud/aesc/>

For physics, for example see <https://www.unige.ch/asso-etud/aep/physique.php>

### Student Union

The University Conference of Student Associations (CUAE) aims to defend the interests of the students of the University.

T 022 379 87 97 - [cuae@unige.ch](mailto:cuae@unige.ch) - [www.cuae.ch](http://www.cuae.ch)

Address: Uni-Mail, 102 bd Carl-Vogt, 1211 Geneva 4

### Housing Office

T 022 379 77 20 - <https://www.unige.ch/batiment/service-batiments/logements/en/>

Address: rue des Battoirs 7, 1211 Geneva 4 - Schedule: Monday to Friday 9h-13h

### For moderate income

#### Financial aid - Scholarships

The social service of the Social Health Centre helps you to manage your financial problems, understand them and act effectively to solve them. Social workers are trained in the financial issues that students may encounter.

[www.unige.ch/dife/social-finances/aides-financieres](http://www.unige.ch/dife/social-finances/aides-financieres)

# MENTAL AND PHYSICAL HEALTH

## Mental health

### Cultural activities

Cine-club / dance / images / words / music / encounters / theater - [www.unige.ch/dife/culture/](http://www.unige.ch/dife/culture/)

### University Press

Campus Magazine / The UNIGE newsletter - [www.unige.ch/communication](http://www.unige.ch/communication)

### Science Libraries

<https://www.unige.ch/biblio/en/infos/locations/sciences/>

### Collectif La Datcha

La Datcha is the student hall of the University of Geneva. It is self-managed. A place to meet, relax or party

[datcha@unige.ch](mailto:datcha@unige.ch) - <https://www.unige.ch/asso-etud/datcha/>

### Psychological benefits

The psychologists of the “Pôle Santé Social” will provide you with listening and support in complete confidentiality. They will evaluate, with you, your situation. They will be able to offer you immediate solutions or direct you to the most appropriate services or treatments in Geneva to answer your problem.

T 022 379 77 79 - [psychological@unige.ch](mailto:psychological@unige.ch)

[www.unige.ch/dife/sante-social/psychologique/](http://www.unige.ch/dife/sante-social/psychologique/)

Address: rue de Candolle 4, 1204 Geneva 4; 3rd floor

### To reach your goal

#### Coaching service

Coaching service for pre-doc students from the Faculty of Science (French / English).

T 022 379 66 51 - [coach-sciences@unige.ch](mailto:coach-sciences@unige.ch) - [www.unige.ch/sciences/coaching](http://www.unige.ch/sciences/coaching)

Address: quai Ernest-Ansermet 30, 1211 Geneva 4



## **Physical health**

### **Sports Office**

More than 60 individual or team sports activities; tournaments and competitions

T 022 379 77 22 - E 022 379 11 09 - [sports@unige.ch](mailto:sports@unige.ch) - [www.unige.ch/dife/sports](http://www.unige.ch/dife/sports)

Address: rue de Candolle 4, 1205 Geneva, 4th floor

Schedule: Monday to Friday, 10 am to 1 pm and 2 pm to 4 pm

### **University restaurants**

Menus from CHF 8.90 to 10.00 on presentation of the student card

<https://www.unige.ch/batiment/campus-durable/alimentation/restaurants>

### **Health benefits**

The Pôle Santé Social offers confidential and free professional health services for all students.

T 022 379 77 79 - [www.unige.ch/dife/sante-social/sante/](http://www.unige.ch/dife/sante-social/sante/)

Address: rue de Candolle 4, 1204 Geneva 4, 3rd floor



## AND AFTER THAT?

### **For a serene professional future**

#### **Career Center**

T 022 379 77 02 - [carriere@unige.ch](mailto:carriere@unige.ch) - [www.unige.ch/dife/carriere/](http://www.unige.ch/dife/carriere/)

Address: rue de Candolle 4, 1211 Geneva 4, 2nd floor

#### **myScience Career Days**

[carriere@unige.ch](mailto:carriere@unige.ch) – [www.unige.ch/dife/carriere/forums/](http://www.unige.ch/dife/carriere/forums/)

### **To create a network**

#### **Alumni**

"Alumni UNIGE" is the Graduate Association of the University of Geneva.

[alumni@unige.ch](mailto:alumni@unige.ch) - <https://alumniunige.ch/>

## STRUCTURE OF THE TEACHING STAFF

### PROFESSORS

**Professeur ordinaire (PO)**

teaching + research+ direction

**Professeur associé (PAS)**

teaching + research+ management

**Professeur titulaire (PT)**

teaching + research  
main activity outside the University

**Professeur titulaire "ancienne loi" (PTI)**

teaching + research

**Professeur assistant (PAST)**

teaching + research

**Professeur invité (PI)**

teaching + research  
maximum stay one year

### RESEARCH AND TEACHING COLLABORATORS

**Maître d'enseignement et de recherche (MER)**

teaching + research

**Chargé de cours (CC)**

engaged for particular teaching  
part time

**Privat-docent (PD)**

teaching, unpaid  
part time

**Chargé d'enseignement (CE)**

teaching + research in some cases

**Conseiller aux études (CET)**

student counseling

**Collaborateur scientifique (COLS) I et II**

research

**Maître-assistant (MA)**

teaching + research  
PhD with experience in research

**Post-doctorant (PDOC)**

assisting students + research  
PhD

**Assistant (AS) A1 et A2**

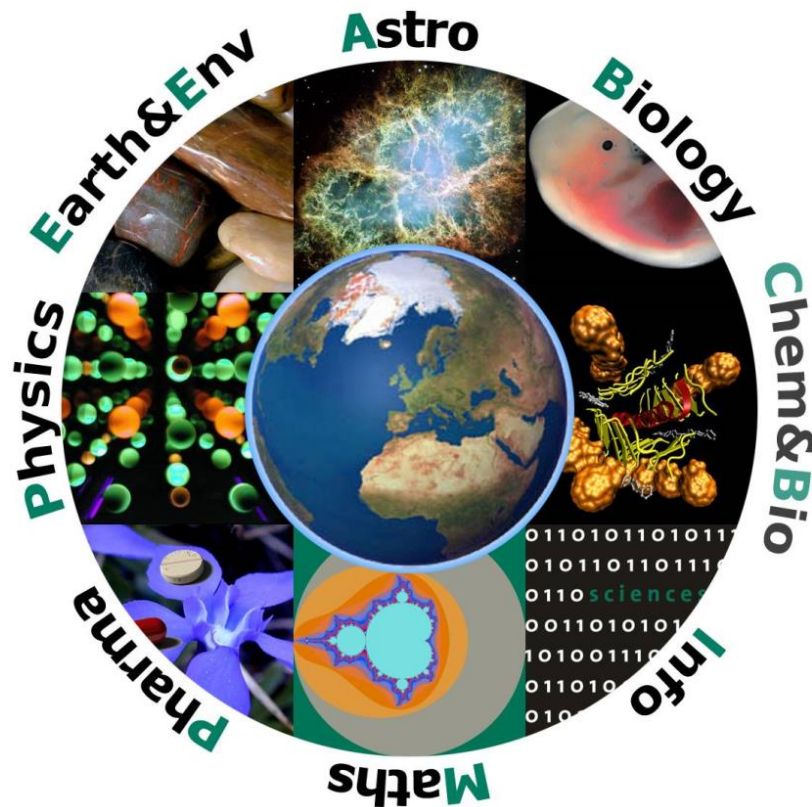
assisting students + research  
Ongoing PhD study

**Auxiliaire de recherche et d'enseignement (ARE)**

part time assistant  
student in training

N.B. the official titles are listed in French and intentionally not translated

# Studying Astrophysics



**UNIVERSITÉ  
DE GENÈVE**

**FACULTY OF SCIENCE**  
Department of Astronomy

## Department of Astronomy

**The Department of Astronomy of the University of Geneva  
is located on two sites in and outside Versoix**



**The main site is the Geneva Observatory at Sauverny/Versoix, which also hosts the Laboratory of Astrophysics of the EPFL**

**The second site is located at Ecogia/Versoix, hosting the ISDC (Integral Science Data Centre), and a large activity related to space missions and ground-based projects.**



The Astronomy Department of the Geneva University is located on two sites of the Versoix town. The main site is the Geneva Observatory at Sauverny/Versoix, which also hosts the EPFL Laboratory of Astrophysics. The second site is located at Ecogia/Versoix, hosting the ISDC (Integral Science Data Center) and a large activity related to space missions and ground-segment projects (Euclid, Gaia, CTA, etc).

About 170 persons are employed on the two sites of Sauverny and Ecogia, including scientists, post-doctoral researchers, PhD candidates, technical staff (computer and electronics specialists, mechanics, etc.), and administrative staff.

The Department of Astronomy manages a permanent astronomical observation station: a 1.2m telescope on the site of La Silla (ESO, Chile). Astronomers also actively participate to large consortia of other telescopes: at St-Michel (Observatory of Haute Provence, OHP, France), La Palma (Canary Islands, Spain), etc. Our astronomers also benefit access to exceptional instruments made available, as part of the Swiss participation in the ESO European Southern Observatory. TelesTo, a new telescope for Science, Teaching and Outreach, was inaugurated in November 2018. It is located in the AstroDome on the Sauverny site.



ESO site, La Silla, Chile



Observatory Haute-Provence, France



La Palma Canary Islands, Spain

## Research Groups and Projects Overview

Research in the Department of Astronomy includes four main themes: Exoplanetary systems, Stars formation & evolution, Galaxies & Universe, Extreme Universe. It is based on, and combines, different approaches, including observations covering the entire electromagnetic spectrum (using ground-based and space-borne telescopes), theoretical work, simulations, modelling, data analysis, and instrumentation.

The Department is involved in many national and international projects for the construction and exploitation of new instruments and satellites, for data analysis, observational surveys, and wide diversity of other international collaborations.

On the Department webpages an overview of the main activities of the research groups and projects is available :

<https://www.unige.ch/sciences/astro/en/research/>

<https://www.unige.ch/sciences/astro/en/projects>

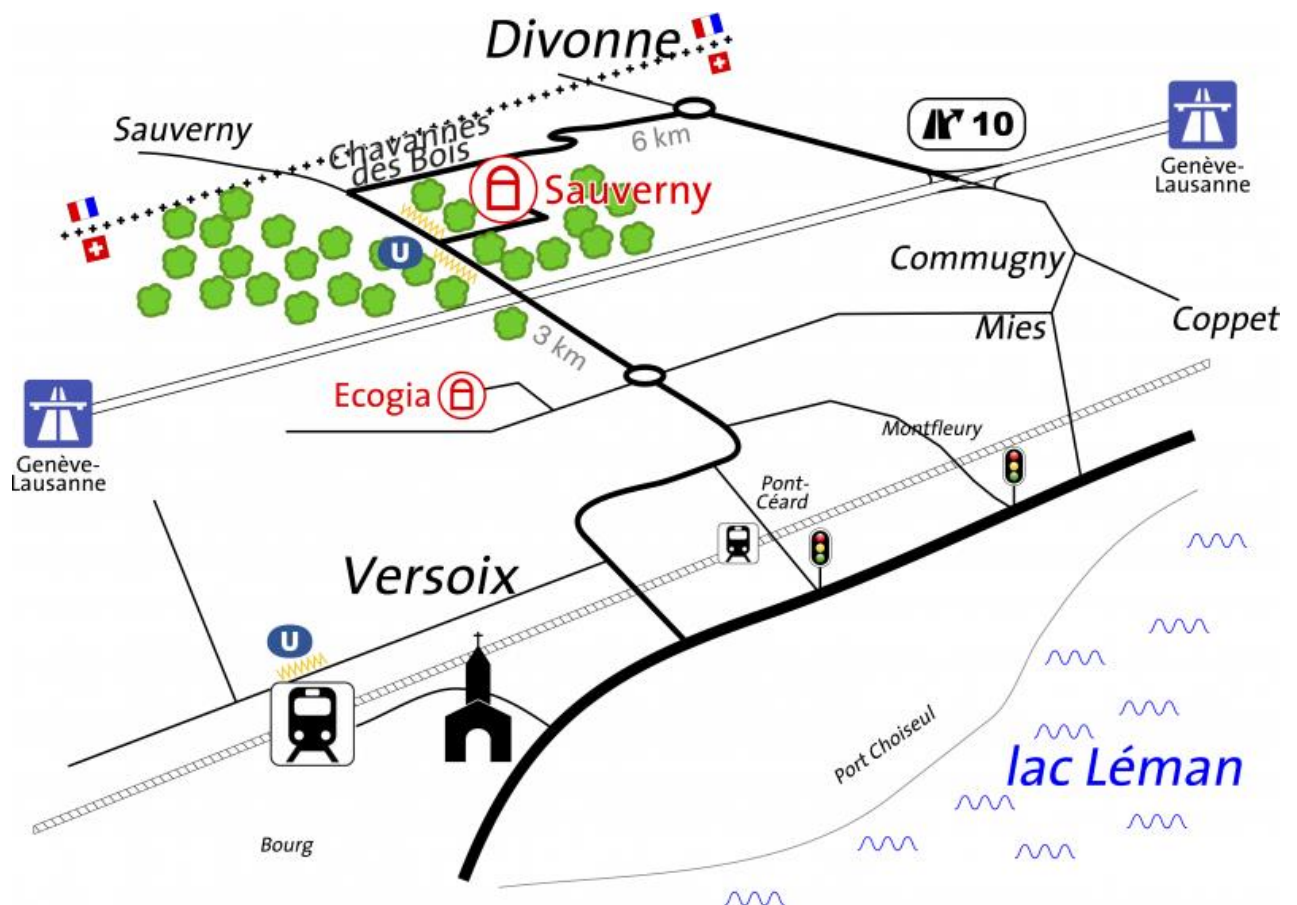
- **Exoplanetary Systems**  
Prof. Stéphane UDRY  
Prof. Francesco PEPE  
Prof. Emeline BOLMONT  
Prof. François BOUCHY  
Prof. Vincent BOURRIER  
Prof. Xavier DUMUSQUE  
Prof. David EHRENREICH  
Prof. Monika LENDL  
Prof. Christophe LOVIS  
Prof. Damien SÉGRANSAN
- **Stars formation & Evolution**  
Prof. Georges MEYNET  
Prof. Corinne CHARBONNEL  
Prof. Tassos FRAGKOS  
Dr Marc AUDARD  
Dr Laurent EYER  
Dr Patrick EGGENBERGER
- **Galaxies & Universe**  
Prof. Daniel SCHAERER  
Prof. Pascal OESCH  
Prof. Anne VERHAMME  
Dr Miroslava DESSAUGES
- **Extreme Universe**  
Prof. Stéphane PALTANI  
Dr Roland WALTER  
Dr Dominique ECKERT



## Quick facts

- Reception phone number of the Department:  
+41 (0) 22 379 22 00 (Sauverny)  
+41 (0) 22 379 21 00 (Ecogia)  
during office hours, from Monday to Friday, 08:30 am – 12:00.
- Web address: <https://www.unige.ch/sciences/astro/en/>
- Sauverny postal address :  
Département d'astronomie de l'Université de Genève,  
chemin Pegasi 51, 1290 Versoix, Switzerland
- Ecogia postal address :  
Département d'astronomie de l'Université de Genève  
chemin d'Ecogia 16, 1290 Versoix, Switzerland

## Location of the two sites (Sauverny and Ecogia)



## How to get there ( TPG bus, taxi, private transportation)

Location **map** (both sites)

<https://www.unige.ch/sciences/astro/en/contacts/contact-observatoire/>

There is public transportation (trains and buses) to get to Sauverny institute (which is located in the woods !)

**Using public transportation TPG** : The «Tout Genève» (all Geneva) ticket entitles you to use all the TPG lines (regional trains, trams, buses and even ferry boats “Les Mouettes” in Geneva area for one hour (60 minutes) from the time of purchase. The whole system uses the same tickets <https://www.tpg.ch>

From Versoix station : bus “55” direction “Chavannes des Bois” :

Ecogia : bus stop “Ecogia”, then 5 minutes ‘walk to join the institute.

Sauverny Observatory : bus stop “Observatoire”; then 10 minutes ‘walk to join the institute.

Ecogia site only: from Versoix there is also the bus “50” towards “Versoix-Centre sportif” : bus stop “Ecogia” (the same as the bus 55)

More information available on <https://www.tpg.ch>

**Taxi company in Versoix** : “Taxi Tooblu” +41 (0) 79 22 44 55 4

**Private transportation** : parking is available on both sites.



## Internal organisation

**Cafeteria:** The Observatory cafeteria is located on the ground floor of the main building of the Sauverny site.

Opening hours :        Monday to Friday from 09:30 to 13:00  
                                 Lunch meals are served from 12:00 to 13:00

You may choose between two daily meals or various salads. You will have to register online on the dedicated FAP page <https://fap.obsuvs3.unige.ch/> (connected to your local account of the Astronomy department). Other items are available at the cafeteria for sale. Microwaves are available to warm up your own dishes.

**Library:** most journals are available online. You may also contact our librarian Mathieu Putallaz [Mathieu.Putallaz@unige.ch](mailto:Mathieu.Putallaz@unige.ch) should you have any question.

More info on :

<https://www.unige.ch/sciences/astro/en/services/library/>

## Good to know: What to do in case of emergency?

### EMERGENCY phone numbers in Switzerland:



[118 Fire brigade, alarm centre](#)

[117 Police](#)

[144 Ambulances, cardio mobile and doctors](#)

[145 Toxicity centre](#)

[112 International emergency number \(Police\)](#)

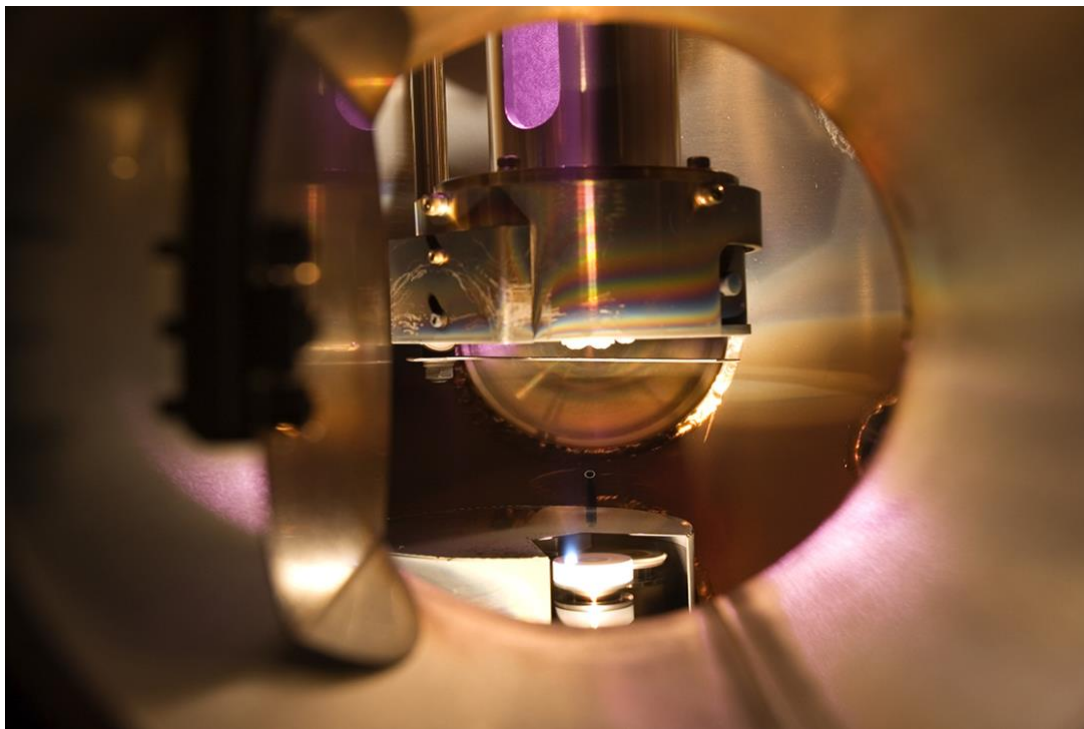
**These numbers are to be used in emergency only**

[Sauverny site guardian /H24/D7: Mrs Jailda Veraguth mobile phone: +41 \(0\) 79 955 83 22](#)

## BACHELOR IN PHYSICS

The Bachelor in Physics includes an introduction to Astrophysics mainly taught in French. More information on :

<https://www.unige.ch/sciences/fr/enseignements/formations/bachelors/physique/>



### DURÉE DES ETUDES

3 ans (6 semestres)

### LANGUE D'ENSEIGNEMENT

**Français**

Bonne connaissance de l'anglais recommandée.

### CONDITIONS D'IMMATRICULATION

[www.unige.ch/conditions/BA](http://www.unige.ch/conditions/BA)

*Baccalauréat universitaire / Bachelor*

## LE BACHELOR EN PHYSIQUE

permet d'acquérir une solide formation dans les domaines de la mécanique classique et quantique, de l'électrodynamique, de la thermodynamique et de la mécanique statistique. Il propose également une introduction à la physique du solide, à l'astronomie et l'astrophysique, à la physique appliquée ainsi qu'à la physique des particules. Font également partie de la formation l'acquisition et le développement des outils mathématiques et informatiques utilisés en physique et dans les sciences naturelles en général. L'obtention du bachelor permet l'accès aux Masters en physique, astrophysique et bi-disciplinaire en sciences.

[www.unige.ch/sciences/physique/enseignement/bachelor](http://www.unige.ch/sciences/physique/enseignement/bachelor)

## PROGRAMME D'ÉTUDES

6 semestres (max. 10 semestres) | 180 crédits ECTS

### Enseignements 1<sup>re</sup> année

60 crédits

- Mathématiques
- Informatique
- Mécanique
- Electrodynamique
- Physique macroscopique
- Travaux pratiques

Cours de soutien en mathématiques et tutorat optionnels

### Enseignements 2<sup>e</sup> année

60 crédits

- Mathématiques
- Informatique
- Mécanique
- Electrodynamique
- Physique quantique
- Travaux pratiques

### Enseignements 3<sup>e</sup> année

60 crédits

- Physique quantique
- Physique statistique
- Astrophysique générale
- Particules et noyaux
- Physique du solide
- Optique quantique
- Cours à option
- Travaux pratiques

## CALENDRIER ACADÉMIQUE

[www.unige.ch/calendrier](http://www.unige.ch/calendrier)

## MOBILITÉ

Départ possible pour une université suisse ou étrangère dès l'obtention de 60 crédits. Le règlement permet d'obtenir jusqu'à 60 crédits du bachelor à l'extérieur de la Faculté. Selon les sections, on conseille aux étudiant-es d'effectuer leur programme de mobilité soit en 2<sup>e</sup> année, soit en 3<sup>e</sup> année de bachelor, pour une durée de 2 semestres. Pour toutes les destinations, l'étudiant-e doit s'assurer que les examens passés dans l'université d'accueil sont reconnus comme équivalents par la Faculté des sciences.

[www.unige.ch/exchange](http://www.unige.ch/exchange)

## DÉBOUCHÉS ACADÉMIQUES

- Master en physique, spécialisation Physique appliquée
- Master en physique, spécialisation Physique de la matière quantique
- Master en physique, spécialisation Physique nucléaire et corpusculaire
- Master en physique, spécialisation Physique théorique
- Master en physique, spécialisation Cosmologie et astrophysique des particules
- Master en astrophysique
- Master en sciences de l'environnement | Admission sur dossier
- Master interdisciplinaire en neurosciences | Admission sur dossier
- Master bi-disciplinaire en sciences
- Master en biologie chimique | Admission sur dossier

## TAXES UNIVERSITAIRES

CHF 500.- par semestre

## INSCRIPTION

Délai d'inscription: 30 avril 2022  
(28 février 2022 pour les candidat-es soumis-es, d'après leur nationalité, à un visa selon les prescriptions de la Confédération)

[www.unige.ch/immatriculations](http://www.unige.ch/immatriculations)

## CONTACTS RELATIFS AUX ÉTUDES

### FACULTÉ DES SCIENCES

Sciences II  
30 quai Ernest-Ansermet  
1211 Genève 4

### SECRÉTARIAT AUX ÉTUDES

T. +41 (0)22 379 66 62  
[secretariat-etudiants-sciences@unige.ch](mailto:secretariat-etudiants-sciences@unige.ch)

### CONSEILLER ACADÉMIQUE

Xavier Chillier  
T. +41 (0)22 379 67 15  
[conseiller-etudes-sciences@unige.ch](mailto:conseiller-etudes-sciences@unige.ch)

### SECTION DE PHYSIQUE

Martin Kunz  
T. +41 (0)22 379 63 50  
[conseiller-etudes-bachelor-physique@unige.ch](mailto:conseiller-etudes-bachelor-physique@unige.ch)

[www.unige.ch/sciences](http://www.unige.ch/sciences)

# MASTER IN ASTROPHYSICS

The up-to-date webpage of the Master programme is available on :  
<https://www.unige.ch/sciences/astro/en/education/master-in-astrophysics/>



## DURÉE DE L'ÉTUDE

2 ans (4 semestres)

## LANGUE D'ENSEIGNEMENT

Anglais

## CONDITIONS D'IMMATRICULATION

[www.unige.ch/conditions/MA](http://www.unige.ch/conditions/MA)

## CONDITIONS D'ADMISSION

Bachelor en physique ou titre jugé équivalent.

## Maîtrise universitaire / Master

### LE MASTER EN ASTROPHYSIQUE

offre une formation approfondie en astrophysique avec une emphase spécifique sur l'exoplanétologie, la physique stellaire et extra-galactique, l'instrumentation sol et spatiale et les outils modernes d'analyse de données scientifiques. Il comprend un tronc commun et une spécialisation dans un de ces domaines. La formation et le travail de master ont lieu dans un institut de recherche de pointe (le Département d'astronomie de l'Université, anciennement Observatoire de Genève) et offrent un contact direct avec les groupes de recherche ainsi que dans le cadre de collaborations internationales utilisant les grandes infrastructures du domaine (ESO, ESA, NASA et autres).

Cette formation permet à l'étudiant-e d'acquérir à la fois de solides bases en astrophysique moderne et une expertise poussée propre à son domaine de spécialisation. Ce master ouvre la voie à des carrières dans des domaines comme la recherche, l'enseignement, l'industrie, la communication scientifique et permet d'acquérir des compétences très appréciées dans divers secteurs pratiquant le traitement et l'analyse de grands volumes de données scientifiques.

#### ORIENTATIONS AU CHOIX:

- Exoplanétologie
- Des étoiles à l'Univers
- Instrumentation et analyse de données

[www.unige.ch/sciences/astro/en/education/master-in-astrophysics](http://www.unige.ch/sciences/astro/en/education/master-in-astrophysics)

## PROGRAMME D'ÉTUDES

4 semestres (max. 8 semestres) | 120 crédits ECTS

**Enseignements de spécialisation et à option, séminaires, travaux pratiques**  
60 crédits

### Mémoire

60 crédits

#### PLANET S

*Origine, évolution et caractérisation des planètes à l'intérieur et à l'extérieur du système solaire. Les récents progrès de la planétologie marquent le passage d'une ère de découverte des exoplanètes, amorcée par l'UNIGE en 1995, à celle de la caractérisation physique et chimique de ces nouveaux mondes. Dans ce contexte, les activités de PlanetS s'articulent autour de trois thèmes principaux: l'origine, l'évolution et la caractérisation des planètes et des systèmes planétaires dans leur ensemble. PlanetS permettra de jeter les bases d'un "Institut suisse des sciences planétaires" qui portera ces activités au-delà de la durée du pôle de recherche national.*

[nccr-planets.ch](http://nccr-planets.ch)

## CALENDRIER ACADÉMIQUE

[www.unige.ch/calendrier](http://www.unige.ch/calendrier)

## NIVEAU DE FRANÇAIS REQUIS PAR L'UNIGE

Aucun examen de français n'est requis pour les non francophones.

## MOBILITÉ

Il est possible d'effectuer un travail de recherche extra-muros sous la direction d'un-e enseignant-e de la Faculté ou de réaliser un stage dans un laboratoire de pointe extérieur à l'Université pour compléter un travail de master.

[unige.ch/exchange](http://unige.ch/exchange)

## PERSPECTIVES PROFESSIONNELLES

Le Master en astrophysique conduit à de nombreuses voies, tant en Suisse qu'à l'étranger:

- Recherche
- Data Science
- Organisations internationales (ESA, ESO)
- Industrie
- Enseignement
- Communication et animation scientifique, etc.

## TAXES UNIVERSITAIRES

CHF 500.- par semestre

## INSCRIPTION

Délai d'inscription: 30 avril 2022  
(28 février 2022 pour les candidat-es soumis-es, d'après leur nationalité, à un visa selon les prescriptions de la Confédération)

[unige.ch/admissions](http://unige.ch/admissions)

## CONTACTS RELATIFS AUX ÉTUDES

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1211 Genève 4

### SECRÉTARIAT AUX ÉTUDES

T. +41 (0)22 379 66 61/62/63  
[secretariat-etudiants-sciences@unige.ch](mailto:secretariat-etudiants-sciences@unige.ch)

### CONSEILLER ACADÉMIQUE

Xavier Chillier  
T. +41 (0)22 379 67 15  
[conseiller-etudes-sciences@unige.ch](mailto:conseiller-etudes-sciences@unige.ch)

### DÉPARTEMENT D'ASTRONOMIE

Daniel Schaerer  
T. +41(0)22 379 24 54  
[Daniel.Schaerer@unige.ch](mailto:Daniel.Schaerer@unige.ch)  
[astro-master@unige.ch](mailto:astro-master@unige.ch)

[www.unige.ch/sciences](http://www.unige.ch/sciences)

Tous les programmes sont susceptibles de modifications. Les règlements font foi.

## ORGANISATION OF THE MASTER IN ASTROPHYSICS

### **Director of the Master programme & Student counsellor**

Prof. Daniel SCHAERER  
Dept. of Astronomy, Sauverny site, office 463  
T 022 379 24 54 – [Daniel.Schaerer@unige.ch](mailto:Daniel.Schaerer@unige.ch)  
[astro-master@unige.ch](mailto:astro-master@unige.ch)

### **Programme coordinator**

Prof. François BOUCHY  
Dept. of Astronomy, Sauverny site, office 1414  
T 022 379 24 60 – [Francois.Bouchy@unige.ch](mailto:Francois.Bouchy@unige.ch)

### **Programme secretary**

Marie-Claude DUNAND  
Dept. of Astronomy, Ecogia site, office C106  
Office hours Tuesday-Friday 8:30-12:00, 13:00-16:30  
T 022 379 21 86 – [Marie-Claude.Dunand@unige.ch](mailto:Marie-Claude.Dunand@unige.ch)

### **Student Secretariat of the Faculty**

T 022 379 66 61/62/63  
[Secretariat-Etudents-sciences@unige.ch](mailto:Secretariat-Etudents-sciences@unige.ch)  
<https://www.unige.ch/sciences/en/espaceetudiant/secretariatetudiants/>

The student secretariat of the Faculty, located in Sciences III, Geneva, will answer all your questions related to your studies.

# PROGRAMME OF THE MASTER IN ASTROPHYSICS

## About the Programme

The Master in Astrophysics is a 2-years research and technique Master (120 ECTS) with the following structure.

**Semester 1** (30 ECTS): Mandatory and Elective courses common to all specialisations

**Semester 2** (30 ECTS): Courses from one specialisation among:

- Exoplanetology
- From Stars to the Universe
- Instrumentation and data analysis

**Semesters 3 & 4** (60 ECTS):

- Major research project (Master thesis)
- Astrophysics Colloquium

The detailed courses list is available on :

<https://www.unige.ch/sciences/astro/en/education/master-in-astrophysics/program/>

The regulations (legal text in French) of the Master Programme is available on :

<https://www.unige.ch/sciences/astro/files/5715/9464/9338/surSite-B12-juin2020.pdf>

Note: updated regulations must be published soon (aug-sept 2022)

## COMMON PROGRAMME (ALL SPECIALISATIONS) – SEMESTER 1

### Semester 1 (Autumn): 30 ECTS

#### Mandatory:

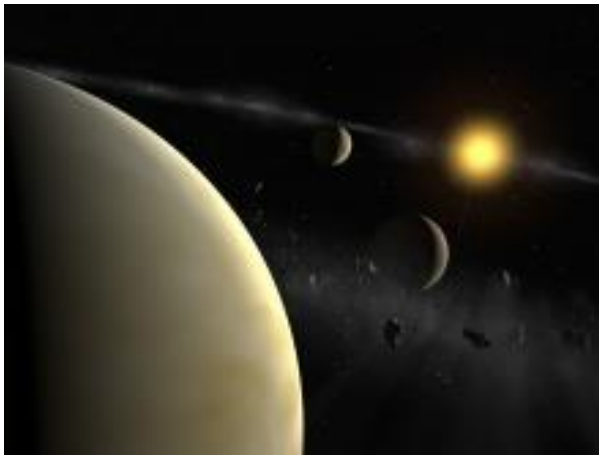
- Physical processes in astrophysics (microscopic) (2h, 3.5 ECTS)  
- *Prof. G. Meynet*
- Physical processes in astrophysics (macroscopic) (2h, 3.5 ECTS)  
- *Prof. A. Fragkos*
- Star and planets – an introduction (2h, 3.5 ECTS)  
- *Prof. C. Charbonnel / Prof. E. Bolmont / Prof. A. Fragkos*
- Galaxies and cosmology – an introduction (2h, 3.5 ECTS)  
- *Prof. D. Schaerer / Prof. P. Oesch*
- Astronomical observables and observations (2h, 3.5 ECTS) - *Prof. S. Paltani*
- Astrophysics & Data Science (2h + 1h, 5 ECTS) - *Prof. D. Ségransan*
- Astrophysics Lab I (7.5 ECTS) - *Dr. M. Audard*

#### Elective:

- Astrophysics Colloquium - *Prof. A. Fragkos et al.*



## SPECIALISATION EXOPLANETOLOGY (SEMESTER 2)



### Semester 2 (Spring): 30 ECTS

#### Mandatory:

- Dynamics of planetary systems (2h+0.5h, 4.5 ECTS)  
- *Prof. S. Udry / Prof. E. Bolmont*
- Planet formation and evolution (2h+0.5h, 4.5 ECTS)  
- *Prof. F. Bouchy / Prof. S. Udry*
- Detection and characterisation techniques (2h+0.5h, 4.5 ECTS) - *Prof. F. Bouchy / Prof. X. Dumusque / Prof. M. Lendl*
- Planetary atmospheres (2h+0.5h, 4.5 ECTS)  
- *Prof. D. Ehrenreich / Prof. E. Bolmont / Prof. V. Bourrier / Prof. C. Lovis*
- Astrophysics Lab II (7.5 ECTS) – *Dr. M. Audard*

#### Elective:

- Course(s) from other specialisations or other courses
- Astrophysics Colloquium - *Prof. A. Fragkos et al.*

#### Other Courses

- Particles in the Universe (3.5 ECTS) - *Prof. T. Montaruli*
- Cosmology II (8 ECTS) - *Prof. C. Bonvin*

Other courses can be chosen from the offer of the Faculty of Sciences, in agreement with the Coordinator of the Master.

## SPECIALISATION FROM STARS TO THE UNIVERSE (SEMESTER 2)



**Semester 2 (Spring): 30 ECTS**

**Mandatory: 4 out of 5 courses from this list + Astrophysics Lab II**

- Stellar structure and evolution (2h+0.5h, 4.5 ECTS) - *Prof. G. Meynet / Dr. Eggenberger / Dr. L. Eyer*
- Galaxies and cosmology II - Galaxy evolution in a cosmological context (2h+0.5h, 4.5 ECTS) - *Prof. P. Oesch / Dr. D. Eckert*
- High energy astrophysics (2h+0.5h, 4.5 ECTS) - *Dr. R. Walter / Dr. M. Audard / Dr. C. Ferrigno / Dr. N. Produit*
- From stars to galaxies: spectroscopic diagnostics in astrophysics (2h+0.5h, 4.5 ECTS) - *Prof. D. Schaerer*
- From interstellar medium to stars: the diffuse media and its link to star formation (2h+0.5h, 4.5 ECTS) - *Dr. M. Audard / Prof. A. Verhamme*
- From stars to the Universe: exercices (2h+0.5h, 4.5 ECTS, 0 ECTS)
- Astrophysics Lab II (7.5 ECTS) - *Dr. M. Audard*

**Elective (other courses):**

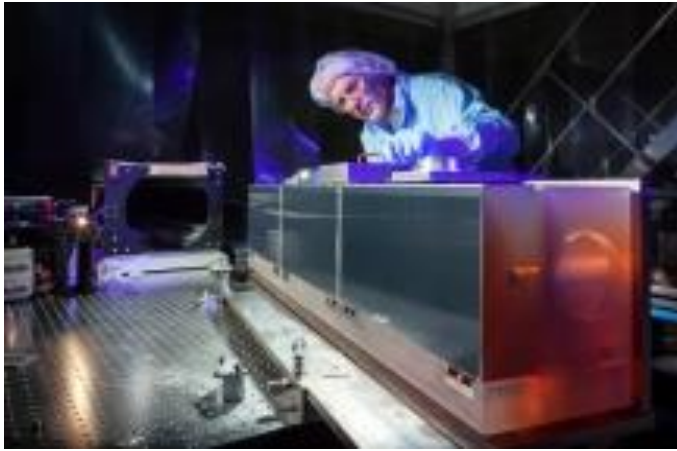
- Course(s) from other specialisations or other courses
- Astrophysics Colloquium - *Prof. A. Fragkos et al.*

**Other Courses**

- Particles in the Universe (3.5 ECTS) - *Prof. T. Montaruli*
- Cosmology (8 ECTS) - *Prof. C. Bonvin*

Other courses can be chosen from the offer of the Faculty of Sciences, in agreement with the Coordinator of the Master.

## SPECIALISATION INSTRUMENTATION AND DATA ANALYSIS (SEMESTER 2)



**Semester 2 (Spring): 30 ECTS**

### **Mandatory:**

- Observational techniques (2h, 3.5 ECTS) - *Prof. F. Pepe / Prof. X. Dumusque / Prof. M. Lendl / Prof. D. Ségransan*
- Optics and detectors for astronomy (2h, 3.5 ECTS)  
- *Dr. B. Chazelas / Dr. F. Wildi / Prof. F. Pepe / Dr. N. Blind / Dr. N. Produit*
- Optics and detectors for astronomy – Exercices + projects (2h, 3.5 ECTS)  
- *Dr. F. Wildi / Dr. B. Chazelas / Dr. N. Blind / Dr. N. Produit / Prof. F. Pepe*
- Observations, data acquisition, data analysis (2h + 2h, 7.5 ECTS)  
- *Prof. C. Lovis / Dr. D. Eckert / Prof. M. Lendl / Prof. S. Paltani / Prof. D. Ségransan / Dr. M. Dessauges / Dr. L. Eyer*
- Astrophysics Lab II (7.5 ECTS) – *Dr. M. Audard*

### **Elective:**

- Course(s) from other specialisations or other courses
- Astrophysics Colloquium - *Prof. A. Fragkos et al.*

### **Other Courses**

- Particles in the Universe (3.5 ECTS) - *Prof. T. Montaruli*
- Cosmology (8 ECTS) - *Prof. C. Bonvin*

Other courses can be chosen from the offer of the Faculty of Sciences, in agreement with the Coordinator of the Master.

## ALL SPECIALISATIONS – SEMESTERS 3 & 4

### Semester 3 (Autumn) & 4 (Spring): 60 ETCS

- Major research project (Master thesis, 60 ECTS)
- Astrophysics Colloquium - *Prof. A. Fragkos et al.*

# COURSE SCHEDULE

**Master in Astrophysics** (Department of Astronomy, University of Geneva)  
Complete schedule for the **fall semester** – 19 September – 23 December 2022

Monday	Tuesday	Wednesday	Thursday	Friday
8h45 - 17h30 M. Audard Astrophysics Lab I	8h45 - 10h30 S. Paltani Astronomical observables and observations  10h30 - 11h00 Science coffee 11h00 - 12h00 Astrophysics Colloquium UniGE-EPFL	8h45 - 10h30 T. Fragkos Physical processes in astrophysics (macroscopic)	10h15 - 12h00 D. Schaerer/ P. Oesch Galaxies and cosmology - an introduction	
	13h30 - 16h00 D. Sgransan Astrophysics and data science (course + exercises)	13h15 - 15h00 C. Charbonnel / E. Bolmont / T. Fragkos Stars and planets - an introduction	14h15 - 16h00 G. Meynet Physical processes in astrophysics (microscopic)	

V1-20220731/ds

Courses in room 263 (ground-floor), Dept. of Astronomy, Versoix

**Master in Astrophysics** (Department of Astronomy, University of Geneva)  
Complete schedule for the **spring semester** – 20 February 2023 – 2 June 2023

Monday	Tuesday	Wednesday	Thursday	Friday
08h45 - 17h30 M. Audard Astrophysics Lab II	08h45 - 10h30 G. Meynet / L. Eyer / P. Eggenberger Stellar Structure and Evolution  10h30 - 11h00 Science coffee  11h00 - 12h00 Astrophysics Colloquium UniGE-EPFL	08h45 - 10h30 B. Chazelas / F. Wildi / N. Blind / N. Produit / F. Pepe Optics and Detectors for Astronomy  10h45 - 12h30 D. Schaerer From stars to galaxies: Spectroscopic diagnostics in astrophysics	08h45 - 10h30 S. Udry / E. Bolmont Dynamics of Planetary Systems  10h45 - 12h30 F. Wildi / B. Chazelas N. Blind / N. Produit / F. Pepe Optics and Detectors for Astronomy (Ex+projects)  10h45 - 12h30 all Stars to Universe: Exercises	08h45 - 10h30 all Exoplanetology Exercises  10h45 - 12h30 R. Walter / M. Audard / C. Ferrigno / N. Produit High energy astrophysics
	13h15 - 15h00 M. Audard / A. Verhamme Diffuse Media, Star Formation  15h15 - 17h00 F. Bouchy / S. Udry Planet formation and evolution	13h15 - 15h00 P. Oesch / D. Eckert Galaxies and cosmology II – Galaxy evolution in a cosmological context  15h15 - 17h00 F. Pepe Observational techniques	13h15 - 15h00 D. Ehrenreich / E. Bolmont / V. Bourrier / C. Lovis Planetary atmospheres  15h15 - 17h00 F. Bouchy / X. Dumasque / M. Lendl Detection and characterisation techniques	13h15 - 15h00 C. Lovis + Observation, data acquisition, data analysis (course + exercises)  15h15 - 17h00 C. Lovis + Observation, data acquisition, data analysis (course + exercises)

V1-20220731/ds

Courses in room 263 (ground-floor), Dept. of Astronomy, Versoix

Specialisations : [Exoplanetology](#) / [From Stars to the Universe](#) / [Instrumentation and Data Analysis](#)

## COURSE LIST AND DESCRIPTIONS

For a detailed online description of each course please follow the links given in the document.

### MASTER IN ASTROPHYSICS

#### Semester 1 - Common Courses

##### Mandatory

Code	Name	Faculty	Type/Semester	ECTS credits
14A030	<a href="#">Physical processes in astrophysics (microscopic)</a>	S	CR 2h A THU 14h15 - 16h00, Obs room 263	3,5
14A031	<a href="#">Physical processes in astrophysics (macroscopic)</a>	S	CR 2h A WED 8h45-10h30, Obs room 263	3,5
14A032	<a href="#">Star and planets - an introduction</a>	S	CR 2h A WED 13h15-15h00, Obs room 263	3,5
14A033	<a href="#">Galaxies and cosmology - an introduction</a>	S	CR 2h A THU 10h15-12h00, Obs room 263	3,5
14A034	<a href="#">Astronomical observables and observations</a>	S	CR 2h A TUE 08h45-10h30, Obs room 263	3,5
14A035	<a href="#">Astrophysics and Data Science</a>	S	CX 2h A TUE 13h30-16h00, Obs room 263	5
14A900	<a href="#">Astrophysics Lab I</a>	S	TP 8h A MON 08h45-17h30, Obs	7,5

##### Elective

Code	Name	Faculty	Type/Semester	ECTS credits
14A730	<a href="#">Astrophysics colloquium</a>	S	SE 1h AN TUE 11h00-12h00, Obs Aula	
10A001	<a href="#">Cours d'astronomie générale ouvert au public</a> <a href="#">Les grandes missions spatiales pour l'Astrophysique – Saison 3</a>	S	SE 1h A MA 17-19, SCII-A300	

## Semester 2 – Specialisation : Exoplanetology

### Mandatory

Code	Name	Faculty	Type/Semester	ECTS credits
14A040	<a href="#">Dynamics of planetary systems</a>	S	CX 2h P THU 08h45-10h30, Obs room 263	4,5
14A041	<a href="#">Planet formation and evolution</a>	S	CX 2h P TUE 15h15-17h00, Obs room 263	4,5
14A042	<a href="#">Detection and characterization techniques</a>	S	CX 2h P THU 15h15-17h00, Obs room 263	4,5
14A043	<a href="#">Planetary atmospheres</a>	S	CX 2h P THU 13h15-15h00, Obs room 263	4,5
14A044	<a href="#">Exoplanetology: exercices</a>	S	EX 2h P FRI 08h45-10h30, Obs room 263	0
14A901	<a href="#">Astrophysics Lab II</a>	S	TP 8h P MON 08h45-17h30, Obs	7,5

### Elective

Code	Name	Faculty	Type/Semester	ECTS credits
14A730	<a href="#">Astrophysics colloquium</a>	S	SE 1h AN TUE 11h00-12h00, Obs Aula	

## Semester 2 – Specialisation : From stars to the Universe

**Mandatory : 4 out of 5 courses from this list + Astrophysics Lab II**

Code	Name	Faculty	Type/Semester	ECTS credits
14A050	<a href="#">Stellar structure and evolution</a>	S	CX 2h P TUE 08h45-10h30, Obs room 263	4,5
14A051	<a href="#">Galaxies and Cosmology II - Galaxy Evolution in a Cosmological Context</a>	S	CX 2h P WED 13h15-15h00, Obs room 263	4,5
14A052	<a href="#">High energy astrophysics</a>	S	CX 2h P FRI 10h45-12h30, Obs room 263	4,5
14A053	<a href="#">From stars to galaxies: spectroscopic diagnostics in astrophysics</a>	S	CX 2h P WED 10h45-12h30, Obs room 263	4,5
14A054	<a href="#">From interstellar medium to stars: diffuse media and their link to star formation</a>	S	CX 2h P TUE 13h15-15h00, Obs room 263	4,5
14A055	<a href="#">From stars to the Universe : exercices</a>	S	EX 2h P WED 15h15-17h00, Obs room 263	0
14A901	<a href="#">Astrophysics Lab II</a>	S	TP 8h P MON 08h45-17h30, Obs	7,5

## Elective

Code	Name	Faculty	Type/Semester	ECTS credits
14A730	<a href="#">Astrophysics colloquium</a>	S	SE 1h AN TUE 11h00-12h00, Obs Aula	



## Semester 2 – Specialisation: Instrumentation and Data Analysis

### Mandatory

Code	Name	Faculty	Type/Semester	ECTS credits
14A060	<a href="#">Observational techniques</a>	S	CR 2h P WED 15h15-17h00, Obs room 263	3,5
14A061	<a href="#">Optics and Detectors for astronomy</a>	S	CR 2h P THU 10h45-12h30, Obs room 263	3,5
14A062	<a href="#">Optics and detectors in astrophysics (Ex + projects)</a>	S	CX 2h P WED 08h45-10h30, Obs room 263	3,5
14A063	<a href="#">Observations, data acquisition, data analysis</a>	S	CX 4h P FRI 13h15-17h00, Obs room 263	7,5
14A901	<a href="#">Astrophysics Lab II</a>	S	TP 8h P MON 08h45-17h30, Obs	7,5

### Elective

Code	Name	Faculty	Type/Semester	ECTS credits
14A730	<a href="#">Astrophysics colloquium</a>	S	SE 1h AN TUE 11h00-12h00, Obs Aula	

## 2<sup>nd</sup> Year – All specialisations

Code	Name	Faculty	Type/Semester	ECTS credits
	Major research project	S	AN	60
14A730	<a href="#">Astrophysics colloquium</a>	S	SE 1h AN TUE 11h00-12h00, Obs Aula	

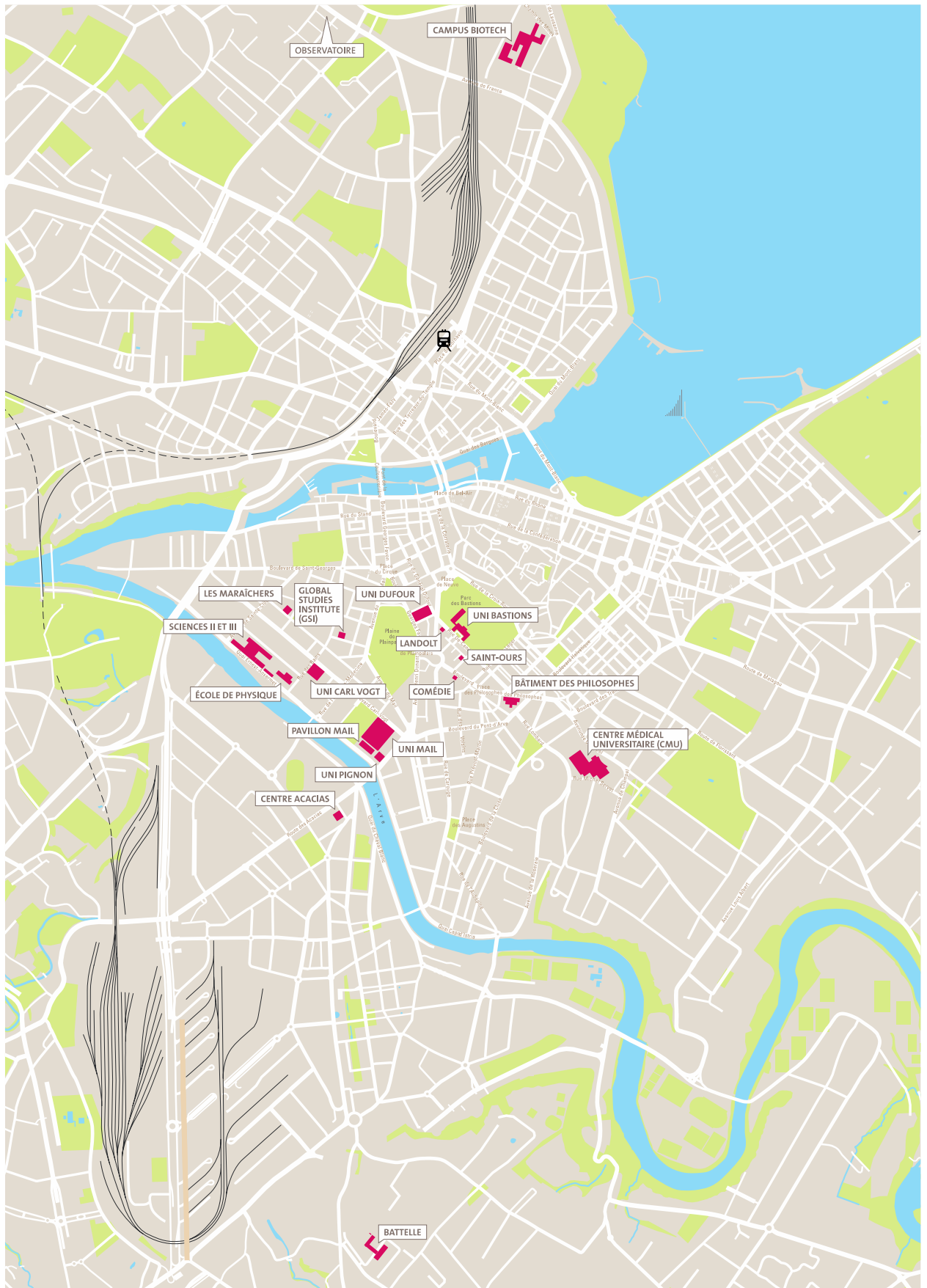
## **FACULTY OF SCIENCE**

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<b>Uni Carl Vogt</b>	66 bd Carl-Vogt
<b>Sciences II et III</b>	30 quai Ernest-Ansermet
<b>École de physique</b>	24 quai Ernest-Ansermet
<b>Les Maraîchers</b>	13 rue des Maraîchers
<b>Centre Acacias</b>	2-4 rue du Lièvre
<b>Observatoire</b>	51 chemin Pegasi, Versoix
<b>Centre médical universitaire (CMU)</b>	1 rue Michel-Servet
<b>Battelle</b>	7 route de Drize, Carouge
<b>Campus Biotech</b>	9 chemin des Mines

## **Other UNIVERSITY buildings**

<b>Uni Dufour</b>	24 rue du Général-Dufour
<b>Uni Bastions</b>	5 rue De-Candolle
<b>Saint-Ours</b>	5 rue de Saint-Ours
<b>Comédie</b>	10-12 bd des Philosophes
<b>Landolt</b>	2 rue De-Candolle
<b>Bâtiment des Philosophes</b>	22 bd des Philosophes
<b>Uni Mail</b>	40 bd du Pont-d'Arve
<b>Uni Pignon</b>	42 bd du Pont-d'Arve
<b>Pavillon Mail</b>	40A bd du Pont-d'Arve
<b>Global Studies Institute (GSI)</b>	10 rue des Vieux-Grenadiers



# sciences



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