

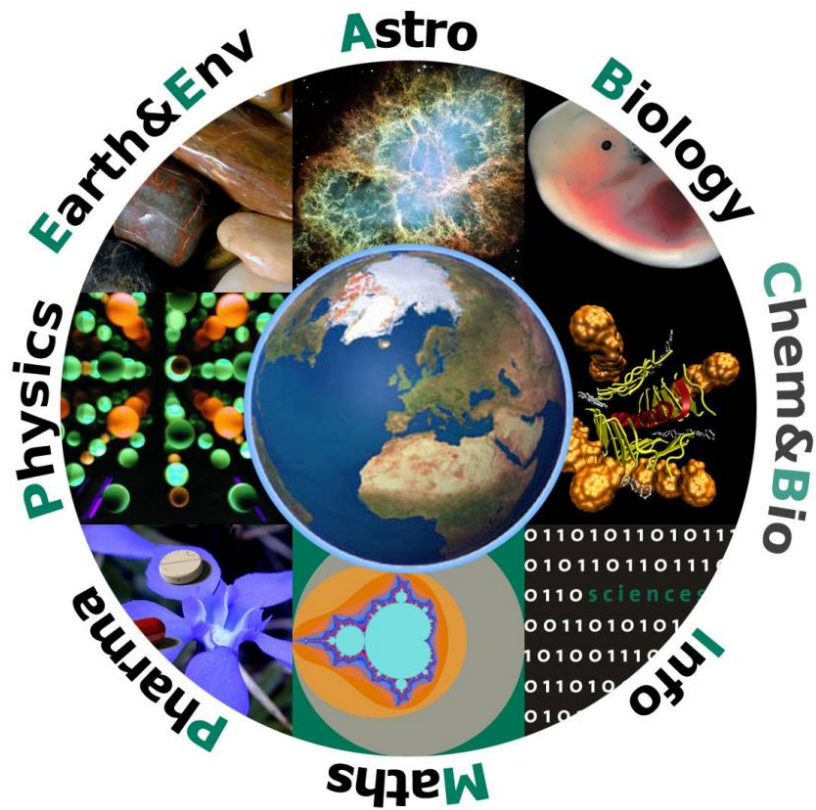


UNIVERSITÉ
DE GENÈVE
FACULTY OF SCIENCE

sciences

Studying Astrophysics

2021-2022



IMPORTANT DATES

AUTUMN SEMESTER 2021 – 2022

| | |
|---------------------------------|--|
| <i>Astro student welcome</i> | <i>Friday 17 September 2021</i> |
| <i>Start of the courses</i> | <i>Monday 20 September 2021</i> |
| <i>Course registration</i> | <i>Tuesday 19 Oct □ Monday 25 Oct 2021</i> |
| <i>Exam registration</i> | <i>Tuesday 2 Nov □ Monday 8 Nov 2021</i> |
| <i>End of exam cancellation</i> | <i>Thursday 9 December 2021</i> |
| <i>End of the courses</i> | <i>Friday 24 December 2021</i> |
| <i>Exam period start</i> | <i>Monday 24 January 2022</i> |
| <i>Exam period end</i> | <i>Friday 11 February 2022</i> |

SPRING SEMESTER 2022

| | |
|---------------------------------|--|
| <i>Start of the courses</i> | <i>Monday 21 February 2022</i> |
| <i>Course registration</i> | <i>Tuesday March 8 □ Monday 14 March 2022</i> |
| <i>Exam registration</i> | <i>Tuesday 22 March □ Monday 28 March 2022</i> |
| <i>End of exam cancellation</i> | <i>Thursday 19 May 2022</i> |
| <i>End of the courses</i> | <i>Friday 3 June 2022</i> |
| <i>Exam period start</i> | <i>Monday 13 June 2022</i> |
| <i>Exam period end</i> | <i>Friday 1 July 2022</i> |
| <i>Exam registration</i> | <i>Tuesday 19 July □ Monday 25 July 2022</i> |
| <i>End of exam cancellation</i> | <i>Thursday 11 August 2022</i> |
| <i>Exam period start</i> | <i>Monday 29 August 2022</i> |
| <i>Exam period end</i> | <i>Friday 9 September 2022</i> |

HOLIDAYS

| | |
|---------------------------|--|
| <i>Easter vacation</i> | <i>Friday 2 □ Sunday 11 April 2021</i> |
| <i>Labor Day</i> | <i>Sunday 1 May 2022</i> |
| <i>Ascension Day</i> | <i>Thursday 26 May 2022</i> |
| <i>Whit Monday</i> | <i>Monday 6 June 2022</i> |
| <i>« Jeûne Genevois »</i> | <i>Thursday 8 September 2022</i> |

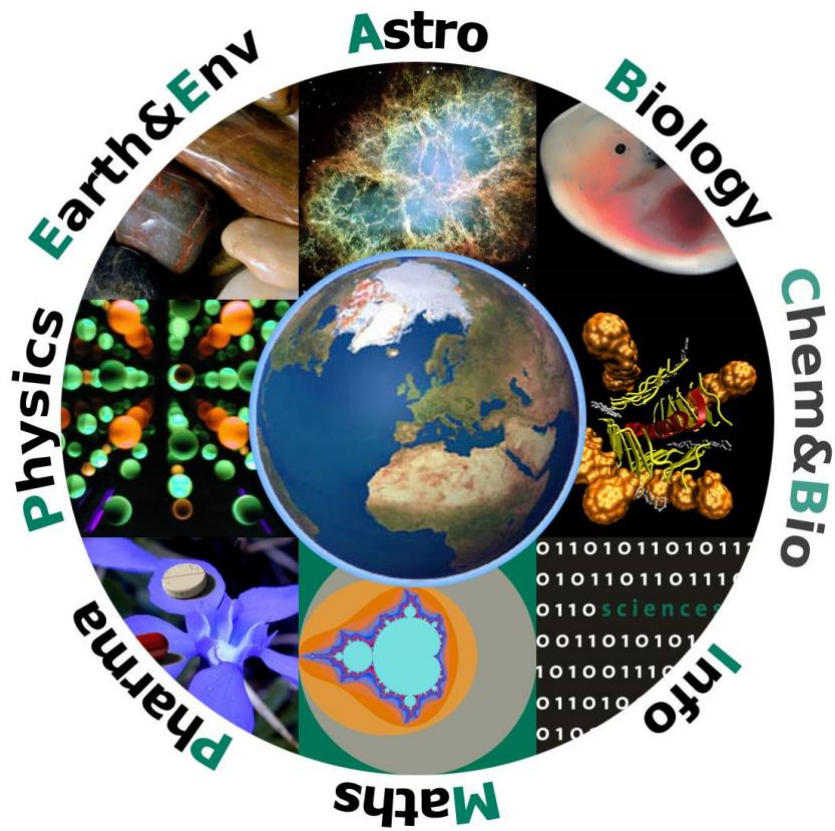
AUTUMN SEMESTER 2022 – 2023 *Monday 12 September 2022*

See here:

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

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

General Information



CONTENTS



**UNIVERSITÉ
DE GENÈVE**

FACULTY OF SCIENCE

Important dates

General information

- Faculty of Science
- Managing your study and exams
- Plagiarism
- Faculty and University Services

Studying Astrophysics

- Department of Astronomy
- Overview of the Master in Astrophysics
- Common Programme and Specialisations
- Course Schedule
- Course list and description

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, the 2010 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 2860 students (47% of whom are female), 170 professors, 1000 teaching and research staff (teaching assistants research masters, lecturers, assistant professors, full professors etc.) and some 530 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 690 students prepare a doctoral thesis, and more than 160 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
Martin GANDER
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

Administrator

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

SECTION PRESIDENTS AND DEPARTMENT DIRECTORS

Biology Section:

Prof. Michel MILINKOVITCH
Quai Ernest-Ansermet 30, 1211 Genève 4
T 022 379 33 38

Chemistry and biochemistry Section:

Prof Thomas BÜRGI
Quai Ernest-Ansermet 30, 1211 Genève 4
T 022 379 65 52

Mathematics Section:

Prof. Andras SZENES
Rue du Lièvre 2-4, 1227 Acacias
T 022 379 00 95

Physics Section:

Prof. Giuseppe IACOBUCCI
Quai Ernest-Ansermet 24, 1211 Genève 4
T 022 379 62 45

Pharmaceutical sciences Section:

Prof. Jean-Luc VEUTHEY
Rue Michel-Servet 1, 1211 Genève 4
T 022 379 68 08

Earth and environmental sciences Section:

Prof. Vera SLAVEYKOVA
Rue des Maraîchers 13 bis, 1211 Genève 4
T 022 379 03 35

Department of Astronomy:

Prof. Francesco PEPE
Chemin des Maillettes 51, 1290 Versoix
T 022 379 23 96

Department of Informatics:

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

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

STUDENT COUNSELLORS OF THE SECTIONS/DEPARTMENTS

| | |
|--|---|
| Biology Section: | Dr. Audrey BELLIER T 022 379 66 65 – conseil-etu-biolo@unige.ch |
| Chemistry and biochemistry Section: | Dr. Didier PERRET T 022 379 31 87 – Didier.Perrret@unige.ch |
| Mathematics Section: | Dr. David CIMASONI T 022 379 11 39 – conseil-etu-math@unige.ch |
| Physics Section: | Prof. Xin WU (<i>bachelor</i>) T 022 379 62 72 – conseiller-etudes-bachelor-physique@unige.ch Prof. Patrycja Paruch (<i>master</i>) T 022 379 35 46 – conseiller-etudes-master-physique@unige.ch |
| Earth and environmental sciences Section: | Prof. Robert MORITZ T 022 379 66 33 – Robert.Moritz@unige.ch |

Pharmaceutical sciences

Section:

Dr. Elisabeth RIVARA-MINTEN

T 022 379 65 82 ou 379 36 55 – conseil-etu-pharm@unige.ch

Department of Astronomy:

Prof. Daniel SCHAERER

T 022 379 24 54 – Daniel.Schaerer@unige.ch

Department of Informatics:

Prof. Stéphane MARCHAND-MAILLET

T 022 379 01 54 – 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

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.

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.

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/>

Mobility

Mobility in Switzerland

A mobility stay can be organized on the basis of agreements between Swiss universities -

<https://www.unige.ch/exchange/en/propos/>

Mobility abroad

Possibilities for a stay at a foreign university exist on the basis of bilateral agreements -

<https://www.unige.ch/exchange/en/outgoing/why-study-abroad/>

Mobility counter

T 022 379 80 86 - GuichetMobilite@unige.ch

<https://www.unige.ch/exchange/en/outgoing/why-study-abroad/students/get-started/where-get-information/>

Address: Uni-Mail, Boulevard du Pont-d'Arve 40, 1211 Geneva 4, room R055

Opening hours: Monday to Friday 10 am to 1 pm

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

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/

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 - 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

To make ends meet

Employment Office

T 022 379 77 02 - F 022 379 11 37 - carriere@unige.ch

<https://www.unige.ch/dife/carriere/etudiants/>

<http://www.unige.ch/dife/emploi/>

Address: rue de Candolle 4, 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

Study allowances

Scholarships and Loans Service

<https://www.ge.ch/obtenir-bourse-pret-etudes-apprentissage>

MENTAL AND PHYSICAL HEALTH

Mental health

Cultural activities

Cine-club / dance / images / words / music / encounters / theater - www.unige.ch/dife/culture/

University Press

Campus Magazine / The UNIGE newsletter - 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 - <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

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 - 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 - 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/

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 - www.unige.ch/dife/carriere/

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

myScience Career Days

carriere@unige.ch – 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 - <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



**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 Sauvigny/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 140 persons are employed on the two sites of Sauvigny 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 Sauvigny 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/>

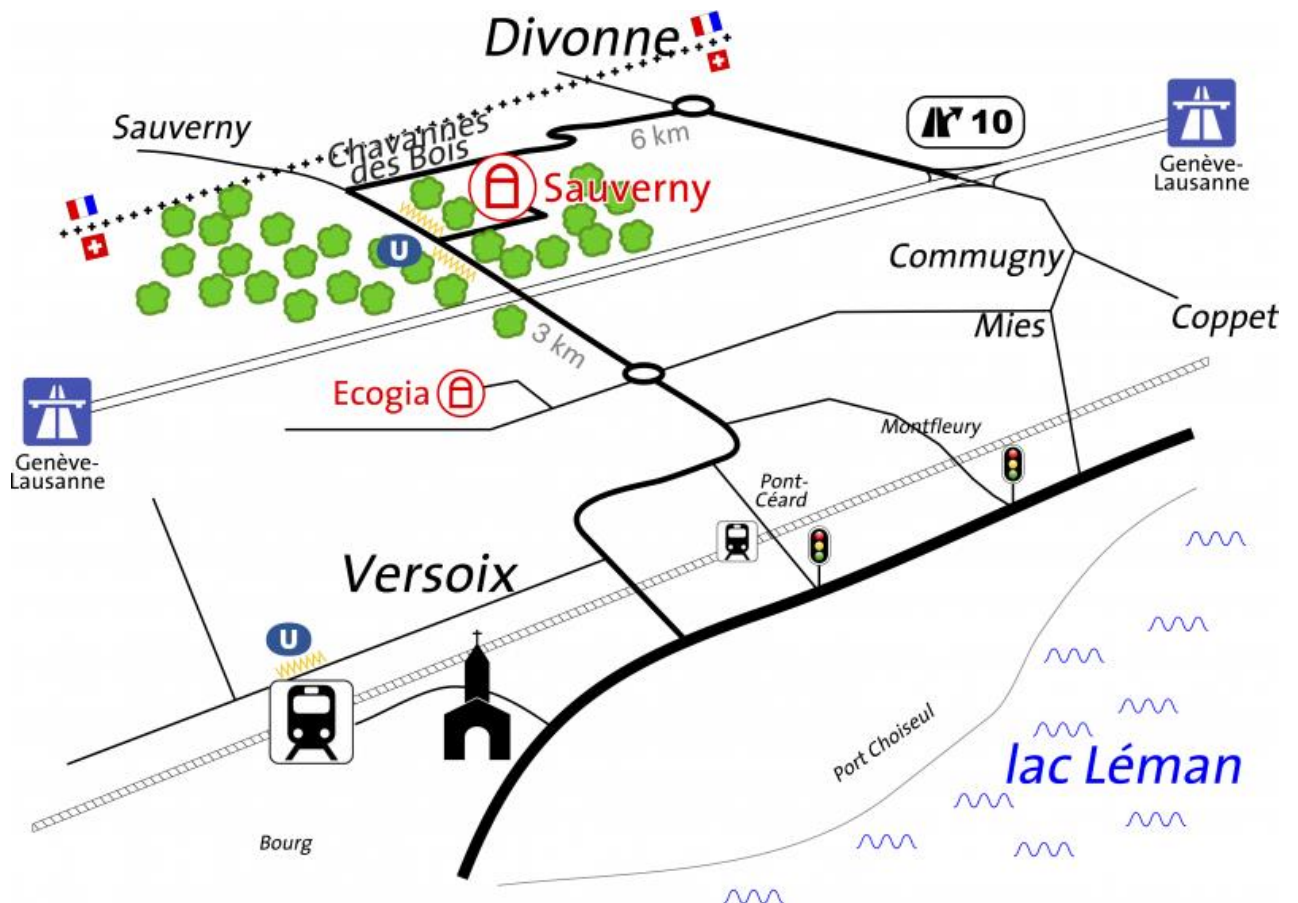
<https://www.unige.ch/sciences/astro/en/projects>

- **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
Prof. Annalisa DE CIA
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 the daily 2 meals or various salads. You will have to register online on the dedicated FAP page <https://fap.astro.unige.ch/> (connected to your local account of the Astronomy department). Different snacks can be taken at your own discretion during the whole day by noting your due in a folder and pay your credit once a week during opening hours. Microwaves are available to warm up your own dishes.

Library: most journals are available online. You may also contact our librarian Mathieu Putallaz Mathieu.Puttalaz@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 \(Police\)](#)

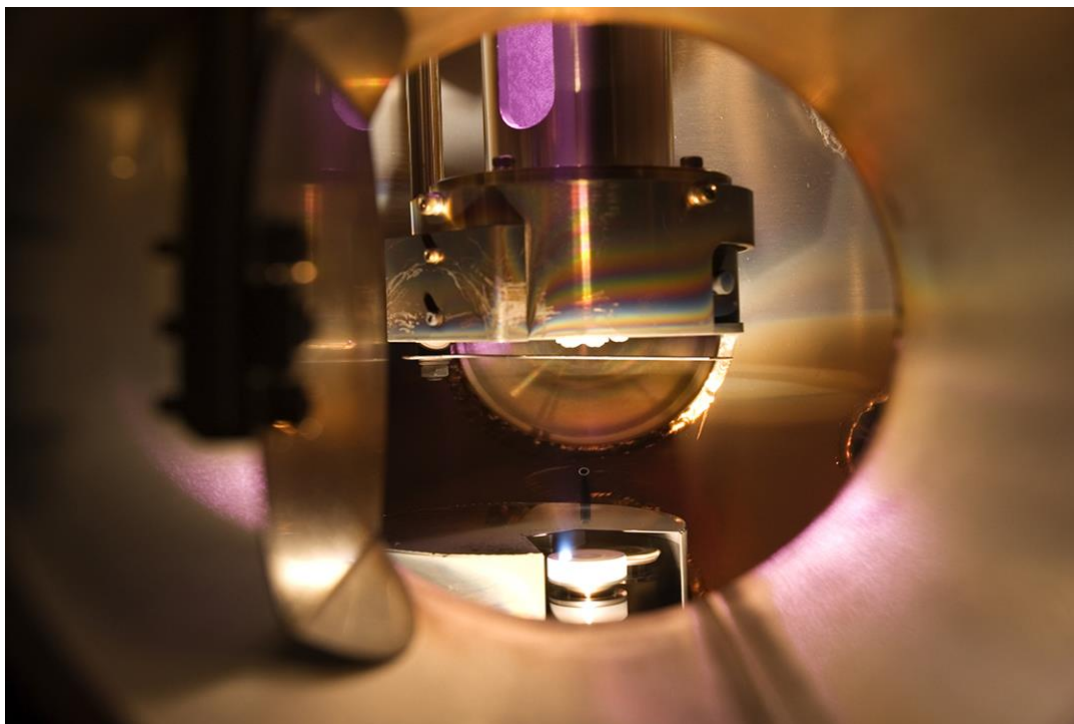
These numbers are to be used in emergency only

[Sauverny site guardian /H24/D7: Mrs Jilda 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 DE SÉTUDES

3 ans (6 semestres)

LANGUE D'ENSEIGNEMENT

Français

Bonne connaissance de l'anglais recommandée.

CONDITIONS D'IMMATRICULATION

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

PROGRAMME D'ÉTUDES

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

Enseignements 1re année

60 crédits

Cours obligatoires et travaux pratiques:

- Mécanique
- Electrodynamique
- Mathématiques
- Informatique, etc.

Enseignements 2e année

60 crédits

Cours obligatoires et travaux pratiques:

- Mécanique
- Electrodynamique
- Mécanique quantique
- Mathématiques
- Thermodynamique, etc.

Enseignements 3e année

60 crédits

Cours obligatoires, cours à option et travaux pratiques:

- Mécanique quantique
- Mécanique statistique
- Astrophysique générale
- Particules et noyaux
- Physique du solide, etc.

CALENDRIER ACADÉMIQUE

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 2e année, soit en 3e 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

DÉBOUCHÉS ACADÉMIQUES

- Master en physique
- 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 2021
(28 février 2021 pour les candidat-es soumis-es, d'après leur nationalité, à un visa selon les prescriptions de la Confédération)

www.unige.ch/admissions

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

CONSEILLER ACADÉMIQUE

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

SECTION DE PHYSIQUE

Xin Wu
T. +41 (0)22 379 62 72
Xin.Wu@unige.ch

www.unige.ch/sciences

MASTER IN ASTROPHYSICS



DURATION OF STUDIES

2 years (4 semesters)

LANGUAGE OF INSTRUCTION

English

CONDITIONS OF REGISTRATION

www.unige.ch/conditions/MA

ADMISSION CONDITIONS

A Bachelor in Physics, or an equivalent degree.

Master's Programme

THE MASTER IN ASTROPHYSICS

provides advanced training in astrophysics with an emphasis on exo-planetology, stellar and extra-galactic physics, ground- and space-based instrumentation, and concepts and tools of modern data science. It includes common courses and a specialisation in one of the above domains. The programme and dissertation work take place in a renowned research institute (the Department of Astronomy of the University, also known as the "Geneva Observatory"), offering direct contacts with the local research groups and with international collaborations which use and contribute to state-of-the-art facilities of the field (ESO, ESA, NASA, and others).

Through the programme, students acquire both a solid foundation in modern astrophysics and expertise in their field of specialisation. The programme leads to careers in areas such as research, teaching and industry, and develops valuable skills for future.

AVAILABLE ORIENTATIONS:

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

www.unige.ch/sciences/astro/en/education

FACULTY OF SCIENCE



UNIVERSITÉ
DE GENÈVE

STUDY PROGRAMME

4 semesters (max. 8 semesters) | 120 ECTS credits

Specialisation courses and electives, seminars, course work
60 credits

Dissertation

60 credits

PLANETS

Origin, evolution and characterisation of planets in the solar system and beyond. Since the discovery of exo-planets by the UNIGE back in 1995, planetology now not only focuses on discovery, but on the physical and chemical characterisation of these new worlds. In this context the activities of Planets concern three main themes: the origin, evolution, and characterization of planets and planetary systems as a whole. Ultimately, Planets lays the foundations of a Swiss Institute of Planetary Sciences that will carry on these activities beyond the lifetime of the National Centre of Competence in Research.

nccr-planets.ch

ACADEMIC CALENDAR

www.unige.ch/calendar

LEVEL OF FRENCH REQUIRED BY UNIGE

No French proficiency test required for non-Francophones.

MOBILITY

Students may conduct research outside the university, under the supervision of a faculty member, or do a work placement at a leading external laboratory in order to complete their Master's degree.

unige.ch/exchange

PROFESSIONAL PROSPECTS

The Master in Astrophysics leads to a number of opportunities both in Switzerland and abroad, including:

- Research
- Data Science
- International organisations (ESA, ESO)
- Industry
- Teaching
- Communication and science outreach

UNIVERSITY TAXES

500 CHF / semester

REGISTRATION

Deadline: 30 April 2021

(28 February 2021 for applicants subject to a visa because of their nationality, as set forth in Swiss federal regulations)

unige.ch/enrolment

CONTACTS FOR STUDIES

FACULTY OF SCIENCE

Sciences II
30 quai Ernest-Ansermet
1211 Genève 4

STUDENT AFFAIRS

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

ACADEMIC ADVISOR

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

DEPARTMENT OF ASTRONOMY

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

www.unige.ch/sciences

All programs are subject to changes. Please consult the program regulations.

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

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
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

Programme secretary

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

Student Secretariat of the Faculty

T 022 379 66 61/62/63
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>

COMMON PROGRAMME (ALL SPECIALISATIONS) – SEMESTER 1

Semester 1 (Autumn): 30 ECTS

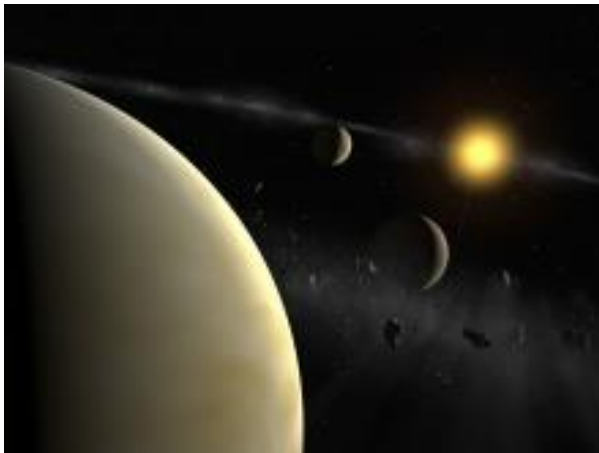
Mandatory:

- 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) - *Dr. D. Ségransan*
- Astrophysics Lab I (7.5 ECTS) - *Dr. M. Audard*

Elective:

- Astrophysics Colloquium - *Prof. P. Oesch / Prof. A. Fragkos*

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. C. Lovis*
- Astrophysics Lab II (7.5 ECTS) – *Dr. M. Audard*

Elective:

- Course(s) from other specialisations or other courses
- Astrophysics Colloquium - *Prof. P. Oesch / Prof. A. Fragkos*

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*
- 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 / Prof. A. De Cia*
- 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):

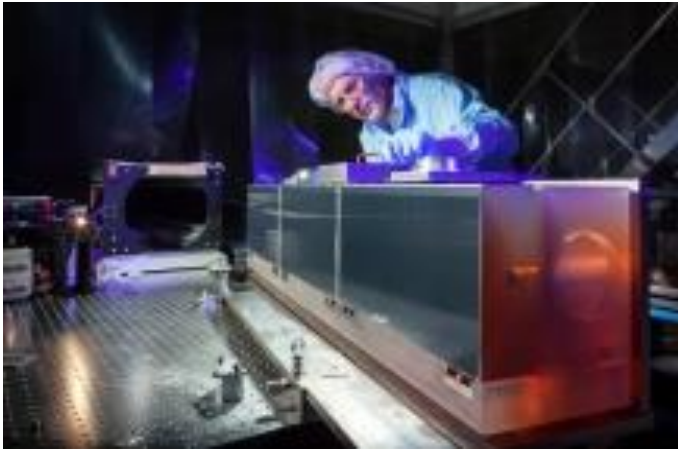
- Course(s) from other specialisations or other courses
- Astrophysics Colloquium - *Prof. P. Oesch / Prof. A. Fragkos*

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*
- 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*
- Astrophysics Lab II (7.5 ECTS) – *Dr. M. Audard*

Elective:

- Course(s) from other specialisations or other courses
- Astrophysics Colloquium - *Prof. P. Oesch / Prof. A. Fragkos*

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. P. Oesch / Prof. A. Fragkos*

COURSE SCHEDULE

Master in Astrophysics (Department of Astronomy, University of Geneva)
Complete schedule for the **fall semester** – 20 September – 24 December 2021

| 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. Segransan 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) | |

V1-20210722/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** – 21 February 2022 – 3 June 2022

| Monday | Tuesday | Wednesday | Thursday | Friday |
|---|--|--|--|--|
| 08h45 - 17h30 M. Audard Astrophysics Lab II | 08h45 - 10h30 G. Meynet Stellar Structure and Evolution 10h30 - 11h00 Science coffee 11h00 - 12h00 Astrophysics Colloquium UniGE-EPFL | 08h45 - 10h30 B. Chazelas / F. Wildi 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 Optics and Detectors for Astronomy (Ex+projects) 10h45 - 12h30 all Stars to Universe: Exercises | 08h45 - 10h30 all Exoplanetology Exercises 10h45 - 12h30 R. Walter 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 Planetary atmospheres 15h15 - 17h00 F. Bouchy 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) |

V1-20210722/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 | Physical processes in astrophysics (microscopic) | S | CR 2h A THU 14h15 - 16h00, Obs room 263 | 3,5 |
| 14A031 | Physical processes in astrophysics (macroscopic) | S | CR 2h A WED 8h45-10h30, Obs room 263 | 3,5 |
| 14A032 | Star and planets - an introduction | S | CR 2h A WED 13h15-15h00, Obs room 263 | 3,5 |
| 14A033 | Galaxies and cosmology - an introduction | S | CR 2h A THU 10h15-12h00, Obs room 263 | 3,5 |
| 14A034 | Astronomical observables and observations | S | CR 2h A TUE 08h45-10h30, Obs room 263 | 3,5 |
| 14A035 | Astrophysics and Data Science | S | CX 2h A TUE 13h30-16h00, Obs room 263 | 5 |
| 14A900 | Astrophysics Lab I | S | TP 8h A MON 08h45-17h30, Obs | 7,5 |

Elective

| Code | Name | Faculty | Type/Semester | ECTS credits |
|--------|--|---------|------------------------------------|--------------|
| 14A730 | Astrophysics colloquium | S | SE 1h AN TUE 11h00-12h00, Obs Aula | |
| 10A001 | Cours d'astronomie générale ouvert au public Les grandes missions spatiales pour l'Astrophysique – Saison 2 | S | SE 1h A MA 17-19, SCII-A300 | |

Semester 2 – Specialisation : Exoplanetology

Mandatory

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

Elective

| Code | Name | Faculty | Type/Semester | ECTS credits |
|--------|---|---------|---------------------------------------|--------------|
| 14A730 | Astrophysics colloquium | 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 | Stellar structure and evolution | S | CX 2h P TUE 08h45-10h30, Obs room 263 | 4,5 |
| 14A051 | Galaxies and Cosmology II - Galaxy Evolution in a Cosmological Context | S | CX 2h P WED 13h15-15h00, Obs room 263 | 4,5 |
| 14A052 | High energy astrophysics | S | CX 2h P FRI 10h45-12h30, Obs room 263 | 4,5 |
| 14A053 | From stars to galaxies: spectroscopic diagnostics in astrophysics | S | CX 2h P WED 10h45-12h30, Obs room 263 | 4,5 |
| 14A054 | From interstellar medium to stars: diffuse media and their link to star formation | S | CX 2h P TUE 13h15-15h00, Obs room 263 | 4,5 |
| 14A055 | From stars to the Universe : exercices | S | EX 2h P WED 15h15-17h00, Obs room 263 | 0 |
| 14A901 | Astrophysics Lab II | S | TP 8h P MON 08h45-17h30, Obs | 7,5 |

Elective

| Code | Name | Faculty | Type/Semester | ECTS credits |
|--------|---|---------|---------------------------------------|--------------|
| 14A730 | Astrophysics colloquium | 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 | Observational techniques | S | CR 2h P WED 15h15-17h00, Obs room 263 | 3,5 |
| 14A061 | Optics and Detectors for astronomy | S | CR 2h P THU 10h45-12h30, Obs room 263 | 3,5 |
| 14A062 | Optics and detectors in astrophysics (Ex + projects) | S | CX 2h P WED 08h45-10h30, Obs room 263 | 3,5 |
| 14A063 | Observations, data acquisition, data analysis | S | CX 4h P FRI 13h15-17h00, Obs room 263 | 7,5 |
| 14A901 | Astrophysics Lab II | S | TP 8h P MON 08h45-17h30, Obs | 7,5 |

Elective

| Code | Name | Faculty | Type/Semester | ECTS credits |
|--------|---|---------|------------------------------------|--------------|
| 14A730 | Astrophysics colloquium | S | SE 1h AN TUE 11h00-12h00, Obs Aula | |

2nd Year – All specialisations

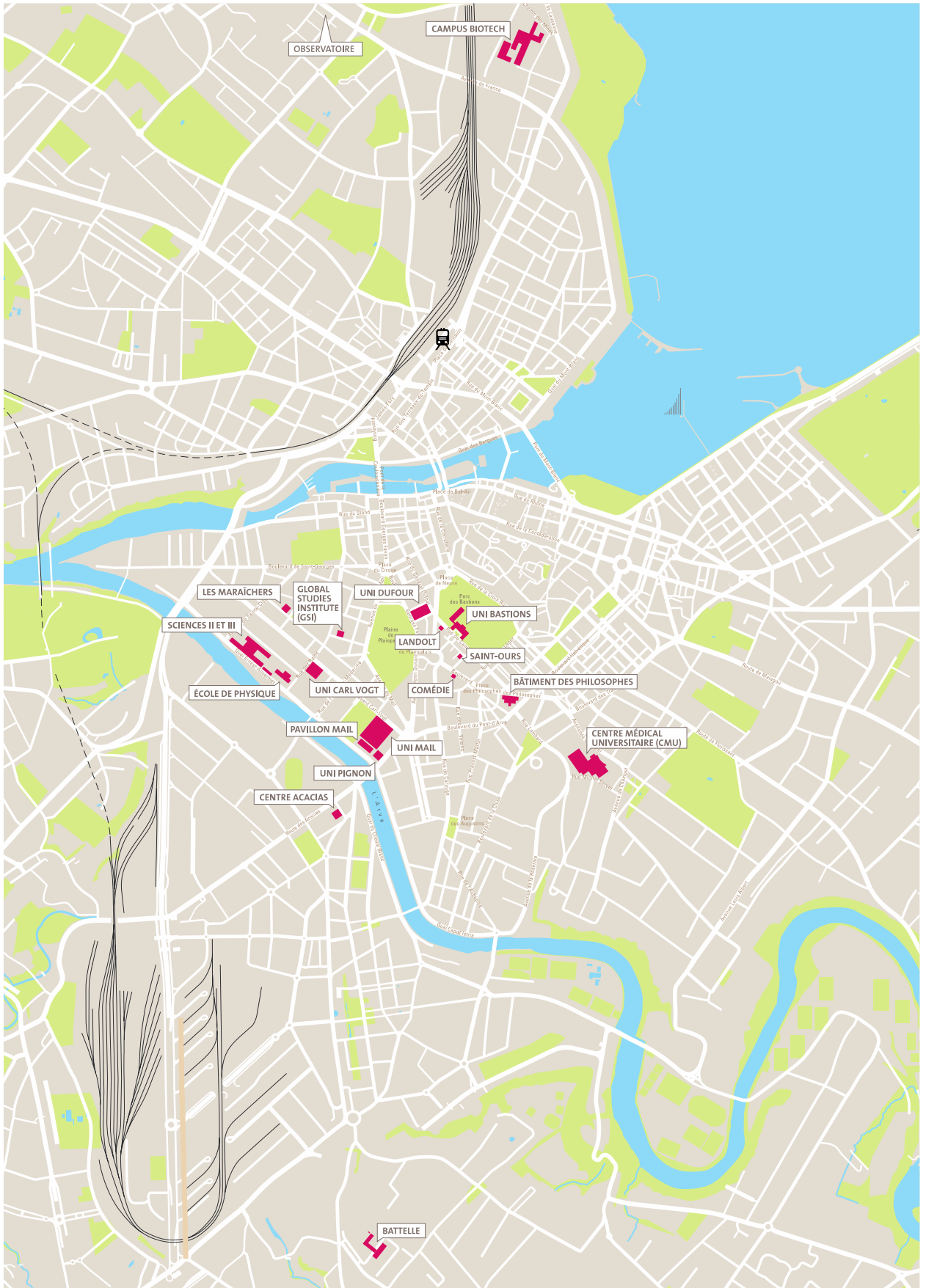
| Code | Name | Faculty | Type/Semester | ECTS credits |
|--------|---|---------|------------------------------------|--------------|
| | Major research project | S | AN | 60 |
| 14A730 | Astrophysics colloquium | S | SE 1h AN TUE 11h00-12h00, Obs Aula | |

FACULTY OF SCIENCE

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

Other UNIVERSITY buildings

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



Sciences



FACULTÉ DES SCIENCES

30 quai Ernest-Ansermet

CH - 1211 Genève 4

www.unige.ch/sciences



Atelier de reprographie ReproMail
Le papier recyclé contribue au développement durable