

last update 26.05.2020

Science and Exchange

Exchange and mobility may also take place in scientific institutions or programs worldwide. Several partner institutions of Switzerland offer exciting and helpful internship opportunities. Fit also for the C.V. Enroll now!

ELIXIR Training Programme

ELIXIR seeks to fill training gaps left by transformative technologies in medicine and the life sciences, including how big data is generated, analysed and interpreted. Most life science professionals will need to be upskilled to take advantage of the exponential growth of bioinformatics tools and data. It develops and delivers both e-Learning and Face-2-Face training to researchers, developers and infrastructure operators and trainers. This training is in topics identified as gaps within the ELIXIR community and in the ELIXIR use cases. Provides and coordinates training to transform scientists into effective users of the data, tools, standards and compute infrastructure provided by ELIXIR.

Increases the number of trainers (training capacity building) with a dedicated Train the Trainer programme.

Develops good practice guidelines and a training evaluation system in collaboration with GOBLET.

Aimed at postgraduate and industry.

Localisation (city): Delocalized (BE, CZ, DK, GB, EE, FI, FR, DE, GR, HU, IE, IT, IL, LU, NL, NO, PT, SI, ES, SE, CH)

Institution: ELIXIR

Educational level: Adult education

Sector: Biology, Informatics, Data analysis

Duration: Short training courses of 1-10 days in length.

elixir-europe.org/platforms/training

DESY Summer student Programme – postponed to 2021

Each summer DESY offers undergraduate students in physics, related natural science disciplines or computing the possibility to participate in the research activities of the laboratory. Selected candidates join in the day-to-day work of research groups at the DESY Laboratory in Hamburg or Zeuthen (Berlin) or at European XFEL (Hamburg) and participate in one of these activities.

While the work in the groups is the main activity, there will also be a series of lectures (given in English) related to the research done at DESY. Visits to the accelerators and experiments are also included in this programme.

Localisation (city): Hamburg/Berlin (DE)

Institution: European XFEL / DESY

Educational level: Higher education (Tertiary education)

Sector: Physics, Biology

Duration: 8 weeks

summerstudents.desy.de

EIROforum School on Instrumentation

Every 2 years (next edition in 2021) a school for Instrumentation is organized under the umbrella of EIROforum, and aims at giving the participants an overview of the basic and advanced principles of instrumentation, and hands-on experience of the values of interdisciplinary project work. The event includes talks on instrumentation concepts from the fields of Free-Electron Lasers, synchrotron radiation, astronomy, space science, high energy physics, fusion, neutron science and molecular biology.

Localisation (city): Delocalized at one of the EIROForum partner site (CH, DE, FR, NL, UK)

Institution: CERN, EMBL, ESA, ESO, ESRF, EUROfusion, European XFEL, ILL

Educational level: Higher education (Tertiary education)

Sector: Instrumentation (physics, biology, material sciences, chemistry)

Duration: 1 week

<https://www.eiroforum.org/tag/science-for-schools/>

European XFEL - PhD and master students

PhDs and some master students can study and work at the European XFEL research facility, with the administrative supervision retained by the universities with which the facility is collaborating with.

Localisation (city): Hamburg (DE)

Institution: European XFEL

Educational level: Higher education (Tertiary education)

Sector: Physics, biology, material sciences, chemistry

Duration: Ad hoc

<https://www.xfel.eu/>

EUCYS competition – postponed to 2021

The EUCYS (European Union Contest for Young Scientists) gives students the opportunity to

- compete with the best of their contemporaries at European level
- meet others with similar abilities and interests
- get guidance from some of the most prominent scientists in Europe

It highlights the best of European scientific student achievements and attracts widespread media interest. (Text from the EUCYS website)

Localisation (city): Delocalized (Europe)

Institution: EUCYS

Educational level: Higher education (Tertiary education)

Sector: Natural sciences, mathematics, social sciences

https://ec.europa.eu/info/research-and-innovation/funding/funding-opportunities/eucys_en

CERN National Teacher Programmes

CERN International Teacher Programmes

This 3-week residential programme, open to teachers from all CERN member and observer states, as well as from other countries subject to funding availability, who would like to update their knowledge of particle physics, its associated technologies and related subjects.

Localisation (city): Geneva

Institution: CERN

Educational level: Adult education and teacher education

Sector: Physics

Duration: 3 weeks

teachers.cern.ch

CERN Upper secondary education Students Internship Programme

CERN invites high-school students (from 16 years) to come to CERN for two weeks, to gain practical experience in science, technology, and innovation. It focuses on giving students the chance to discover STEM in the CERN context and environment, strengthening their understanding of science, and developing their skills in a high-tech environment.

Localisation (city): Geneva

Institution: CERN

Educational level: Upper secondary education

Sector: Physics

Duration: 2 weeks

hSSIP.web.cern.ch

CERN Summer student programme – postponed to 2021

Localisation (city): Geneva

Institution: CERN

The CERN Summer Student Programme offers students pursuing bachelor's or master's degrees in physics, computing, engineering and math a unique opportunity to join in the day-to-day work of research teams participating in experiments at CERN in Geneva, Switzerland.

Educational level: Higher education (Tertiary education)

Sector: Physics

Duration: 8-13 weeks

home.cern/summer-student-programme

ESO Internships

The ESO internships are an opportunity to gain insight and experience in an intergovernmental astronomy organisation carrying out an ambitious programme focused on the design, construction and operation of powerful ground-based observing facilities enabling astronomers to make important scientific discoveries.

Localisation (city): Delocalized (mostly Munich, DE or Chile)

Institution: ESO

Educational level: Higher education (Tertiary education)

Sector: Astronomy

Duration: Internships : 3-6 months, studentship : 2 years

<https://recruitment.eso.org/>

ESO research studentship programme

The research studentship programme provides an outstanding opportunity for PhD students to conduct their research in the vibrant scientific environment of one of the world's leading observatories for a period of up to two years.

ESO Teacher school programs

The ESO Educational Office is part of the education and Public Outreach Department. The aim is to provide support for astronomy and astrophysics education, especially at the high-school level. This includes teaching materials, courses for teachers and specific educational projects, often in collaboration with partners such as the European Association for Astronomy Education (EAAE), the EIROforum, the European Commission and others.

Localisation (city): Delocalized in Europe (mostly Munich, DE)

Institution: ESO

Educational level: Teacher education

Sector: Astronomy

Duration: Typically 2-4 days

www.eso.org/public/outreach/eduoff

Educational material:

www.eso.org/public/products/education

www.scienceinschool.org

Teacher school programs:

www.eso.org/public/outreach/eduoff/teacherschools

ESO Astronomy camp for lower secondary students

The camp will explore the theme of the Exoplanets via several astronomical sessions, including lectures, hands-on activities and night-time observations with the telescopes of the Observatory, alongside various social activities, winter sports and excursions.

Localisation (city): Aosta (IT)

Institution: ESO

Educational level: Lower secondary education

Sector: Astronomy

Duration: 1 week

www.sterrenlab.com/camps

Erasmus Mundus Programme

European educational initiatives in fusion aim to maintain the expertise that has placed the EU fusion program at the forefront of international fusion research and engineering and to ensure the availability of competent staff to construct and operate ITER and DEMO.

Localisation (city): Delocalized (worldwide)

Institution: Fusion for Energy / ITER

Educational level: Higher education (Tertiary education)

Sector: Physics

Duration: Master: 2 years, PhD: 3 years

www.iter.org/education/international/erasmus

FuseNet - The European Fusion Education Network

FuseNet develops education material and activities for lower secondary schools, supports master and PhD students in fusion to participate in an educational activity, it sponsors internships, organizes a yearly PhD event, awards certificates to students that fulfill the qualifications as defined by the fusion research field, develops teaching material and much more.

Localisation (city): Delocalized (worldwide)

Institution: Fusion for Energy / ITER

Educational level: Lower secondary education / Tertiary education

Sector: Physics

www.fusenet.eu

Fusion for Energy/ITER Summer schools

Summer schools on different topics for students.

Localisation (city): Delocalized (worldwide)

Institution: Fusion for Energy / ITER

Educational level: Higher education (Tertiary education)

Sector: Physics

Duration: Typically 1-2 weeks

www.iter.org/education

European Learning Laboratory for the Life Sciences

EMBL scientists visit schools; school groups visit EMBL; 2-3 days training courses for secondary biology teachers.

Multifaceted training and engagement activities provide European teachers as well as primary and secondary school students with hands-on experience of cutting-edge life sciences research. The European Learning Laboratory for the Life Sciences works closely with EMBL scientists to bring transform new ideas gained from EMBL research and technology into useful knowledge for teachers and students, aiming to raise curiosity for scientific research and make young people well-educated and critical consumers of scientific knowledge.

Localisation (city): Heidelberg (DE)

Institution: EMBL

Educational level: Primary and secondary school / Teacher education

Sector: Biology

Duration: School: single visits

Teachers: 3 days

<https://www.embl.de/training/scienceforschools/index.html>www.embl.de/training/scienceforschools/teacher_training/

EMBL Undergraduate internships and visits of graduated students

EMBL welcomes undergraduate and graduate students of all disciplines in the natural sciences extending from biology, chemistry, physics and mathematics to medicine, informatics and engineering. They can carry out research at one of EMBL's laboratories in Heidelberg (Germany), Grenoble (France), Hamburg (Germany), Hinxton (near Cambridge, UK), Rome (Italy) or Barcelona (Spain). Undergraduate internships are normally part of the student's Diploma, Bachelor or Masters' thesis project at another institution. Visits can also be arranged after degree completion. EMBL can help with different solutions in view of accommodation. Students may receive payment during their internship, e.g. from grants available to the respective Group Leader.

Localisation (city): Delocalized (Heidelberg DE, Grenoble FR, Hamburg DE, Hinxton UK, Rome IT or Barcelona ES)

Institution: EMBL

Educational level: Higher education (Tertiary education)

Sector: Biology

Duration: Flexible

Undergraduate internships :

www.embl.de/training/undergraduates/index.html

Visits after degree completion :

<https://www.embl.de/training/visitor-programme/index.html>

EMBL Lautenschläger Summer School

The EMBL Lautenschläger Summer School "Talents teach talents" builds on the strength of EMBL's outstanding research portfolio and its long-standing expertise in the training of young scientists. This two-week programme allows a selected group of undergraduate students from fields outside of biology (e.g. mathematics, physics, chemistry, engineering, computational science etc) to get a glimpse of modern day research in the life sciences.

The participants benefit from a well-balanced curriculum: EMBL group leaders and PhD students will lead theoretical lectures, complemented by experimental practicals and stimulating discussion rounds. The programme **also offers** several social activities that foster a collaborative spirit, which is a hallmark of research at EMBL.

The 2020 edition will focus on "Visualising Life – Interdisciplinary approaches to biology". The aim is to provide insightful and hands-on experience in current biology methods, such as building a high-speed microscope to image developing organisms, and using machine learning to extract insightful data from the resulting complex images.

Localisation (city): Heidelberg DE

Institution: EMBL

Educational level: Higher education (Tertiary education)

Sector: Biology (for students in Mathematics, Physics, Chemistry, Engineering, Computational Science etc.)

Duration: 2 weeks

https://www.embl.de/training/undergraduates/summer_school/

HERCULES (Higher European Research Course for Users of Large Experimental Systems)

The five-week school consists in specialized courses, lectures, practicals, tutorials and visits of European Large Facilities (co-organized with University Grenoble Alpes and Institute National Polytechnique). It provides students, postdoctoral and senior

Localisation (city): Grenoble (FR), with visits to other facilities in Europe

Institution: ESRF

Educational level: Higher education (Tertiary education) **Sector:** Physics, Large

scientists from European and non-European universities and laboratories with an overview of the techniques and scientific possibilities associated with neutrons and synchrotron radiation for condensed matter studies (biology, chemistry, physics, materials science, geosciences, and industrial applications).

facilities for natural sciences, industrial applications

Duration: 5 weeks

www.esrf.eu/home/education/hercules.html

X-Ray and Neutron Science - International Student Summer Programme (joint programme ESRF/ILL) – postponed to 2021

4-week experimental project embedded in a research group of ESRF or ILL, together with a series of introductory lectures on the principles and applications of X-ray and neutron science (magnetism, materials science, soft matter, structural biology, imaging, etc.). Financial support and free accommodation in Grenoble.

Localisation (city): Grenoble (FR)

Institution: ESRF / ILL

Educational level: Higher education (Tertiary education)

Sector: Physics, biology, material sciences

Duration: 4 weeks

<https://www.esrf.eu/home/education/summer-student-programme.html>

ILL Internship / Work placement opportunities

The Institut Laue-Langevin (ILL) is an international research centre at the leading edge of neutron science and technology. As the world's flagship centre for neutron science, the ILL makes its facilities and expertise available to visiting scientists from all over the world. Internships at ILL are an opportunity to contribute to the development of scientific research, participate in the implementation of advanced technology projects and work in an international context.

Localisation (city): Grenoble (FR)

Institution: ILL

Educational level: Higher education (Tertiary education)

Sector: Physics, biology, chemistry, material sciences, computer sciences, engineering, communication, administration

Duration: 3-5 months

<https://www.ill.eu/careers/all-our-vacancies/internships-work-placements/>

ESA Young Graduate Trainees (YGT), Swiss National Trainee Programm (NTP); Internships; PhD Students; Research Fellows

YGT: The programme lasts for one year and gives participants an opportunity to gain valuable experience in the development and operation of space missions. Opportunities go online once a year in mid-November, and stay open for one month.

NTP: The programme offers the opportunity to work at the European Space Agency ESA and gain valuable experience in the development and operation of space missions. National Trainees gain valuable hands-on training and experience, launching their career in the space sector in industry, research or, of course, at ESA itself. This, in addition to the rich personal experience of living and working in another country within an exciting, diverse and international environment, makes the NTP very unique. Announcement April/May.

Localisation (city): Delocalized at European Space Agency ESA Centers (Nordwijk, Paris, Madrid, Rome, Cologne, Darmstadt)

Institution: ESA

Educational level: Higher education (Tertiary education) (with Masters)

Sector: Natural sciences, mathematics, social sciences, Interest in space science and applications

Duration: 1-2 years training; Others depending on programme

http://www.esa.int/About_Us/Careers_at_ESA/Graduates_Young_Graduate_Trainees

<https://www.spacecenter.ch/activities/spacecareer/ntp/>

ESA Teacher Workshop; Galileo Teacher Training

The workshops, identical in both summer and autumn editions, feature keynote lectures from top-level space experts and visits to the ESA ESTEC facilities. Over the course of a four-day programme, the participants will engage in practical training sessions that demonstrate how to use space in the classroom as an inspirational context.

Localisation (city): Leiden (NL)

Institution: ESA

Educational level: Teacher education

Sector: Space sciences

Duration: 1 week, 2 times / year (July & October)

http://www.esa.int/Education/Teachers_Corner/About_ESA_s_Summer_and_Autumn_Teacher_Workshops

ESA Academy is ESA's overarching educational programme for university students from ESA Member States

Hands-on space projects and experiments. Training courses with ECTS.

Localisation (city): Redu (BE)

Institution: ESA

Educational level: Higher education (Tertiary education)

Sector: Space sciences

Duration: Ongoing announcements on the ESA website

http://www.esa.int/Education/ESA_Academy

Series of challenges & competitions tailored to different age groups and open to all ESA Member States (e.g CanSat, Astro Pi, Mission X, Moon Camp Challenge, Climate Detectives)

Localisation (city): Delocalized - local to classrooms/schools with possibilities for travel

Institution: ESA

Educational level: Primary and lower secondary education

Sector: All subjects, with some emphasis on physics, mathematics, biology, chemistry

Duration: Ongoing announcements on the ESA website

<http://www.esa.int/Education>

(see section "School projects »)