

ESP Diploma Courses

FIRST SEMESTER

Wave Physics

Fluid Dynamics

Earth Systems Thermodynamics

Physics of the Earth for Geohazards

Physics of the Atmosphere

Numerical Methods I

SECOND SEMESTER

Physics of Climate

Physics of the Ocean

Ocean Dynamics

Atmospheric Dynamics

Climate Modelling & Change

Biogeochemical Cycles

Numerical Methods II

Physics of Earthquakes and Volcanoes

Theoretical Seismology

Applied Seismology

Space Geodesy and InSAR

Physics of Volcanoes

Mechanics of Earthquakes and Tectonophysics

Earth System Physics Diploma Programme

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Earth System Physics Section

The Earth System Physics (ESP) section studies a wide spectrum of the Earth system, from its fluid components (oceans and the atmosphere) to the planet's interior.

To know more please visit:

www.ictp.it/research/esp.aspx

The Abdus Salam

International Centre for Theoretical Physics

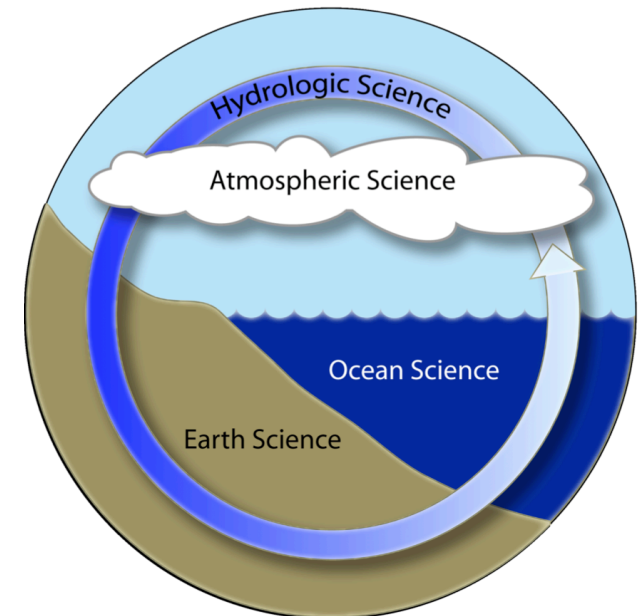
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The Abdus Salam
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Earth System Physics Diploma Programme 2018/2019



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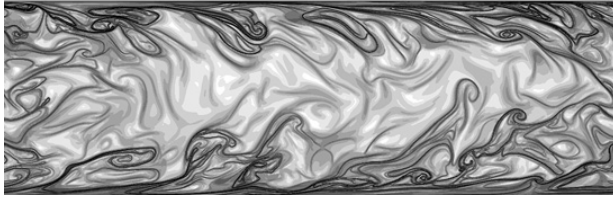
The Diploma Course

Supporting its mission to promote advanced scientific research in developing countries, ICTP offers a Postgraduate Diploma Programme that prepares talented students for PhD studies.

This one-year pre-PhD programme consists of two semesters of basic and advanced courses given by experts in the fields of Earth System Physics.

After the completion of the courses (including examinations), participants are required to work on an assessed dissertation.

The Postgraduate Diploma Programme started in 1991, and since then, many of its graduates have gone on to undertake PhDs at various prestigious universities worldwide. Many of them have subsequently returned to their home countries, where they are actively involved in teaching and in developing advanced research groups. Others have pursued scientific careers in leading scientific institutions worldwide. Former students often continue to maintain an active collaboration with ICTP throughout their careers.



The Programme is open to young qualified graduates in physics, mathematics or related fields. A limited number of scholarships (around 10) are awarded to successful candidates from developing countries (with a particular emphasis on students from the least developed regions of the world) to cover travel and living expenses during their stay at ICTP. The selection of the candidates is based on their University performance as well as on academic recommendations. The selection committee aims to select the best academically qualified candidates while striving for gender balance and geographical distribution.

Structure of the Diploma

The ESP Diploma offers courses in the fields of *Fluid Dynamics, Physics and Dynamics of the Atmosphere, Oceans and Solid Earth, Climate Dynamics Variability and Change, and natural hazards such as earthquakes and volcanoes*, reflecting the core research activities of the ESP Section at ICTP. The academic programme consists of three terms:

1. The first one, common to all students, is dedicated to courses in basic subjects.
2. After the first term, students choose to follow either the **Physics of Climate** or the **Physics of Earthquakes and Volcanoes** branch of the Diploma. The second term is thus devoted to advanced topics in the chosen field.
3. In the third term students carry out research under the guidance of a faculty supervisor.

During the first eight months of the programme students attend, on average, about 10 hours of lectures per week, and complete obligatory homework assignments. Final examinations are administered for all courses. Those who successfully complete this stage can progress to work on dissertations during the last three months of the programme, ending in an oral defense of the written dissertation. The ICTP Postgraduate Diploma is awarded to those students who have successfully completed the examinations and dissertation work.

More contact details are available on the Diploma Office page.



How to Apply

The online application form can be found here:
diploma.ictp.it/application-and-admission.aspx
the application deadline is **31 January 2016**.

Qualifications and scholarships

- The Postgraduate Diploma Programme is open to young (generally below 28 years of age), qualified graduates from all developing countries that are members of the United Nations, UNESCO or IAEA.
- The minimum qualification for applicants is a degree equivalent to an MSc (or an exceptionally good BSc) in physics, mathematics or engineering. The selection of candidates will be based on their university record and on academic recommendations.
- Since the Postgraduate Diploma Programme is in English, fluency in speaking and writing is essential.
- The applicant is expected to have an adequate theoretical background in physics, mathematics or engineering, and skills on mathematical methods applied to geophysics and geosciences. Prior knowledge in Earth Sciences is not a necessary prerequisite.

Scholarships and travel grants will be awarded to those 10 students selected from developing countries. There are no course fees. The scholarships cover living expenses for the entire year of study.

A limited number of qualified candidates who meet the same selection criteria as others may attend the courses at their own cost. They must supply written evidence from a funding agency or a banking institution that funds are available for their entire year's stay, and are equal to those offered by the Centre.

Application

In addition to completing an online application form, candidates should upload the following as part of their application:

- Copies of transcripts of university academic records and university degrees in English (The selected candidates will be required to provide originals or certified copies of these documents as well as of their official English translation before he/she can be admitted to the Programme).
- Any certificates or documents that give proof of the student's ability to follow advanced-level courses, study and write scientific literature in the English language.
- Two letters of recommendation, from scientists familiar with the applicant's studies and work.

Questions concerning the course syllabus or related topics should be addressed to the course director.