



POLITECNICO
DI TORINO

For over 150 years, Politecnico di Torino has been one of the most prestigious public

institutions at both national and international levels in the field of education, research, technology transfer and services in all sectors of Architecture and Engineering. Its long history demonstrates how the University has grown into a focal point for education and research in Italy and in Europe.

Today, Politecnico di Torino is an internationally recognized Research University which attracts students from 120 countries and runs about 800 projects per year in cooperation with businesses, public and private institutions, local organizations.

The Specializing Master's Programmes and Lifelong Learning School is a centre of excellence which defines ground-breaking educational policies and addresses the demands of the economic context.

The School's programmes are designed to meet the need for high-level technical training that boosts the knowledge base already acquired by students during the traditional degree paths. The programmes also actively address the constantly changing requirements of the world of work, support and develop students' competitiveness and entrepreneurial skills.

The School addresses the needs of scientific and technological innovation expressed by industry and the service sector. It designs and implements tailor-made training programmes for recent graduates, newly employed staff and senior professionals. To this end, the School has built partnerships with other Italian and international universities, as well as with public bodies and major corporations.

The programmes allow participants to acquire on-the-job training thanks to the opportunity to gain experience in a company, in Italy or abroad. The Master's programmes and training courses are intended for Italian and international students, since they are consistent with the University's internationalization process and preserve its traditional connection with the local community.



12th edition

2nd Level Specializing Master's Programme in
Space Exploration and Development System



Institutional supporters:



Endorsing companies:





The 2nd level Specializing Master's Programme in "**Space Exploration and Development Systems**" (SEEDS) focuses on the human and robotic exploration of space and on the related missions, systems, and technologies.

The purpose of the programme is to provide young graduates with the core applied physics and engineering skills required to develop space systems and missions from initial concept through design, assembly and verification, to launch and operations.

To reach these objectives SEEDS relies on the tight collaboration of three European Higher Education Institutions located in three different countries, namely Politecnico di Torino in Italy, Institut Supérieur de l'Aéronautique et l'Espace (ISAE, Toulouse) in France and University of Leicester in UK.

All three partners share common features including: strong links with space industry, heritage in space research and exploration, and the inclusion of high-level expertise in the delivery of teaching, based on both the academia and the industry.

Three parallel SEEDS classes are recruited every year, at Politecnico di Torino, ISAE Toulouse and University of Leicester. The first 5-6 months are spent at the recruiting Institution and consist of class lectures, providing the general foundations of the various disciplines related to Space Exploration. Each subject is held under the responsibility of a teacher of Politecnico di Torino, but nearly 50% of the lecture time is provided by people having direct industrial experience at an international level.

In the following 6-7 months the students from the three Institutions are grouped together to develop the SEEDS Project Work (PW) under the guide of experienced senior tutors. The Project Work begins in Turin, Italy, and then proceeds in France and UK. During the Project Work the students have also the opportunity to spend two weeks at the European Space Agency or at National Space Agencies.



The Master programme is structured as follows:

Starting date: November 2020 (a.y. 2019/2020)

Duration: 12 months

Language: English

ECTS (European Credit Transfer System): 80 (including classes and project work)

Format: full time

Campus: Politecnico di Torino – Lingotto Campus

Who can attend: The programme is addressed to graduate students having completed a Master's degree programme (or equivalent title) in the areas of studies of Engineering and Universal Sciences.

COURSES

Fundamentals of space sciences and techniques

Space management and utilization

Space exploration systems I

Space exploration systems II

Human space systems I

Human space systems II

Space telecommunications, GNC and avionic (6-months Project Work) :

- Internship at Thales Alenia Space/Altec
(International Space Company/Space Research Center in Turin)

- Internship at ISAE

- Internship at University of Leicester

- 2 weeks at European Space Agency/National Space Agencies

Final event

CONTACTS

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 <https://didattica.polito.it/master/seeds/2020/introduction>

 <https://www.linkedin.com/company/spaceexplorationanddevelopmentsystems/>