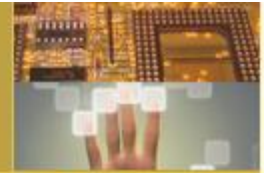




UNIVERSITÀ
DI PAVIA
Master Programs in

Electronic Engineering
Computer Engineering
Industrial Automation Engineering



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Welcome

The School of Engineering of the [University of Pavia](#) (Italy) offers three international Master of Science programs ("Lauree Magistrali"): MSc in [Electronic Engineering](#), MSc in [Computer Engineering](#) and MSc in [Industrial Automation Engineering](#). The first one has three tracks on [Microelectronics](#), [Photonics](#) and [Space Communication and Sensing](#); the second one has two tracks on [Computer Science and Multimedia](#) and [Embedded and Control Systems](#); the third one has two tracks on [Industrial Technologies and Management](#) and [Robotics and Mechatronics](#). Courses are taught in English by highly qualified professors with an internationally recognized scientific activity. The Computer Engineering MS has Double Degree agreements with four Chinese universities: Tongji (Shanghai), HIT (Harbin), UESTC (Chengdu) and NEU (Northeast University).

The University of Pavia is one of the oldest in Europe, founded in 825. Many renowned humanists and scientists studied and taught at the Alma Ticinensis Universitas, such as Cardano, a mathematician who found out the Cardanic joint and the solution of cubic equations, and Alessandro Volta, the inventor of electric piles.

Nowadays, the multidisciplinary University of Pavia includes nine faculties, three campuses covered by free WiFi access and the largest Residence Hall system in Italy. The [University Sports Center](#) (CUS) offers modern training facilities for track and field, canoeing, rowing, volleyball, rugby, fencing, archery, sports for physically disabled persons, aerobics, basketball, swimming and sailing.





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Space Communication and Sensing

[Download the MSc programme here](#)

Putting men on the Moon and robots on Mars might be the most eye-catching achievements of **space technology**, but its real weight and potential to impact our everyday lives actually lies elsewhere and is **more pervasive than we believe**. The space industry offers an ever-expanding array of space products and services, which are **changing the way people go about their daily lives**. Examples may be cited from GPS navigation, telecoms, weather forecasting, satellite monitoring of Earth surface.

They continue to evolve in technological sophistication and capability, and their applications continue to change and adapt with the needs of the economy. Space manufacturing and service industries are the strategic high-tech sectors **driving growth and innovation well beyond the space sector, delivering value across all economic areas**.

The global space industry is a highly strategic sector, helping our communities to both face societal challenges and create innovative technologies and services - ultimately generating **employment and welfare**. In Europe, for example, existing space programmes Galileo and EGNOS are expected to generate economic and social benefits **worth around €60-90 billion over the next 20 years**.

To catch up with the explosive growth of space applications, a **specialized workforce** is needed, and **will be increasingly needed**, in the space sector.



With our minds set to hooking to this growth, and building on our experience in space-related applications ranging from Earth Observation to Space Communications, from Space Antennas Technology to Space Signal Processing, **we decided to launch the new "Space Communications and Sensing" MSc programme.**

The envisaged objective is to **prepare graduates** with a well-fitting background to the foreseen expanding space employment areas. A **solid theoretical and practical education** on different issues connected to space will be the **first pillar** on which a successful curriculum will be built up for our students. Our courses will indeed cover different topics, from hardware (e.g. antenna design) to software (Digital Signal Processing, networks, pattern recognition), from physics (scattering models) to system-oriented design (satellite systems), from hard-wired electronic circuits to immaterial laser communications.

In terms of our students' curriculum, SPACE is intended to be an opportunity, not a constraint.

To keep our teaching at the forefront of science advancement, a vital contribution comes from the dense connections with other Universities and research centres scattered around the world. Among the most notable examples are Rio (Brazil), Hannover and Technical University Munich (Germany), Extremadura (Spain), China University of Mining and Technology (China), Grenoble Institute of Technology (France), Ecole Polytechnique Federale de Lausanne (Switzerland), Chiba and Tohoku (Japan), Nottingham and Cambridge (UK), Massachusetts Institute of Technology and Stanford (USA).

A **second pillar** is enabled by our **well-established network** of collaborations with **Space Agencies and international Space Companies and Corporates, besides the local high-tech companies and spin-offs.** A non-exhaustive list includes: European Space Agency (ESOC, ESRIN, ESTEC), EUMETSAT, Italian Space Agency, Selex Electronic Systems, Telerilevamento Europa, Aresys, Compagnia Generale dello Spazio, GalileianPlus, Callisto Space, ACS, Cobham, Risk Management Solutions, EUCENTRE, ImageCat UK, ImageCat US, Cambridge Architectural Research, SARMAP, Geoscience Australia, US Geological Survey, NASA, the Surrey Space Centre, the Global Earthquake Model.

The second pillar will indeed consist of a wide offer of valuable internships and vocational training opportunities. Many of our students in the past have found their workplace as the natural follow-up to an intern.

Our graduates, boasting an all-round technical and operational background, will be set to an excellent launch in the employment market in a fascinating, innovative, and appealing hi-tech environment.