Bachelor's Degree in Geomatic and Surveying Engineering

**Engineering and Architecture**
**Information and Communications Technologies**

School of Engineering in Geodesy, Cartography and Surveying
Building 7i
Campus of Vera (València)

Bachelor's Degree in Geomatic and Surveying Engineering

- 4 courses
- 240 credits
- Spanish and valencian
- Credit 20.27 € (2019/2020)
- 75 places
- Cut-off marks
- etsigct@upv.es
- +34 963 877 160
- www.upv.es/titulaciones/GIGT
- Credit 20,27 € (2019/2020)

It will make you eligible for scholarships.

**Introduction to the degree**

The Engineering Degree in Geomatics and Surveying provides the skills and tools necessary to develop a professional activity that involves the acquisition, management and representation of the information associated with territory, including mastering all the methodologies and techniques for territory data collection (remote sensing, photogrammetry, geophysics, GPS, etc.), using the Geographic Information Systems (GIS) and the use and development of software.

Their uses include engineering and construction works; the development of cartography along with its management and computer operations; land registration and regional planning taking into account the legal, economic, social and environmental aspects.

Geomatics has opened new professional horizons, spatial applications on mobile devices, maps servers like Google Maps, augmented reality such as Google Earth or Street View, locators, route managers, logistics, fleet controls, tourism applications, etc.

**International mobility**

One of the hallmarks of the ETSIGCT is its international relations. The International Office participates in most international mobility programmes and holds agreements with more than 80 universities in 22 countries in Europe and America.

The ETSIGCT has double degree agreements with the ESTP in Paris and the FH Karkruhe in Germany. This type of agreement offers the possibility of obtaining the official degree of the host university or school as well as the UPV’s.

**Internships**

The agreements signed between the School, private companies and public bodies offer a wide variety of paid internships in Spain and abroad, mentored by a professor from the School and a technical expert from the company. Additionally, there are associations in the School through which you can enjoy internships abroad (IAESTE) or European training courses in transversal competencies (BEST).

**Continuation of studies**

With this degree, you will be able to access to:

- MD in Geomatics Engineering and Geoinformation
- UPV Master’s Degree
- others MD + levelling subjects

**Professional opportunities**

This degree qualifies you to become a Geomatics and Topographical engineering professional. You will be able to work in both the public and private sectors in the following areas:

- Cartography drafting based on aerial, satellite or drone imaging and its publication on the internet.
- Creating an inventory of the architectural and archaeological heritage through geophysical techniques and three-dimensional scanning.
- European Space Agency programmes: satellite navigation (Galileo) and Earth observation (Copernicus).
- Territory planning and management by means of Geographic Information Systems (GIS).
- Topographical tasks for the performance of works, expert advice, technical assistance, work supervision, legal examinations, property delimitation, etc.
- Geometric control and auscultation of major works.
- Emergency management.

Enjoy our huge campuses with spaces designed for you such as the Student Recreation House.

You can do up to 70 sports in our facilities.

You will find many services at your disposal: language classes, discounts in public transport, counselling, employability support…

Study at the UPV and be part of Spain’s best technological university according to the Shanghai ranking.

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## Credits for obtaining the degree

<table>
<thead>
<tr>
<th>Basic courses</th>
<th>Compulsory</th>
<th>Elective</th>
<th>Internship</th>
<th>TFG</th>
<th>Total</th>
</tr>
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<tbody>
<tr>
<td>60.00</td>
<td>144.00</td>
<td>24.00</td>
<td>0.00</td>
<td>12.00</td>
<td>240.00</td>
</tr>
</tbody>
</table>

## The subjects that you will be able to take

### Basic courses
- Algebra
- Business Organization and Management
- Calculus
- Computer Science
- Databases
- Electromagnetism and Optics
- Geomorphology
- Graphic Representation Techniques
- Mathematical Methods
- Mechanics
- Civil Engineering
- Digital Image Processing
- Environmental Engineering
- Geographic Information Systems
- Geomatics Project Development and Execution
- Geometric Design of Civil Infrastructure
- Geometrical Geodesy
- Geophysics
- Map Design and Production
- Map Projections
- Mapping Instrumentation and Observations
- Photogrammetry
- Physical Geodesy
- Remote Sensing
- Spatial Data Infrastructures
- Spatial Geodesy
- Surveying Procedures
- Urban and Spatial Planning
- 3D Data Treatment and Management

### Compulsory courses
- Civil Works Surveying
- Adjustment of Observations
- Advanced GIS
- Applied Mathematics
- Applied Photogrammetry and Remote Sensing
- Cadastre
- Cartography

### Elective courses
- Academic and Professional French B2
- Academic and Professional German B2
- Advanced Programming
- English B2
- GIS Programming On Mobile Devices
- GPS Projects
- Mobile Devices and GNSS
- Photogrammetry and Graphic Representation of Heritage
- Topografía Industrial

Internationally accredited bachelor’s degree (EUR-ACE)