310628 - Surveying in Civil Engineering

Degree competences to which the subject contributes

- Definition of geometry, in planimetry and altimetry, of projects about linear sketches and infrastructures.
- Application of the topography in the different specialties of engineering. The surveying and metric control in projects of architecture and engineering.
- Measurements and cubage techniques.
- Safety, health and labour risks in the professional environment of geomatics.

Learning objectives of the subject

- Definition of geometry, in planimetry and altimetry, of projects about linear sketches and infrastructures.
- Application of the topography in the different specialties of engineering. The surveying and metric control in projects of architecture and engineering.
- Measurements and cubage techniques.
- Safety, health and labour risks in the professional environment of geomatics.
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### Study load

<table>
<thead>
<tr>
<th>Study load</th>
<th>Total learning time: 150h</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hours large group:</td>
<td>24h  16.00%</td>
</tr>
<tr>
<td>Hours medium group:</td>
<td>36h  24.00%</td>
</tr>
<tr>
<td>Self study:</td>
<td>90h  60.00%</td>
</tr>
<tr>
<td>Content</td>
<td>Learning time</td>
</tr>
<tr>
<td>---------------------------------------------</td>
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<tr>
<td><strong>Surveying concept</strong></td>
<td><strong>1h</strong></td>
</tr>
<tr>
<td><strong>Learning time</strong></td>
<td><strong>21h</strong></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Geometric fittings</strong></td>
<td><strong>7h</strong></td>
</tr>
<tr>
<td><strong>Learning time</strong></td>
<td><strong>33h</strong></td>
</tr>
<tr>
<td><strong>Surveying methods</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Learning time</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Alineation definition in floor plan</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Learning time</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Description</strong></td>
<td></td>
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<tr>
<td><strong>Related activities</strong></td>
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<tr>
<td><strong>Related activities</strong></td>
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</tbody>
</table>
### Alineation definitions in elevation

**Description:**
Vertical deals. Intersections and fitting.
Longitudinal profiles

**Related activities:**
Practices in class

**Learning time:** 10h
- Theory classes: 2h
- Practical classes: 2h
- Self study: 6h

### Definition of the transverse section

**Description:**
Transverse profiles.
Type section. Elements and conditionings.
Regulation aspects.
The relation with the floor plant and elevation longitudinals

**Related activities:**
Practices in class

**Learning time:** 50h
- Theory classes: 3h
- Practical classes: 17h
- Self study: 30h

### Measurements and cubage

**Description:**
Measurement of longitudinal elements.
Measurements of surfaces and volumes.
Regulation aspects.

**Related activities:**
Practices in class

**Learning time:** 28h
- Theory classes: 2h
- Practical classes: 9h
- Self study: 17h
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Qualification system

Continuous evaluation by small theoretical tests.
Practical exams that have a great importance in the final mark.
Valoration of the deliveries.
The attendance is valorated in the final mark.

Bibliography

Basic:

