The establishment of the European System of Higher Education is the consequence of several meetings held by the politicians according to the following timetable:

SORBONE (1998)
BOLOGNA (1999)
SALAMANCA (2001)
BERLIN (2003)

Main objectives:
- To increase the international competitiveness of the European system of higher education.
- To ensure that the European higher education system acquires a world-wide degree of attraction equal to our extraordinary cultural and scientific traditions.
- To reach in the short term, and in any case within the first decade of the third millennium, the following objectives:
  - Adoption of a system of easily readable and comparable degrees (implementation of the Diploma Supplement).
  - Adoption of a system essentially based on two main cycles: graduate and postgraduate.
  - Establishment of a system of credits - such as in the ECTS system. (1 credit ECTS = 25 – 30 hours student work)
  - Promotion of mobility for students, teachers and administrative staff.
  - Promotion of European co-operation in quality assurance.
  - Promotion of the necessary European dimensions in higher education

Regarding the two cycles it is established:
- Access to the second cycle shall require successful completion of the first cycle studies, lasting a minimum of three years.
- This cycle should consist of three or four years (180 or 240 ECTS)
- The degree awarded after the first cycle shall also be relevant to the European labour market as an appropriate level of qualification.
- The second cycle should lead to the master and/or doctorate degree as in many European countries. (Nothing is said about professional qualifications given by this cycle)
- This cycle should consist of one or two years (60 or 120 ECTS).

APPLICATION IN SPAIN
LEGAL REGULATION: RR. DD 55 & 56, 25 JANUARY 2005
APRIL – MAY 2005: CATALOGUE OF GRADUATE UNIVERSITY DEGREES
RR. DD FOR EVERY NEW GRADUATE DEGREE
OCTOBER 2007: ALL UNIVERSITY DEGREES WILL BE ADAPTED TO THE NEW SYSTEM
POSTGRADUATE STUDIES: EVERY UNIVERSITY WILL PREPARE ITS OWN POSTGRADUATE DEGREES
ENGINEERING STUDIES:
- ONLY ONE NAME FOR DEGREE
- 240 ECTS + FINAL THESIS + PROFESSIONAL PRACTICE + LANGUAGES
- WITH SEVERAL ORIENTATIONS AND PROFILES TO FULFIL THE DIFFERENT NEEDS.

POSSIBLE MODELS:
- Master A
- Eng. X
- Master B
- Eng. Y
- Master C
- Eng. Z
- Master D

SINCE THE MIDDLE OF 2003 ALL UNIVERSITIES WITH DEGREES IN SURVEYING AND THE PROFESSIONAL ASSOCIATIONS STARTED WORKING IN OUR “WHITE BOOK”.

THERE WERE THREE COMMISSIONS:
- ACADEMIC COMMISSION
- PROFESSIONAL COMMISSION
- MOBILITY AND QUALITY COMMISSION

70% OF THE CURRICULUM WILL BE COMMON AND OBLIGATORY FOR EVERY UNIVERSITY WITH THIS DEGREE.

30% FREE FOR EVERY UNIVERSITY

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30% FREE FOR EVERY UNIVERSITY
INFORMATION SOURCES:

- INQUIRIES OF C. O. I. T. TOPOGRAFÍA
- THEMATIC EGECS NETWORK
- TUNNING PROGRAMME
- ALFA NETWORK
- F. I. G.
- C. L. G. E.
- OWN INQUIRIES

PROFESSIONAL FIELDS:

- Project, development and management of Measurement Processes; modelling, representation and visualization of the physic characteristics on, under and over the terrestrial surface.
- Project, development and management of Information Systems.
- Project, development and management of processes of images use.
- Project, development and management of Navigation and Positioning Systems.
- Project, development and management of processes and products for Civil Engineering and Architecture.

PROJECTED CURRICULUM:

FOUR BIG GROUPS OF SUBJECTS WERE CONSIDERED

<table>
<thead>
<tr>
<th>SPECIFIC SUBJECTS</th>
<th>CREDITS</th>
<th>Student Work Hours</th>
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</thead>
<tbody>
<tr>
<td>MATHMATICS</td>
<td>37</td>
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COMMON SUBJECTS TO ENGINEERING (27 ECTS)

<table>
<thead>
<tr>
<th>SPECIFIC SUBJECTS</th>
<th>CREDITS</th>
<th>Minimum Hours</th>
<th>Maximum Hours</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIVIC ENGINEERING</td>
<td>12.5</td>
<td>112.5</td>
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<tr>
<td>GRAPHIC ENGINEERING</td>
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<tr>
<td>ENVIRONMENTAL ENGINEERING</td>
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<td>87.5</td>
<td>165</td>
</tr>
<tr>
<td>GERMANOLOGY</td>
<td>3.4</td>
<td>87.5</td>
<td>165</td>
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<tr>
<td>ENGINEERING PROJECTS</td>
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<td>170</td>
</tr>
<tr>
<td>Total</td>
<td>25</td>
<td>475</td>
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</table>
The New Degree in Surveying.

The competencies for the engineers replaced by the new one
- The professional profiles established in the “White Book”
- That had by our colleagues around Europe (CLGE) and the world (FIG)

What about the present engineers?
The government will establish the steps to transform the present engineers to the new one.
Universities and professional associations will propose that such transformation be without complementary studies.
THE PROFESSIONAL PARADIGM

MEASUREMENT

SPATIAL INFORMATION MANAGEMENT

LAND MANAGEMENT

Diseñar/ construir/ manejar el entorno natural/artificial y unido a los derechos espaciales/legales