

Working Group 1 Undergraduate Education



EEGECS WORKING GROUP 1:

THE FIRST FIVE YEARS OF THE WORKING GROUP ON UNDERGRADUATE EDUCATION...

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Working Group 1 Undergraduate Education



EEGECS objectives

- Improve quality in education.
- Enhance its European dimension.
- Increase mobility and improve transparency and credit recognition:
 - ✓ Diploma Supplement
 - ✓ Recognition for teachers
- Foster co-operation, dialogue, exchange of information and experience between Institutions and other sectors of society.
- Introduce and extend among all the European universities an e-learning system.







EEGECS objectives

- Adopt a system of easily readable and comparable degrees (ECTS).
- Move towards the adoption of a two-tier degree and the establishment of a single quality accreditation system and unified criteria for quality assurance.
- Promote a knowledge-based society (lifelong learning, ICT in learning and teaching).
- Increase the attractiveness of European Area of Higher Education in Geodesy, Cartography and Surveying.
- Move towards the adoption of a common frame of reference for degrees



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EEGECS working groups

- WG-1 Undergraduate Education.
- WG-2 Research.
- WG-3 Continuous education, E-learning and European Dimension of Studies.
- WG-4 Enterprises Private Sector.
- WG-5 Mobility, Languages, Culture, Citizenship, Social Cohesion...
- WG-6 Quality Assurance.



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Working Groups activities

- They have developed their activities with support of questionnaires, surveys, consultancies, searching in internet or other sources.
- They have organized forums and workshops to analyze information and come up with results





WORKING GROUP 1: UNDERGRADUATE EDUCATION

Objectives

- Develop the state-of-the-art of the discipline in Europe and other countries: comparative analysis of the study plans in each country (within Europe, and other countries, to enhance dialogue between higher education institutions, exchange ideas and information and obtaining a general panorama)
- Adoption of the ECTS, and implementation of the Diploma Supplement, to promote transparency, and facilitate mobility and recognition of study periods abroad
- Move towards the adoption of a 2-tier degree system
- Elaborate a core curriculum of the discipline, with a European dimension, in order to organise diversity, rather than eliminate it.



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WORKING GROUP 1:

UNDERGRADUATE EDUCATION

Number of members: 39

(20 countries)

embers:	 Francisco García García 	B	Israel Quintanilla García	B	Jean-Paul Donnay
	Alain de Wulf	œ	Jean-Jacques Derwael	œ	Erik Stubkjær
	Mathias Neumann-Redlin	G	Kostas Katsambalos	G	Luís Camarero Estela
	Rosa Chueca	œ	Norbert Bartelme	G	Sabine Prem
	Stig-Göran Mårtensson	œ	Huaan Fan	œ	Mark Breach
	Inge Revhaug	œ	Borislav Marinov	œ	Miloslav Svec
	Vlatismil Hanzl	œ	Lenka Ritickova	œ	Tonu Oja
	Janis Strauhmanis	œ	Ceslovas Aksamitauskas	G	Jesús Reyes Núñez
	Stanislaw Bialousz	G	Constantin Cosarca	œ	Johan Neuner
	Ales Breznikar	œ	Alojz Kopacik	œ	Amparo Núñez Andrés
	José Lanaja	G	Moisés Martín Betancor	G	Frank Friesecke
	Henrique Oliveira	œ	Wilhem Zeddies	œ	Caren Femenia Ribera
	Michaela Korbasova	œ	María J. Iniesto Alba	œ	Emilie Leroy



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European Education in Geodetic Engineering, Cartography and Surveying (EEGECS) Socrates Thematic Network



Homepage of WG1:

http://lazarus.elte.hu/gb/dolgozo/

jesus/eegecs/wg1.htm

Working Group 1 "Undergraduate Education"

Final Report 2nd year of activities

Reports from European countries

Reports from countries out of Europe

Answers sent by European universities to the questionnaire (table)

Photos taken during the 3rd General Assembly in Dublin (April 22-23, 2005) Photos taken during the 2nd Meeting in Antwerpen (September 10-11, 2004) Photos taken during the 2nd General Assembly in Valencia (February 20-21, 2004) Photos taken during the 1st WG1 Meeting in Budapest (December 4-5, 2003)

Accessible from January, 2003



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Dissemination Activities	Out of EU Answer Questionnaires Received: Questionnaires Received	Dissemination Activities Education and Culture	
Publications EEGECS Events Others Events / News	Other: Institutions Questionnaire English [®] Institutions Questionnaire Spanish.doc [®]	Publications Home > Working Groups > WG1 2:47:49 pm. EEGECS Events Others Events / News Working Group 1	
Join Us Chat	Interactive Questionnaires: European Interactive Questionnaire® International Interactive English Questionnaire® International Interactive Spanish Questionnaire®	Join Us Objectives : UNDERGRADUATE EDUCATION: Enhance dialogue between higher education institutions, promote the adoption of ECTS and elaborate a core curriculum of the discipline. Chairman : Rosa Chueca : r.chueca@euitto.upm.es	
Techno TN ANECA	Interactive Questionnaires: European Interactive Questionnaire	Questionnaire: Questionnaire (in english) Questionaire for the European universities. February 2003. ANECA Reports: First Year:	
An initiative of the	International Interactive Spanish Questionnaire	WG1 Report - Year 1 *	
European Commission	Alain de Wulf Jean-Jacques Derwael Mathias Neumann-Redlin Kostas Katsambalos Rosa Chueca Norbert Bartelme Stig-Göran Mårtensson Huaan Fan Inge Revhaug Borislav Marinov N	E L E S Czech Reports [®] C	
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Actual homepage of WG1 within the EEGECS website



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SURVEY ON EDUCATION IN GEODETIC ENGINEERING, CARTOGRAPHY AND SURVEYING:

SITUATION IN EUROPE

2003-2004

- Questionnaire made between December of 2002 and March of 2003
- Sent for all the institutions members of EEGECS, asking them to forward it for other institutions in their countries and/or other european countries.



FIG-SYMPOSIA COM.2&3

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A proposal for questionnaire to send for institutions in other tinents	Occember 10, 2003	Partners	Institution - General Information		
t of international associations that our Working Group can contact	December 10, 2003	Working Groups	1.Country:		
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To contact us or request any information please send a message to this add esus@kudens.elte.hu	Sress:		programme?		
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- First version of the questionnaire



9. Duration of the programme : If you selected "others", please specify which:	SEMESTERS (click the correctone)
10. Is there any requirement to enter the study programme? If yes, please indicate shortly these requirements:	YES (click the correctone)
11. Has your institution adopted (or is your institution planning to adopt) a Diploma Supplement? If YES please attach a sample document to the questionnaire	YES (click the correctone) I attach it (click the correctone)
12. If the curriculum is available on the Web, please specify the address of the site. If the information is available in other format (for example .doc), please attach it to this survey.	It is in the following one: (click the correctone) http://

Please, answer the next questions if the required information is not included in the homepage or document asked in the previous question:

 13. Is the programme offering courses (or subjects) taught in other language(s)? If yes, please indicate which courses and in which language(s): 	
14. Are compulsory practical trainings (provided by external institutions) included in the programme? If yes, specify the duration and at which stage (when)	YES (eliek the correct one)

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The questionnaire was divided in two main parts: the first one asked about general and structural characteristics of the degrees (ECTS, Diploma Supplement, degree system, practical trainings, etc) and the second one contained tables asking about the different groups of subjects taught in the different institutions.

Questionnaire for European institutions (2003–2004)





Questionnaire for European institutions (2003–2004)

- The questionnaire was divided in two main parts: the first one asked about general and structural characteristics of the degrees (ECTS, Diploma Supplement, degree system, practical trainings, etc)
- The second one contained tables asking about the different groups of subjects taught in the different institutions.





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SURVEY ON EDUCATION IN GEODETIC ENGINEERING, CARTOGRAPHY AND SURVEYING

Sent answers:

- -17 countries
- -44 institutions
- (33 EEGECS members)
- -52 programs

- Germany: 10 institutions
- Spain: 9 institutions
- United Kingdom: 5 institutions



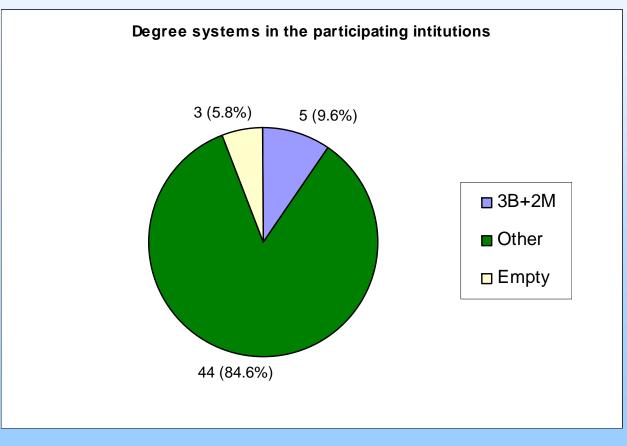


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EUROPE REPORT: SOME RESULTS BASED ON ANSWERS TO THE SURVEY

Types of degree systems by institutions (2003–2004)

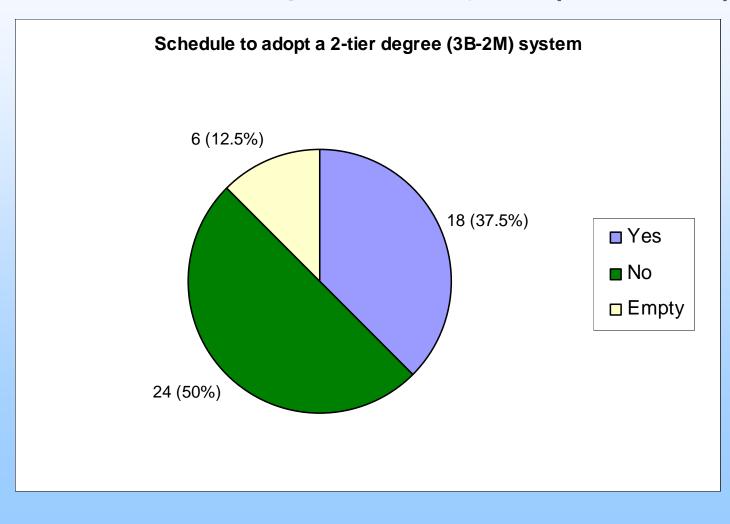




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Adoption of a 2-tier degree (3B-2M) system (2003–2004)

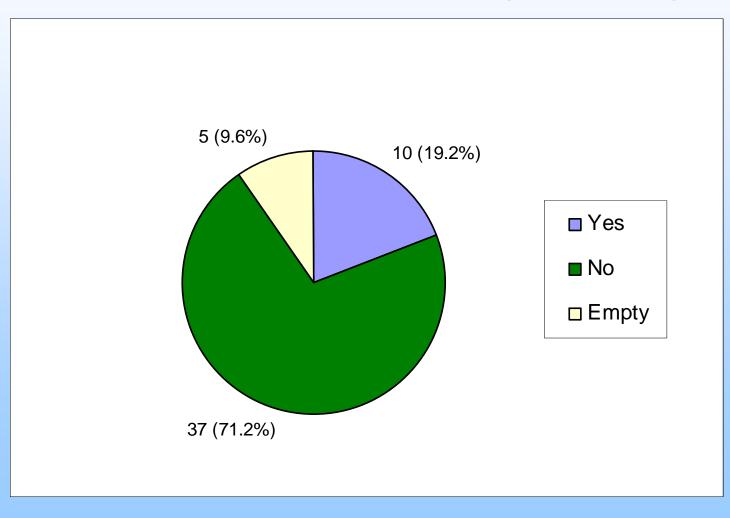




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Adoption of Diploma Supplement (2003–2004)

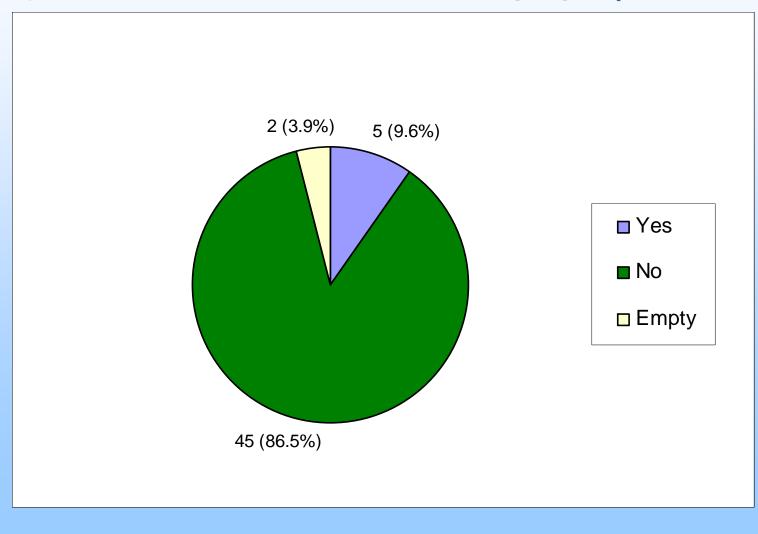




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Systematic offer of courses in other languages (2003–2004)

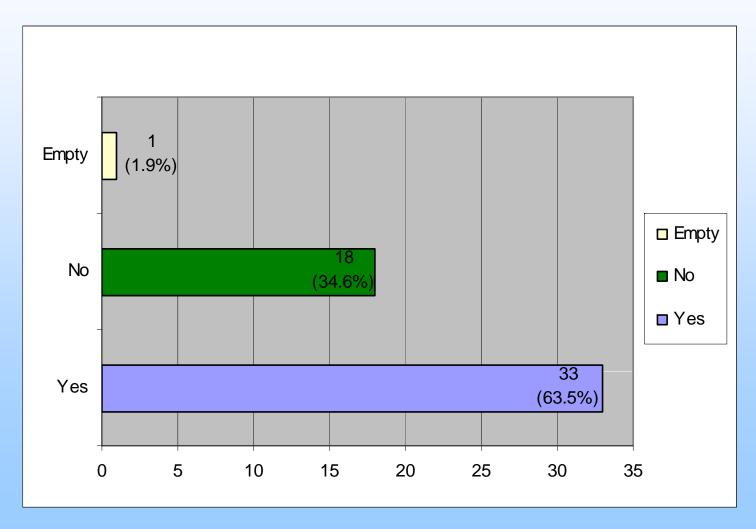




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Adoption of ECTS (2003–2004)





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NATIONAL REPORTS ON HIGHER EDUCATION IN GEODETIC ENGINEERING, CARTOGRAPHY AND SURVEYING

The main objectives of these reports were:

- Graphical and brief presentation of the study plans described in the questionnaire
- Complementary information that have not been included in the questionnaire
- Brief presentation of institutions that did not participate in the survey

20 national reports from European countries (Austria, Belgium, Bulgaria, Czech Republic, Finland, <u>France</u>, Germany, Hungary, Ireland, Italy, Lithuania, Norway, Portugal, Romania, Slovakia, Slovenia, Spain, United Kingdom and Turkey)



CONGRESO INTERNACIONAL DE INGENIERÍA GEOMÁTICA Y TOPOGRÁFICA INTERNATIONAL CONGRESS ON GEOMATIC & SURVEYING ENGINEERING

IX CONGRESO NACIONAL TOP-CART VALENCIA 2008 FIG-SYMPOSIA COM.2&3

YES

(click the correct one)

	7. List the specializations within this programme:	Specialization 1: Specialization 2: Specialization 3: Specialization 4:
1		14
	8. Which is the type of degree system of your institution (for example: 3 years Bachelor and 2 years Master)?	
	9. Duration of the programme :	SEMESTERS (click the correct one)
	If you selected "others", please specify which:	
I		

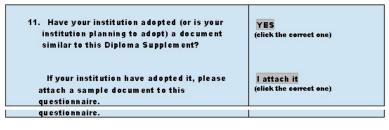
European universities are working to adopt the Diploma Supplement. This is a document to be attached to a higher education diploma aiming at improving international 'transparency' and at facilitating the academic and professional recognition of qualifications (diplomas, degrees, certificates etc.). It is designed to provide a description of the nature, level, context, content and status of the studies that were pursued and successfully completed by the individual named on the original qualification to which this supplement is appended.

10. Is there any requirement to enter the study

If yes, please indicate shortly these

programme?

requirements:



EEGECS: European Education in Geodetic Engineering Cartography and Surveying. Ref. 104276 – CP – 1 – 2003 – 1 – ES – ERASMUS - TN Working Group 1 Undergraduate Education



SURVEY FOR HIGHER EDUCATION INSTITUTIONS IN OTHER CONTINENTS (2004– 2005)

Information about the degrees related to our specializations all over the world

Questionnaire similar to the European one, but at same time inquiring for information not provided by other international reports (e.g. FIG-CLG)



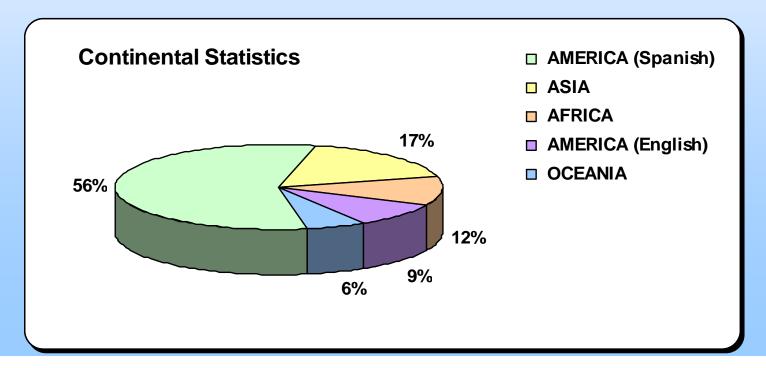
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SURVEY FOR HIGHER EDUCATION INSTITUTIONS IN OTHER CONTINENTS (2004–2005)

This Questionnaire was sent to international institutions from all around the world and in spite of the poor number of answer checked, the international reports of each country were made.

The graphic is a statistic of contacts and countries that received the questionnaire:

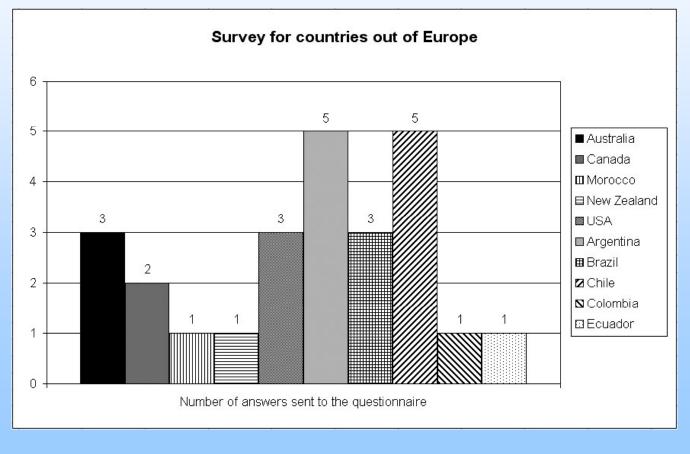




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SURVEY FOR HIGHER EDUCATION INSTITUTIONS IN OTHER CONTINENTS (2004–2005)



20 answers from countries out of Europe: Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Morocco, Canada, U.S.A., Australia and New Zealand



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SURVEY FOR HIGHER EDUCATION INSTITUTIONS IN OTHER CONTINENTS (2004–2005)

Argentina Brasil <u>Chile</u> Colombia Costa Rica Ecuador Moroco Canada USA Australia New Zealand





Survey on working groups (2005-06)

The questionnaire (Institutions Questionnaire English) made for this task, linked to a database, was translated to Spanish for South American people (Institutions Questionnaire Spanish).

Questions about:

- General features
- Field of work
- Activities
- Seminars
- Congresses
- Meetings
- Specialization or Non official degrees
- Relevant stage of groups of subjects for a future curriculum



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Survey on working groups (2005-06)

- AUSTRIA
- **BELGIUM**
- **BULGARIA**
- CZECH
- **DENMARK**
- FINLAND
- FRANCE
- GERMANY
- GREECE
- HUNGARY
- IRELAND
- ITALY

- LITHUANIA
- LUXEMBOURG
- <u>NETHERLANDS</u>
- NORWAY
- POLAND
- PORTUGAL
- ROMANIA
- SLOVAKIA
- SLOVENIA
- SPAIN
- SWEDEN
- TURKEY
- U. K.



Working Group 1 Undergraduate Education



WG1 MEETINGS



1st meeting: Budapest (Hungary) December 4-5, 2003



2nd meeting: Antwerpen (Belgium) September 10-11, 2004

Active participation in all the General Assemblies organized within EEGECS (Valencia 2003 and 2004, Dublin 2005 and Gent 2007) and in others meetings or congresses as <u>ASITA</u> (Catania 2005), Technoforum TN (Brussels, 2005, 2006, 2007), enice'07 (Madrid, 2007), etc.



"European Education in Geodesy, Cartography & Surveying Historical development of the Faculties & Titles"

Prof. Rosa Chueca Castedo Polytechnic University of Madrid

Rosa Mariana Chueca Castedo Chairman of WG1, EEGECS

Alberto Fernández Wyttenbach Technical Assistant WG1, EEGECS Higher School of Surveying, Geodesy and Cartography Engineers

Polytechnic University of Madrid

European Education in Geodesy, Cartography & Surveying Historical development of the Faculties & Titles

Summary

- Intro Europe history
- The Italian Tradition
- European Situation: Introduction
- University & Faculty: Types
- University & Faculty: Evolution
- Bachelor & Master in Europe
- Bachelor: Names & Duration
- Bachelor Fields
- Master Programs in Europe
- Master: Names & Duration
- Master Fields
- Conclusions

European Education in Geodesy, Cartography & Surveying Historical development of the Faculties & Titles

European Study

Search Criteria:

- Only the information provided by the NET was considered
- European Countries and EU countries that include some Undergraduate or Postgraduate programme from the groups of subjects related with the EEGECS Thematic Net:
 - Geomatics
 - Surveying
 - Hydrographics
 - Mining Surveying
 - Land Management & Planning
 - Geodesy
 - Positioning and Navigation
 - Photogrammetry & Remote Sensing
 - Cartography
 - GIS
 - Cadastre & Real Estate...

9^a Conferenza Nazionale ASITA



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> EUROPEAN EDUCATION IN GEODETIC ENGINEERING CARTOGRAPHY AND SURVEYING

Working Group 1







THE FUTURE OF WORKING GROUP 1

- Organization of a new survey \implies changes made in European Higher Education during the last three years (comparison of actual situation with the state-of-the-art in our fields in 2003-2004)

- Reading the original objectives proposed in 2002, the Working Group did not accomplish only one: *Elaborate a core curriculum of the discipline, with a European dimension, in order to organise diversity, rather than eliminate it.*

Question: Is the elaboration of a general core curriculum the only one solution to organise diversity in our degrees, rather than eliminate it?

Compatibility between study plans: creation of a document (e.g. recommendations) on the frame of different groups of themes that at present are organized by subjects in the respective core curricula of European institutions. These recommendations are oriented to give information about the themes that should be taught within a specialization (the term subject is intentionally not used, because the same theme can be taught in subjects with different names).



Working Group 1 Undergraduate Education



THANK YOU

MUCHAS GRACIAS

José Jesús Reyes Nuñez Eotvos Loránd University, Hungary



Rosa M. Chueca Castedo Universidad Politécnica de Madrid, Spain