



5th FIG Regional Conference
Coastal Areas and Land Administration
- Building the Capacity
San José, Costa Rica, 12-15 November 2007

CURRICULUM DEVELOPMENT IN LATINAMERICA: AN EDUCATIONAL THEMATIC NETWORK?

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San José de Costa Rica, 12 - 15 Noviembre 2007

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STATE OF THE ART

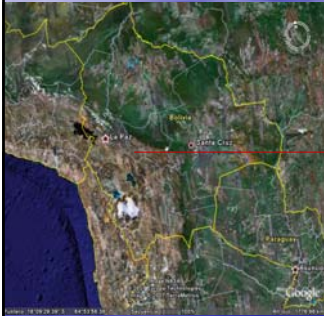
2



Universidades: Grado: 13
 Doctorado: 1 (Catamarca)
 Master: 1 (San Juan)
 Especialización: 1 (Buz. Aires)

Duración: Grado: 4, 4.5, 5, 5.5 años
 Master: 7
 Nombres: Ing. Agrimensor... 10
 Agrimensor..... 3
 Lic. Cartografía..... 1 (Santa Fe)

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Universidades: Grado.....1
 Tés. Sup. 1
 Duración: Lic. 5
 Tés. Sup. 3
 Nombre: Ing. Geográfica


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Universidades: Grado: 4
 Doctorado: 1 (Cunitiba)
 Master: 1 (Cunitiba)

Duración: Grado: 5
 Master: 7
 Nombres: Ing. Agrimensor... 1
 Ing. Cartografía..... 3

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Universidades: Grado: 2
 Tecnólogo 1
 Especialización 1

Duración: Grado: 5
 Tecnólogo 3
 Especialista en SIG 1, 5

Nombres: Ing. Topógrafo 1
 Ing. Geod. Y Geod 1
 Techn. En Topo. 1
 ES. En GIS 1

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Universidades: Grado: 1
 Master: 2

Duración: Grado: 4 y 5 años
 Master: 1.5 y 2

Nombres: Bach. Ing. Topógrafo
 Lic. Ing. Topógrafo
 Master en Catastro, Geod. y GIS
 GIS y Teledetección

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SIN INFORMACIÓN

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Universidades: Grado: 1
 Perito: 1
 Tecnólogo: 2
 Especialización: 1

Duración: Grado: 5
 Perito: 3
 Tecnólogo: 3 y 2
 Especialista en SIG: 7
 Nombres: Ing. Geógrafo: 1
 Perito Geomensor: 1
 Tech. en Topo: 2
 Etop. En GIS: 1

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Universidades: Grado: 3

Duración: Grado: 4 y 5 años

Nombres: Ing. Geomático: 1
 Ing. GJ. Geomensor: 2

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Universidades: Grado: 1

Duración: Grado: ?

Tecnólogo: ?

Nombres: Ing. Adm. De Tierras: 1
 Tec. Agrimensura: 1

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Universidades: Grado: 11

Duración: Grado: 3, 4, 4.5, 5

Nombres: Ing. Topógrafo: 1
 Ing. Geomático: 2
 Ing. Topo. y Geod.: 4
 Ing. Topo. y Geomét.: 1
 Ing. Topo. y Fotogram.: 1
 Ing. Topo. Hidrográf.: 1
 Ing. Topo. Hidrológ.: 1

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Universidades: Grado..... 1
 Duración: Grado..... 4
 Nombres: Ing. Geomático..... 1
 Ing. Topografía..... 1

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SIN INFORMACIÓN

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Universidades: Grado..... 3
 Duración: Grado..... 5
 Nombres: Ing. Geogr. y Geomá..... 1
 Ing. Geográfica..... 1
 Ing. Topo. Y Agrimen..... 1

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Universidades: Grado..... 2
 Duración: Grado..... 4
 Nombres: Agrimensura..... 1
 Land Surv & Mapping..... 1

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Universidades:..... 2
 Duración: Técnico..... 2
 Nombres: Téc. Sup. Agrimen..... 1

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Universidades:..... 1
 Duración: Grado..... 5
 Nombres: Agrimensura..... 1

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Universidades: 2
 Duración: Grado 2
 Nombres: Ing. Geodesica 1
 Topografía 1

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Universidades: 55
 Grado: 48
 Master: 4
 Doctorado: 2

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GOEGRAPHIC DIVERSITY:
 CENTRAL AMERICA
 SOUTH AMERICA

ACADENIC DIVERSITY:
 DIFERENCES IN:
 CURRICULA:
 DIFFERENT FOCUSES
 DIFFERENT LENGTH

LEVEL:
 TECHNICIAN
 GRADUATE
 POSTGRADUATE

NAMES

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PROFESSIONAL DIVERSITY :
 MOBILITY PROBLEMS:

IN THE ACADEMIC WORDL:
 STUDENTS MOBILITY
 MSc & PhD COURSES
 TEACHING MOBILITY

IN THE LABOUR FIELD:
 TO FULFIL REQUIREMENTS
 LACK OF APPROPRIATE BACKGROUND

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CURRICULA HARMONIZATION ?

OUTPUT HARMONIZATION?

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THE EUROPEAN EXPERIENCE:

Intention for the report:
 To provide:

- Evidence and arguments to stimulate development of curricula to enhance academic standards across Europe.
- Information to facilitate the determination of equivalence of qualifications to assist mutual recognition of qualifications and thereby the mobility of professionals within Europe

CONCLUSION:
 A COMMON CORE SOLUTION WOULD BE VERY DIFFICULT IF NOT UNDESIRABLE.
 THE OUTPUT HARMONIZATION IS PROPOSED
 THE ONLY CONSTANT IS CHANGE AND THIS SHOULD BE CONTROLLED BY THE PROFESSION

Enhancing Professional Competence of Surveyors in Europe
 Sig Enevmark and Paddy Prohlerdorst (Ed.)
 THE COUNCIL OF EUROPEAN GEODETIC SURVEYORS
 INTERNATIONAL FEDERATION OF SURVEYORS

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THE BOLOGNA DECLARATION:

IMPLEMENTATION OF THE DIPLOMA SUPPLEMENT

TO ESTABLISH A CYCLIC SYSTEM:

GRADUATE: 180 – 270 ECTS

MASTER: 60 – 120 ECTS

DOCTORATE

The degree awarded after the first cycle SHALL ALSO BE RELEVANT TO THE EUROPEAN LABOUR MARKET AS AN APPROPRIATE LEVEL OF QUALIFICATION.

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WOULD THIS BE THE SITUATION IN LATINAMERICA?

COMPARED WITH EUROPE THERE ARE SIGNIFICANT DIFFERENCES:

A MUCH BIGGER CULTURAL AFFINITY

NOT LINGUISTIC BARRIERS

SOME IDIOSYNCRATIC SIMILARITIES

A MORE COMMON SOCIAL AND LABOUR REALITY

AND SOME OTHERS

NEVERTHELESS:

DIFFERENCES IN THE NATIONAL MARKETS

DIFFERENCES IN EVERY COUNTRY NEEDS

REGIONAL DIFFERENCIES

DIFFERENCES IN THE ACADEMIC TRADITION

PROFESSIONAL INTERFERENCES (MAINLY WITH OTHER ENGINEERINGS)

AND SOME OTHERS

COULD THIS LEAD TO ESTABLISH A WORKING GROUP TO STUDY AND ANALYZE THE SITUATION?

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EDUCATIONAL NETWORK

ADVENTAGES:

- A GROUP OF EXPERTS IN ACADEMIC ISSUES WORKING TOGETHER
 - EASYS LINKS AMONG UNIVERSITIES
 - FACILITIES TO RESEARCH, ANALIZE AND PUT IN COMMON
 - FACILITIES TO TRAVEL AND MEET WHEN NEEDED
 - ECONOMIC SUPPORT FROM UNIVERSITIES
 - MUTUAL KNOWLEDGE IN MANY CASES
 - POSSIBILITIES OF INVOLVING YOUNG ACADEMIC STAFF (THE FUTURE)
-

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BUT BEARING IN MIND:

THE NEED OF ABSOLUTE AND CONTINUOUS COOPERATION WITH PROFESSIONAL ASSOCIATIONS AND INSTITUTIONS, AT NATIONAL AND INTERNATIONAL LEVEL

ADVENTAGES:

- A CLOSER KNOWLEDGE OF THE PROFESSIONAL MARKET
- UNIVERSITY LANDS IN THE REALITY
- FACILITIES FOR SOME ECONOMIC SUPPORT

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PAST EXPERIENCE IN LATINAMERICA

The idea of creating this Network arose during the Symposium held in Puerto Rico by the Colegio de Ingenieros y Agrimensores de Puerto Rico (CIAPR) and the Mayagüez University before the problems, similarities, lacks and needs in most of the countries in that Continent. President Foster supported and emphasized the need of such a Network. Members were elected in Mayagüez, trying to represent most of the present countries.

The main goals of this Network are:

- To establish strong links among the docent Institutions in Latinamerica
- To facilitate the free flow and exchange of ideas, projects and people among our docent Institutions
- To facilitate the harmonization of curricula, if such is possible and necessary
- To facilitate a "common educational base"
- To facilitate mobility among professionals, teaching staff and students
- To improve the conditions of our professionals, when and where it is necessary, and increase the work possibilities of our graduates
- This Network is born with spirit of permanence; it is not only an occasional work studying the state of the art in education in this continent, but being a permanent link among professional and educational Institutions

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MEETINGS:

THERE WERE TWO MEETINGS:



CÓRDOBA (ARGENTINA), 2003
11 PARTICIPANTS

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SAN JOSÉ (COSTA RICA), 2004

12 PARTICIPANTS

DEFINITION OF THE PROFESSIONAL PROFILE:

Specific technologies	<p>Project, execution and management of measurement processes, modelling, representation and visualization of physic characteristics in, over and under the terrestrial surface.</p> <p>Project, execution and management of information systems</p> <p>Project, execution and management in the handling and processing of images</p> <p>Project, execution and management of positioning, navigation and monitoring systems</p>
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Related technologies	<p>Project, execution and management of processes and products for civil works and building</p> <p>Project, execution and management of processes and products applicable to environmental, agronomic, forestry, mining, industrial and hydrographic engineering</p> <p>Project, execution and management of processes and products applicable to the information society (telecommunications and informatics)</p>
Land Administration, Rural and Urban Planning	<p>Project, execution and management of processes and products applicable to Cadastre, Land Registry, Land Administration, drainage, expertise and valuation</p> <p>Project execution and management of processes and products applicable to rural and urban planning and development</p>

DRAFT OF CURRICULUM:


Basic Subjects	Basic subjects for Engineering and Surveying	Specific subjects for Surveying and Agrimensura	Complementary and Humanistic subjects
Mathematics	Sciences of Engineering	Geoposition	Economy and Management
Physics	Geosciences	Surveying	History
Computer Science and Telecom	Urban Engineering	Photogrammetry And Remote Sensing	Geography
Chemistry	Engineering Projects	GIS	Foreign Languages
	Engineering Drawing	Law	Expression and Communication Technique
		Rural, Urban Planning and Land Management	Special expertises
		Cadastre	
		Valuation	
		Land Administration, Mensura	

CONCLUSIONS:

- Today's situation is undesirable for everybody. Professionals, Associations and Universities, mainly when the globalization process brings so many opportunities and problems.
- Strong wish of having some curricular harmonization which can facilitate mobility inside the continent.
- Hope that this Educational Network can help the different countries, Universities, Associations, Professionals, Professors and Students to a better knowledge of each other and, consequently, to facilitate the access to Graduate, Master, PhD, CPD courses inside the continent with much less problems (economic, linguistic, idiosyncratic, ...) than going outside Latinamerica.
- This Network should be a permanent forum for all Latinamerican colleagues, where make possible contacts, exchange of experiences, problems, solutions.... and reinforce the links among themselves and widen this experience to the Sister Caribbean Associations and Universities, although not Spanish speakers, as well as to the North American countries when needed and suitable.

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WHATEVER THE DECISION IN THE FUTURE, BOTH, ACADEMY AND PROFESSION, SHOULD WALK TOGETHER, HAND BY HAND.



THANK YOU VERY MUCH FOR YOUR ATTENTION,
TIME AND PATIENCE.