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New University Curricula of Geodesy and Geoinformatics in Croatia

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University of Zagreb – Faculty of Geodesy

Faculty of Geodesy

- Long tradition in higher education in Croatia
- 1775 – *Exercitationes Gaeodeticae*
- 1811 – First diplomas and first chartered surveyors in Croatia
- 1962 – Faculty of Geodesy, the autonomous institution

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University of Zagreb – Faculty of Geodesy

Internal organization:

- Institute for Applied Geodesy
- Institute for Cartography and Photogrammetry
- Institute for Geomatics
- Hvar Observatory

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Institute for Cartography and Photogrammetry

- Chair for Cartography
- Chair for Geoinformation
- Chair for Photogrammetry and Remote Sensing



Faculty of Geodesy

- 115 new students in 2004/05
- 224 new students in 2005/06 !!! Bologna
- 144 new students in 2006/07

In 2005/06 :

- Enrolment quota was increased (+20)
- Special laws (+26)
- Some students failed the 1st year (+63)



- The Bologna phase!
- Scheme: 3 + 2 + 3
- Undergraduate study
- **GEODESY AND GEOINFORMATICS**
- 3 years, 180 ECTS



Competences:

- Determination of the Earth's size and shape and measurement of all data necessary for defining the size, position, shape and contours of a part of the Earth, and their changes.
- Placement and positioning of objects in space and time, and other engineering works on, above or under the Earth's surface.
- Production and updating of plans, maps and other documents.



- Gathering and application of spatial data using close range methods, and aerial and satellite survey.
- Determining the position of public and private land boundaries, including national and international borders, and recording the land in adequate registers.
- Maintenance of geoinformation systems (GIS), and gathering and storing data in these systems.



- Visualisation and communication by means of maps and mobile digital devices.
- Assessment of values and real estate management, either urban or rural area, land or buildings.
- Familiarity with geospatial services for various user groups.



Undergraduate studies ends with:

- baccalaureus/baccalaurea (prvostupnik/prvostupnica) in **GEODESY AND GEOINFORMATICS**

Jobs:

- Geodetic surveyor
- GIS collaborator
- Cadastral surveyor
- Collaborator in photogrammetry
- Collaborator in cartography
- Collaborator in hydrography



Undergraduate studies philosophy:

Not to give students too much knowledge:

- Just enough to be good collaborators, or
- To continue with graduate studies



Undergraduate studies in GEODESY and GEOINFORMATICS

1st semester

Remarks: 2 ECTS credits in optional courses

Sports 0+2



			L	E	Ex	ECTS
1.	Beban Brkić, J.	Analytical Geometry and Linear Algebra	2	2	1	5
2.	Zadelj-Maritić, V.	Mathematical Analysis	4	3	1	8
3.	Brkić, M.	Physics	2	2	1	5
4.	Vucetić, N.	Basics of Geoinformatics	2	2	1	5
5.	Lastić, Z.	Geodetic Instruments	2	2	1	5
Optional	Špoljarić, D.	Basics of Informatics	1	1	0	2
	Kapović, Z. Džapo, M.	Introduction in Geodesy	2	0	0	2
	Mraović, B.	Business Communication	1	1	0	2
		From an other faculty				2 max
		Total	13(14)	12(11)	5	30
				25		



Undergraduate studies in GEODESY and GEOINFORMATICS

2nd semester

Remark: 3 ECTS credits in optional courses

Sports 0+2



			L	E	Ex	ECTS
1.	Radović, N.	Computer Geometry	2	2	1	5
2.	Vucetić, N.	Programming	2	2	1	5
3.	Džapo, M.	Land Surveying	3	4	1	7
4.	Barković, Đ.	Field Measurements	1	2	1	3
5.	Felić, L.	Analysis and Processing of Geodetic Measur.	3	3	1	7
Optional	Fuckan-Džikić, B.	Basics of English for Special Purposes	1	1	1	3
	Fuckan-Džikić, B.	Basics of German for Special Purposes	1	1	1	3
	Radović, N.	Spherical Trigonometry	1	1	1	3
	Josipović, T.	Principles of Land Register Law	2	0	1	3
		From an other faculty				3 max
		Total	12(13)	14(13)	6	30
				26		



First Bologna BSc experiences

- Optimal number of new BSc students is 150 a year
- 224 enrolled in 2005/06
- Unexpected many students !!!
- Not enough professors and assistants
- Lack of larger lecture rooms
- Lack of money
- Etc.
- Everything against continuous student's knowledge evaluation, mentor work with smaller groups, ...



First Bologna BSc experiences

- 224 students enrolled in 2005/06
- Only 115 entered 3rd semester with the possibility to take all subjects from 3rd semester
- Only 23 with max 60 (=30+30) ECTS



First Bologna BSc experiences

- 2006/07 BSc
- 263 students entered the classification exam
- 144 enrolled



Continuation

- Graduate studies
- Postgraduate specialist studies
- Postgraduate doctoral studies



Instead of Conclusion

The main goal of the Bologna reform is to make studying more successful, and to increase the number of highly educated people in Croatia!

We will try to do our best to afford this.



Thank you for your attention!