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New University Curricula of Geodesy and Geoinformatics in Croatia

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Universities in Croatia

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

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 GEINFORMATICS**

- 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:
- Bachelor’s degree (prostupnik/procjena)
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. Bebendorf, J. Analytical Geometry and Linear Algebra 2 3 1 5
2. Zadelj-Martic, V. Mathematical Analysis 4 3 1 8
3. Bula, M. Physics 2 2 1 5
4. Vučetić, N. Basics of Geoinformatics 2 2 1 5
5. Leoš, J. Geodetic Instruments 2 2 1 5

Optional:
- Sporić, D. Basics of Information 1 1 0 2
- Apparao, J. Introduction to Geodesy 2 0 0 3
- Mazić, R. Business Communication 1 1 0 2

From another faculty 2

Total 13(14) 12(11) 5 30

Undergraduate studies in GEODESY and GEOINFORMATICS
2nd semester

Remarks: 3 ECTS credits in optional courses

Sports 0+2

L E Ex
ECTS
1. Radovic, N. Computer Geometry 2 3 1 5
2. Vučetić, N. Programming 2 3 1 5
3. Španić, M. Land Surveying 3 4 1 7
4. Barsak, Z. Field Measurements 1 2 1 3
5. Feil, L. Analysis and Processing of Geodetic Data
  Advanced Geoinformatics and Surveying Sciences 3 3 1 7

Optional:
- Radosević, N. Basics of English for Geoinformatics 1 1 1 3
- Radosević, N. Basics of German for Geoinformatics 1 1 1 3
- Barsak, Z. Specialized Geography 1 1 1 3
- Božović, D. Principles of Land Surveying 1 1 1 3
- From another faculty 2

Total 13(14) 14(13) 6 30
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

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!