39th ISM PRESIDIUM MEETING

Freiberg, Germany, 26-29 September 2011

NATIONAL REPORT OF HUNGARY, 2011

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Assoc. Prof., Department Head

I. **PRESENT SITUATION OF THE BOLOGNA MSC TRAINING AT THE FACULTY** (FACULTY OF EARTH SCIENCE AND ENGINEERING UNIVERSITY OF MISKOLC) **AND TEACHING TASKS OF MY DEPARTMENT (**DEPARTMENT OF GEODESY AND MINE SURVEYING **IN THIS NEW TRAINING SYSTEM**

II. **SOME IMPORTANT DATA ABOUT HUNGARIAN MINE SURVEYING, MINING PRODUCTION AND SUPERVISED MINES**

THE PRESENT TRAINING SYSTEM AT THE FACULTY OF EARTH SCIENCE AND ENGINEERING (FEE)

I. Traditional European university and high school training in credit system both full time and part time schedule

It has been finished!!!

II. BOLOGNA MULTICYCLE /BSc, MSc/ LINEAR TRAINING in credit system both full time and part time schedule

/generally 3.5 years, it was introduced from the September of 2006, details later/

ABOUT THE BOLOGNA BSC TRAINING AT THE FACULTY

BSC FUNDAMENTAL BRANCHES:

Branch of Earth Science and Engineering (individual)

Branch of Environmental Engineering

(consortium, UV)

Branch of Geography (consortium)

SUBJECTS OF MY DEPARTMENT IN BOLOGNA BSC TRAINING SYSTEM OF THE FACULTY

BRANCH OF EARTH SCIENCE AND ENGINEERING

Specializations: Earth Science and Enginnering,
Mining and Geotechnical,
Petroleum and Natural Gas,
Raw Material Preparation

GEODESY (2 lectures, 2 practicals/week)
1st term; exam 4 credit

BASIC KNOWLEDGE IN GIS (2l + 2p)
2nd term exam 4 credit

MINE SURVEYING (1 lecture + 2 practicals/week)
5th term practical mark 3 credit

SUBJECTS OF MY DEPARTMENT IN BOLOGNA BSc TRAINING SYSTEM OF THE FACULTY 2

BRANCH OF ENVIRONMENTAL ENGINEERING

Specializations: Geo-environmental
Environment-technical
Environment-management

GEODETIC BASICS OF GIS (2l + 2p)

1st term exam 4 credit

SUBJECTS OF MY DEPARTMENT IN BOLOGNA
BSc TRAINING SYSTEM OF THE FACULTY 3

BRANCH OF GEOGRAPHY

Specializations: Geoinformation researcher
Geographical - Geographical lecturer

MAPPING (2 lectures + 2 practicals/week)
2nd term practical remark 4 credit

GEODESY AND GIS (2l + 2p)
5th term exam 4 credit

DIGITAL MAPPING (2 practicals/week)
6th term exam 2 credit

FORMATION OF STUDENTS' NUMBER AT THE DEPARTMENT OF GEODESY AND MINE SURVEYING SINCE THE INTRODUCTION OF BOLOGNA SYSTEM /2006/

TERM	NUMBER OF STUDENTS/TERM	NUMBER OF STUDENTS/YEAR	CHANGE [%]	NOTE
2006/2007 1st term	596			
2006/2007 2nd term	423	**1019**		
2007/2008 1st term	688			
2007/2008 2nd term	519	**1207**	**18**	increase
2008/2009 1st term	749			
2008/2009 2nd term	646	**1395**	**15 /37/**	increase
2009/2010 1st term	594			
2009/2010 2nd term	518	**1112**	**21**	decrease

FORMATION OF STUDENTS' NUMBER AT THE DEPARTMENT OF GEODESY AND MINE SURVEYING SINCE THE INTRODUCTION OF BOLOGNA SYSTEM /2006/

TERM	NUMBER OF STUDENTS/TERM	NUMBER OF STUDENTS/YEAR	CHANGE [%]	NOTE
2010/2011 1st term	463			
2010/2011 2nd term	296	**759 +** **49** MSC **808**	**27**	decrease

ABOUT THE FUTURE MSC BRANCHES CONNECTED TO THE FORMER BSC ONES AT MY FACULTY 1

THE MSC BRANCHES AND SPECIALIZATIONS ARE TO BE STARTED AT THE FACULTY:

1. **To the Branch of Earth Science and Engineering** (BSc):

- ✓ **Mining and Geotechnical Engineering /05. 2009; 02. 2010/**
  (Underground Mining and Tunneling Special Block; Surface Mining and Geotechnical Special Block) **part time training, 14 (02.2010)**
- ✓ **Petroleum and Natural Gas Engineering /02. 2009; 02. 2010/**
  (Petroleum Engineering; Natural Gas Engineering) **11 (02.2010)**
- ❖ **Earth Science and Engineering /04. 2009; 02. 2010/**
  (Geological Engineering; Geophysical Engineering; Geo-information Enginneering)
- ✓ **Hidrogeological Engineering / Hungarian and English / /01. 2009; 02. 2010/ 16 (02.2010)**
- ❖ **Mineral Processing Engineering /05. 2009; 02. 2010/**
  (Raw Material Preparation Modul; General Processing Modul)

ABOUT THE FOUNDATION OF MSC BRANCHES CONNECTED TO FORMER BSC ONES AT MY FACULTY 2

2. To the Branch of Environmental Engineering (BSc):

❖ **Branch of Environmental Engineering /02. 2009; 02. 2010/**

(Waste Management Modul; Environmental processing-technique Modul; Environment-management Modul)

3. To the Branch of Geography (BSc):

✓ **Branch of Geography /12. 2008; 09. 2009/**

(GIS, Geomorphology) 8 (09.2009), 4 (09.2010)

SOME CHARACTERISTICS OF THE MSC BRANCHES

- 4 terms 120 credit ≈ 1400 lectures and practicals
- beginning: generally in February 2010
  in September 2009 (Branch of Geography)
- generally 4 weeks professional practice
- less than 30% difference among the same branch moduls
- flexible entrance the former degree is important credit admission could be necessary
- TECHNICAL TRAINING: Max. 45 students
  Min. 10 STUDENTS/BRANCH

SUBJECTS OF MY DEPARTMENT IN BOLOGNA MSC TRAINING SYSTEM OF THE FACULTY 1

BRANCH OF MINING ANG GEOTECHNICAL ENGINEERING
BRANCH OF EARTH SCIENCE AND ENGINEERING
BRANCH OF PETROLEUM AND NATURAL GAS ENGINEERING
BRANCH OF ENVIRONMENTAL ENGINEERING

GIS (2 lectures, 1 practical/week)

1st term; exam 4 credit

BRANCH OF MINING ANG GEOTECHNICAL ENGINEERING

MINE SURVEYING (1 lecture + 2 practicals/week)

3rd or 5th term practical mark 3 credit

SUBJECTS OF MY DEPARTMENT IN BOLOGNA MSC TRAINING SYSTEM OF THE FACULTY 2

BRANCH OF EARTH SCIENCE AND ENGINEERING

- **Geo-information Engineering**

OPERATION SYSTEMS (1 lecture, 1 practical/week)
2nd term; exam 2 credit

DATA BASE SYSTEMS I (1 lecture + 1 practical/week)
2nd term exam 2 credit

MSC STUDENTS AT THE FACULTY (2011)

NUMBER OF MSC STUDENTS IN 2011						
	2009 /a/	**2010 /s/**	**2010 /a/**	**2011 /s/**	**2011 /a/**	
BRANCH OF EARTH SCIENCE AND ENGINEERING						
Petroleum and Natural Gas Engineering		11	5	16	14	46
Earth Science and Engineering					13	13
Hidrogeological Engineering		16	13		15	44
Mineral Processing Engineering			6 (5)		9	14
Mining and Geotechnical Engineering		13 (14)		9		23
BRANCH OF ENVIRONMENTAL ENGINEEERING					10	10
BRANCH OF GEOGRAPHY	8 (4) **GR** (2)		4 (3)		5	12
Altogether						**162**

SOME DATA ABOUT HUNGARIAN CHARTERED SURVEYORS

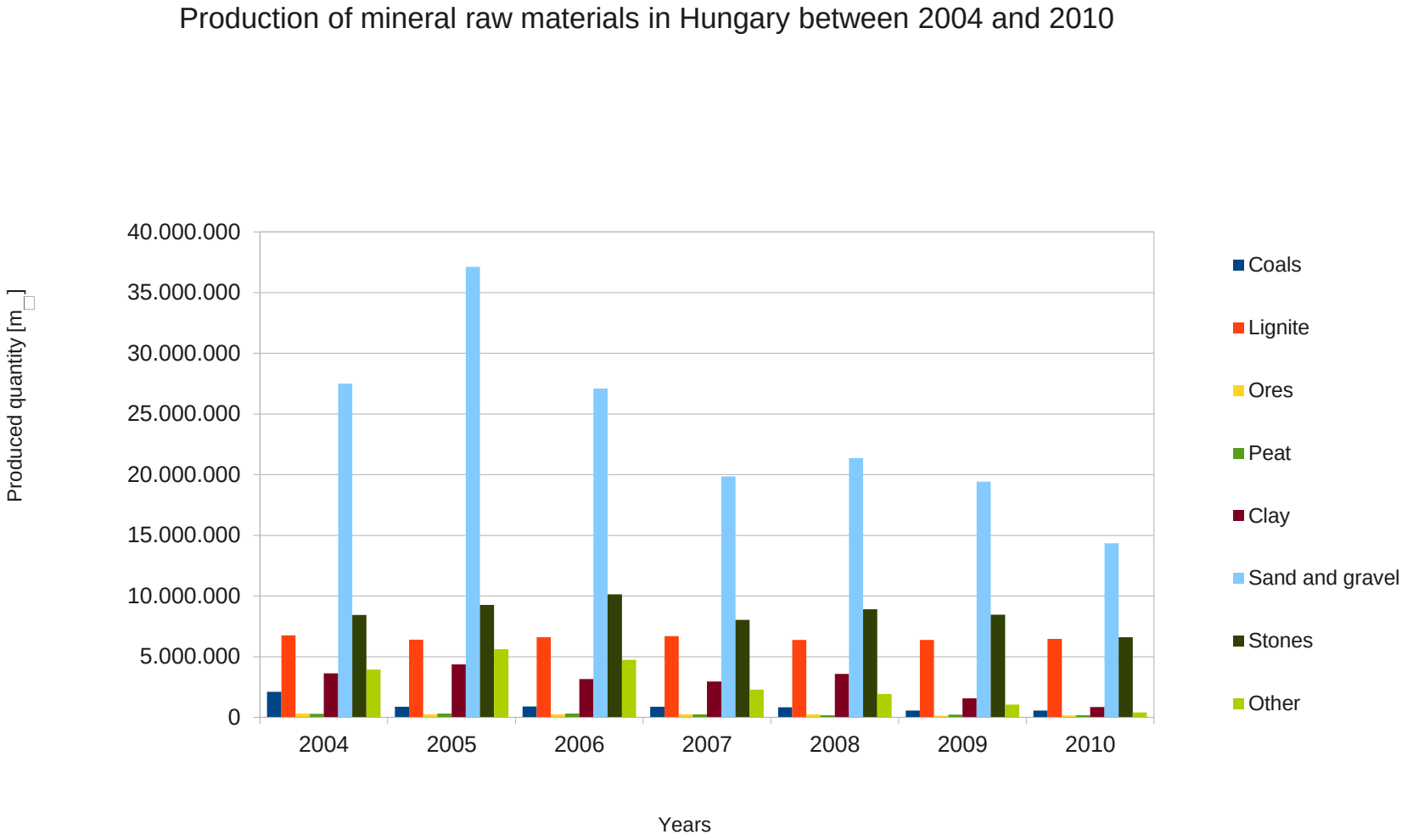
- In **June of 2011** there were **162** chartered mine surveyors in Hungary.
- The certificates of **58** chartered mine surveyors are valid for both surface and underground mining.
- The number of chartered mine surveyor's certificates for surface mining issued by the Hungarian Mining Bureau is: **104**.

PRODUCTION OF MINERAL RAW MATERIALS IN HUNGARY /2004-2010/

Mineral raw materials	Unit	2004	2005	2006	2007	2008	2009	2010
Coals	m^3	2 101 394	868 625	894 052	882 787	826 671	563 232	555 298
Lignite (-1.2%)	m^3	6 770 867	6 395 360	6 596 738	6 685 349	6 390 938	6 390 790	6 479 452
Ores (+29%)	m^3	312 966	258 750	257 482	260 714	243 281	132 379	155 013
Peat- Marsh-soil	m^3	306 582	316 552	321 367	259 952	193 832	229 655	175 395
Clay	m^3	3 618 780	4 367 566	3 158 773	2 961 460	3 584 042	1 576 132	863 834
Sand and gravel	m^3	27 500 482	37 126 446	27 102 272	19 847 454	21 369 623	19 425 408	14 334 220
Stones	m^3	8 448 361	9 260 230	10 148 074	8 031 523	8 915 158	8 458 042	6 596 363
Other (-9%)	m^3	3 952 495	5 616 149	4 743 345	2 292 666	1 927 676	1 061 221	398 182
Crude oil	Mt	1.08	0.95	0.89	0.84	0.82	0.80	0.73
Natural gas	Gm^3	3.21	3.17	3.29	2.72	2.85	3.17	3.05
CO2 gas	Gm^3	0.12	0.12	0.13	0.15	0.13	0.14	0.14

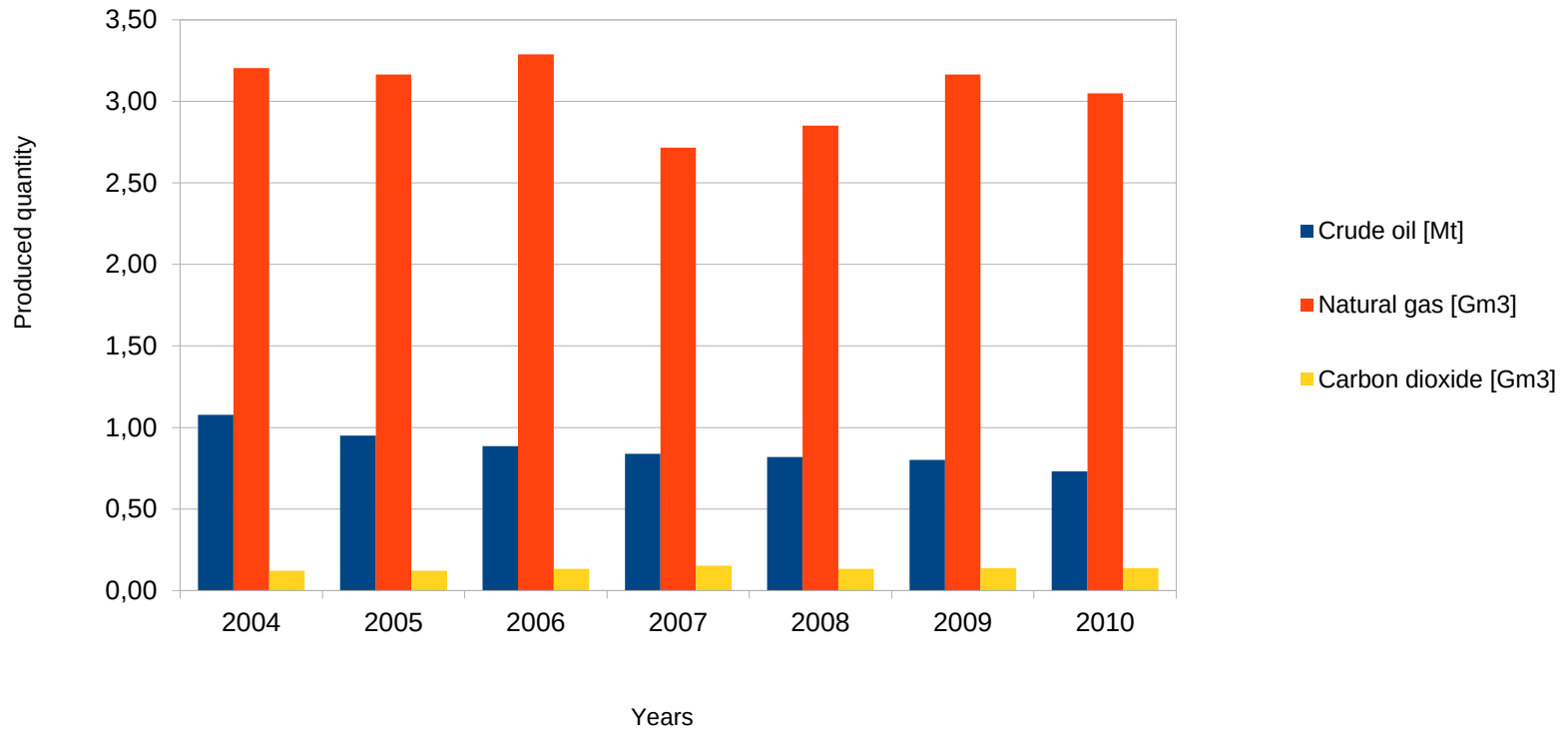
29.55 Mm3

RAW MATERIAL PRODUCTION IN HUNGARY /2004-2010/



RAW MATERIAL PRODUCTION IN HUNGARY /2004-2010/

Production of mineral raw materials in Hungary between 2004 and 2010



Mines in Hungary in December of 2010	
Underground mines	
•suspended	
•in operation	4
Open cast mines /registered/	
•suspended	
•in operation	739
Total	743

OPERATING SUPERVIZED MINES IN DECEMBER OF 2010

TYPES OF MINING	NUMBER OF MINES	
	underground	surface
Coal mining	1	12
Ore mining	3	1
• Bauxite	2	1
• Manganese	1	0
Other mineral and raw material mining	0	716 (-9%)
• Mineral	0	
• Stone	0	
• Gravel	0	
• Sand	0	
• Clay and marl	0	
Mining not counted elsewhere	0	
Total	4	739

LEGAL REGULATIONS, 2010

New legal regulations referring to mine surveying in 2010.

10/2010.(III.4)KHEM

about the scale and content of mining maps.

12/2010.(III.4)KHEM

about the chartered mine surveyor.

- special high school degree,
- 4 year practice in mine surveying (2 years leading role in directing mining tasks individually),
- special qualification exam in front of a panel which examines the knowledge of a candidate in legal background and in mine surveying

Thank You for your attention!!

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