

# Czech University of Life Sciences in Prague (CULS)

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## Structure of Higher Educational System in the Czech Republic

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***Faculty of Agrobiology,  
Food and Natural Resources (FAFNR) [www.af.czu.cz](http://www.af.czu.cz)  
Department of Water Resources***

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# History of the Czech HES

- Charles University was founded on the 7th of April 1348 by a Charter of Charles IV, Emperor of the Romans and King of Bohemia.
- Since 1348 – almost continuous education



# History of the Czech HES

- **Former Czechoslovakia (1918 -1938)**
  - Belonged among the most developed countries in the World (between the first 10)
  - Dense network of schools at all levels
  - The high quality of secondary professional schools and technical universities
- **Closing of HEI during the World War II (1939 -1945)**
  - prosecution of teachers and students

# History of the Czech HES

- **1948 – Communist regime in Czechoslovakia**
  - emigration of teachers, new wave of prosecutions hit the universities
- **1968 – Soviet invasion in August**
  - followed by expulsion and new wave of emigration
  - humanities were badly and significantly touched
  - technical and natural sciences keeps relatively very good standard
- **1989 – 1990 – „velvet“ revolution**



# History of the Czech HES

- **1990 new Act on the Universities**
  - academic freedom and self governance restored
  - international development, links to other universities in the World has been established
  - rapid increase of number of students
  - not relevant increase of financing (old EU countries – average 1.3% GDP, the CR as a new EU country only 0.7% in 2004)
- **2004 full membership of the CR in the EU, member of Schengen Treaty states**





# EU/Praha



# Facts about HEI in the CR

HEI	1989-1990		2005-2006	
Number of HEI	23		67	
Number of faculties	64		117	
Number of students in thousands	110		298	
HEI	2006	(2009)	Students in 2006	(2009)
Public HEI	25	(26)	274 962	(333 580)
State HEI	2	(2)	4 114	
Private HEI	40	(44)	19 120	(56 357)
<b>Terciary professional schools</b>				
Regional	114	(regional authorities)	19 593	
State	1		85	
Private	47		8 340	
Religious	12		1 741	
<b>TOTAL:</b>	<b>241</b>		<b>327 955</b>	<b>(389 231) in 2009</b>
<b>2009 – 55.5% Women, 44.5% Men</b>				



# Czech University of Life Sciences In Prague (Praha)



- 1. Faculty of Agrobiology, Food and Natural Resources
- 2. Faculty of Economics and Management
- 3. Faculty of Engineering
- 4. Faculty of Environmental Science
- 5. Faculty of Forestry, Wildlife and Wood Sciences
- 1. Institute of Education and Communication
- 2. Institute of Tropics and Subtropics





# CULS in Prague

- Since 2003 FULL implementation of Bologna principles
- 3 years of BSc, 2 years of MSc, 3 - 4 years of PhD
- Thesis in Czech or English
- ECTS credits are regularly used since 2003, semester is 30 ECTS, a year 60 ECTS
- Good number of international students from roughly 60 countries (around 300 international BSc and MSc students in 2010)



# Academic year 2009-2010

CULS in data:

**23 000 students**

FAFNR in data:

- 4 414 students
  - 1833 + 991 BSc students
  - 766 + 186 MSc students
  - 169 + 81 PhD students
- Extraordinary students: 158
- 328 (278.6) staff members
  - 169 (146) teachers
  - and research staff
  - 159 (132.6) other staff



# Study programmes - Undergraduate

- **I – BSc Undergraduate Study P**

- 3 years, 6 semesters

(in Czech and in English language)

- 1) Crop Science (ABR)
- 2) Horticulture (ABZ) (in Czech)
- 3) Animal Science (ABP)



- *These study programmes have been designed as job orientated with the maximum emphasis on obtaining practical skills.*
- Other BSc study programmes with a general theoretical orientation are:
- 4) Agriculture, Horticulture and Rural Development (ATZ) (in Czech)
- 5) Sustainable Use of Natural Resources (ATP) (in Czech)
- **6) Sustainable Use of Natural Resources (ATN) (fully in English)** - theoretical orientation, preparation for the MSc NRE

# International BSc „Sustainable Use of Natural Resources“ (ATN)

- BSc Programme for the international & Czech students fully in English

Code	Year of study / Subject	ECTS	AS	SS
	1 <sup>st</sup> year			
TAA11E	Applied Mathematics	5	2/2	
TBA03E	Applied Physics	6	2/2	
AEA01E	Zoology	6	2/3	
ACA09E	Inorganic and Analytical Chemistry	6	2/2	
APA35E	Fundamentals of Geology	5	2/2	
	Foreign language	5	0/2	0/2
RTA01Z	Physical training	2	0/2	0/2
ESA07E	Fundamentals of Statistics	5		2/2
ACA07E	Organic Chemistry	6		2/2
AEA32E	Principles of Agroecology	4		2/1
ABA14E	General and Special Agricultural Botany	6		2/2
AWA49Z	Practical Training	3		7 days
AEA29E	Excursions, field training	2		2 days



Explanation:

ECTS - Creditation

AS = Autumn Semester

SS = Spring Semester



# BSc SUNR

## SUBJECTS of the State Exam

### 1. Theory of Natural Resources

- Basic Meteorology
- Soil Science
- Fundamentals of Microbiology
- Hydrology and Hydrogeology

### 2. Use of Natural Resources

- Fundamentals of Orchards and Urban Design
- Plant Production and Environment
- Animal Production and Environment
- Waste Handling

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**Contact – programme director**

**Professor Svatopluk Matula**

**IRO FAENR· Marie Kafková MA**

	2 <sup>nd</sup> year			
APA38E	Soil Science	6	2/3	
AMA11E	Fundamentals of Microbiology	6	2/2	
EEA14E	Fundamentals of Economics 1	5	2/2	
AAA27E	Agricultural Systems	5	2/2	
AAA25E	Basic Meteorology	6	2/2	
ARA31E	Plant Production and Environment	6		2/2
ASA22E	Animal Production and Environment	6		2/2
	Compulsory Optional subject I*)			2/2
	Compulsory Optional subject I*)			2/2
	Foreign language	5	0/2	0/2
AUA10Z	Practical Encyclopedy	4		10 days
AUA26Z	Specialized Practice	4		25 days
	<b>Compulsory Optional Subjects I</b>			
APA37E	Applied Cartography	6	2/2	2/2
ATA23E	Fundamentals of Turf and Lawn Management	5	2/2	2/2
AZA66E	Fundamentals of Landscape Architecture	4	2/2	2/2
LHX01E	Fundamentals of Forest Management	4		2/2
	3 <sup>rd</sup> year			
AIA07E	Hydrology and Hydrogeology	6	2/2	
AZA67E	Fundamentals of Orchards and Urban Design	6	2/2	
AHA33E	Waste Handling	6	2/2	
AZA68E	Establishment and Maintenance of Greenery	5	2/2	
	Compulsory Optional Subject II*)			
	Fully Optional Subject**)			
AWA27Z	BSc Thesis	18	0/8	0/8
AHA30Z	Excursion and Field Training	2		2 days
	Fully Optional Subject**)			2/2
	<b>Compulsory optional subjects II</b>			
AZA21E	Fundamentals of Vegetables, Edible Mushrooms and Sprouts Production	4	2/1	2/1
ERA16E	Management and Marketing	5	2/2	2/2
EUA03E	Trade and Commerce	5	2/2	2/2
AGA44E	Fundamentals of Genetics	6	2/2	2/2
EEA16E	Environmental Economics	5		2/1
EEE43E	EU Integration Process in Agriculture	5	2/1	

# Study programmes - Graduate

## • II – MSc Graduate Study Programmes

2 years, 4 semesters (in Czech and in English)

- The three-year BSc programmes are possibly followed by the **MSc programmes**:

- 1) Animal Science (AMP)
- 2) Crop Science (AMR)
- 3) Plant Protection (AML)
- 4) Horticulture (AMZ)
- 5) Genetic Engineering and Breeding (AMG)
- 6) Rural Policy and Agriculture (AMV)
- 7) Farm Produce Quality and Processing (AMK)
- 8) Care of the Biosphere (AMB)
- 9) Soil Assessment and Conservation (AMH)
- 10) Natural Resources and Environment (AMN)

(Double Degree Programme with Natural Resources Management and Ecological Engineering - BOKU Wien)



(in Czech)



(in English)

# Study programmes – Postgraduate

(in Czech or in English)

## • III – PhD Postgraduate Programmes

- The following broadly designed study programmes have been accredited at the faculty:
- **1) Crop Science (ADR) – General CS, Special CS**
- **2) Animal Science (ADP) – General AS, Special AS**
- **3) Agricultural Special Sciences (ADS)**
  - Agric. and Forestry Phytopathology, Agric. Chemistry, Exploitation and Protection of Natural Resources







 Faculty of Agrobiological Sciences  
University of Tsukuba

# Department of Water Resources

Head Professor Svat Matula





# Department of Water Resources

- History and activities

- Department has been formed on 1st January 2009,
- Following in a modern way the activities of the original Faculty of Agronomy, specializing in farmland water resources.
- These activities continued since the foundation of the university in 1952
- Activities also in the Third World countries



# Department of Water Resources

- Focus

- Hydropedology, Soil Physics, Surface and Soil Hydrology, Hydrogeology, Hydrometeorology, Irrigation, Water Management in Agriculture and Natural Water Resources rank as top priority subjects at the FAFNR since the School has been founded.
- In addition, the Department also specializes in water resources development in the arid and semi-arid regions of the developing countries, (international projects).

# Department of Water Resources

- Educational activities
  - subjects investigating the mutual relations between the soil and water, the ground and water, and available water resources, resp. water sources finding, utilization, and management.
  - lecturing in the prestigious International MScProgram “Natural Resources and Environment” (NRE) and in Bachelor Program „Sustainable Use of Natural Resources“, (SUNR)
  - teaching in BSc, MSc, and PhD programs, short intensive courses in Soil and Water Relationship abroad on regular basis, for example in Finland, Estonia, etc.
  - The head of the Dept. is director of BSc study programme SUNR and MSc NRE

# Department of Water Resources

- Research activities - topics
  - Soil/Rock and Water Relations and its modeling.
  - Water Retention in Soil and its modeling.
  - Defining of Hydrophysical Characteristics of the Porous Media by in situ and laboratory methods.
  - Monitoring of Soil Moisture Change Dynamics by Non-Destructive Methods
  - Participation in the world-wide research network.



# Department of Water Resources

- International contacts
  - Active membership in the international scientific organizations: ICID, IAHS, IUSS, EGU, SSSA, BSSS, etc.
  - Grant projects on national and international scale (examples are 6. RP EU WATERMAN in Africa, TEMPUS IV - EDUWAT in Syria).
  - Teaching in regular study programs - universities in and out of the EU.
  - Very active participation in the LLP - ERASMUS.

# Department of Water Resources

- Other activities in research and teaching
- EXPERIMENTAL FIELD STATION OF SOIL MOISTURE DYNAMICS – member of the world network using satellite communication
- Cooperation with many home and foreign institutions having the similar activities in teaching and research



# Contacts to us



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