

# Educons University - possibilities for cooperation: applying German experience in developing models for university-industry collaboration and research networking

dr Andrea Andrejević Panić, Prof dr Dejana Panković Educons University



# Facts and figures



26 study programmes



10 faculties



10.000 m2 total area of campus

buildings



133 number of employees



13
members of the Alliance of
Central-Eastern European
Universities



50+ companies that signed the agreement of cooperation with Educons University



2.000+ graduate students in the last 5 years



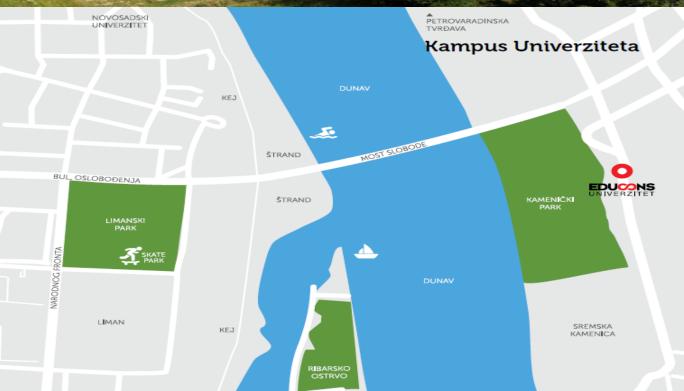
100 capacity of the students hall of residence



## Where are We









#### **MISSION STATEMENT**

- Our Mission is to provide a functional synthesis of the innovative and traditional education, ensuring the acquirement of functional knowledge and degrees relevant in the modern era.
- EDUCONS trains future leaders capable to work through problems, develop solutions and successfully lead/manage the changes.
- EDUCONS aims to give knowledge that can and will answer the most pressing questions of the moment.

#### **VISION**

#### STRONG REGIONAL POSITIONING



# **International Cooperation**





Joint project proposals, exchange of staff and students, joint educational programs, conferences, publishing etc.





#### http://www.aceu-edu.org/

➤ The union of universities from Romania, Hungary, Slovakia, Bulgaria, Slovenia, Macedonia, Montenegro, Greece, Serbia and other countries of Central and Eastern Europe (Educons initiative)

# THE BASIC IDEA to foster collaboration, provide opportunity for global experience and create JOINT KNOWLEDGE FRIENDLY ENVIRONMENT

- ➤ Registered in 2009 in Sremska Kamenica, ACEU Secretariat being headquartered at Educons University.
- ➤ Significant projects: International Joint Master Degree in Green Economy, ACEU Congress 2010-2014, Climate Change, Economic Development, Environment and People Conference (CCEDEP) 2011-2014; ACEU Scientific Journal JEDEP, University Sports Games ACEU 2011; International Summer School of Green Economy



#### **Summer Schools**

#### 1st international SUMMER SCHOOL I N F I N A N C E





1<sup>st</sup> Financial markets capital flows to the emerging economies — possibilities and transformations, 22<sup>nd</sup> — 26<sup>th</sup> June, 2015 Educons University





International Summer School: URBAN AND RURAL DEVELOPMENT IN PRACTICE: SUSTAINABILITY FOR ALL (WITH SERBIAN LANGUAGE AND CULTURE),

2<sup>nd</sup> International Summer School 1<sup>st</sup> July- 1<sup>st</sup> August 2016 Educons University 3<sup>rd</sup> International Summer School 1<sup>st</sup> July- 1<sup>st</sup> August 2018 Educons University



#### **Development Centres**

- EDUCONS intensively cooperates with high schools, business entities, local self-governments and municipal bodies

  KNOBUR

  KNOBUR
- Centre for Career Development and Cooperation with the Business Sector (more than 100 business partners)
- Alumni club former students who are today on important position in different areas of social life.
- Centre for innovation and development
- Centre for scientific research and publishing

#### TOWARD SMART SPECIALIZATION AND SMART REGIONS



### Cooperation with the Economy













































#### **UNIVERSITY BOARDS OF DIRECTORS**



#### LIFE AND SPORT

**STUDY** 

LIVE

**SPORT** 



**Educons Olympic Students** 





Ivana Španović — athletics





Mihail Dudaš — athletics

Tatjana Jelača — athletics

INVESTING INTO STUDENTS' STANDARD & INTERNATIONALIZATION



# EDUCANS Integrated University concept





#### **Blended Learning Concept**

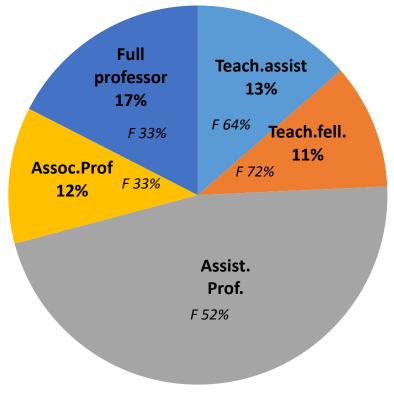
- Regional pioneer in setting up the practice of blended learning (powerful knowledge transfer system adapted to the young generation)
- Abandoning the traditional system repetitive matrix
- Combined learning a compound of a traditional classroom and interactive online communication
- Interaction, discussions, knowledge exchange with compulsory application of mobile technologies – Digital equipment as intellectual partners (the Internet, lap top, tablet, cloud intelligence database)
- Disruptive pedagogy and active learning approach Teacher serves as a specific "corrector"

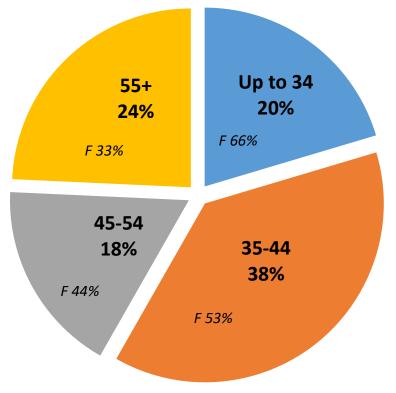
#### CREATIVITY AND ACTIVE LEARNING



## Academic staff at Educons University

- -The biggest percentage of employed academic staff is at the level of assistant professor
- -More than 58% of academic staff is in the age category up to 44 years
- -In average females are represented with 50%
- -Educons academic team is "in the prime of life" and gender balanced







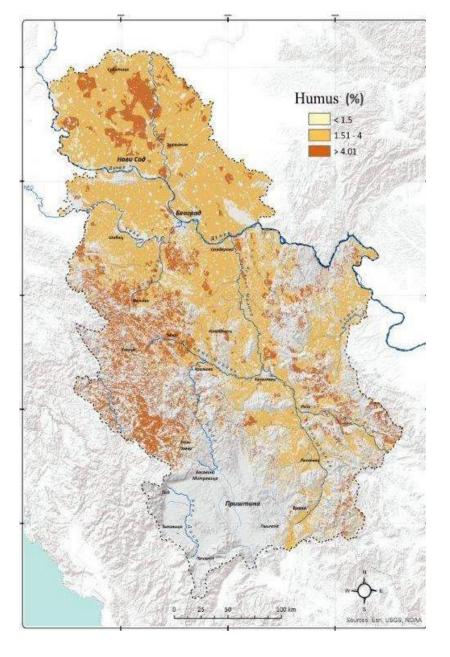
103

Percentage of employees according to the age and gender (F=female)



# Agriculture

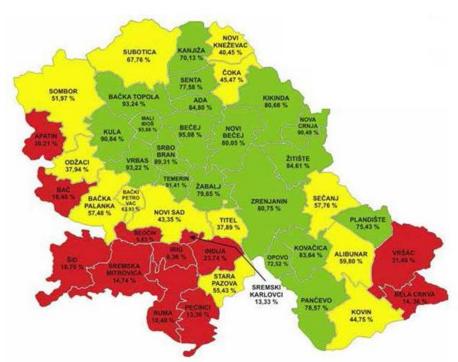
- The area of agriculture is an important factor of the economy in Serbia, in the Vojvodina region in particular.
- According to the Program for Smart Specialization in research and innovation of Autonomous Province of Vojvodina for the period 2015-2020 the most important key sector at regional level is Agricultural production and food industry, including organic agriculture production. http://www.puma.vojvodina.gov.rs/SL/2015/16/16\_2015.pdf
- Conventional agriculture is based on the use of hybrid seeds and high yielding varieties, that are highly responsive to large doses of chemical fertilizers and irrigation.
- This has resulted in soil being deprived of useful microorganisms, essential plant nutrients and organic matter.
- An analysis of over 184.899 samples of plowland in AP Vojvodina indicated that most samples belong to the category of low humus soils with the organic matter content ranging from 1% to 3%. Organic matter content in Vojvodina soils is under strong anthropogenic influence.





# Strategic goal of applied research in Educons University

- Destruction of agricultural resources is mainly caused by plant diseases, crop yield decrease can sometimes reach 90%.
- Traditional methods for plant pathogen control rely on the use of chemical pesticides, particularly fungicides.
- Applications of fungicides and fumigants build up in the soil, pollute fresh water and therefore affect humans and many forms of wildlife.
- Strategic goal of applied research in Educons University is the development of environmental friendly techniques in agriculture to decrease pollution, completely in line with European Directive 2009/128/EC and regional smart specialization goals.



Humus status in Vojvodina soils. Green color - favorable humus content; Yellow color - medium favorable humus content; Red color - unfavorable humus content. Source: *Republic of Serbia Ministry of Agriculture and Environmental Protection*, 2016.



# Laboratory for Agrobiotechnology

Members: Two senior researchers, three Postdocs, one PhD student

**Activities:** 

Investigation of the interactions between plants and symbiotic microorganism targeted to development of microbiological products for application in ecological agriculture.

Investigation of the microorganisms application for bioremediation of polluted agricultural soil Beside research in the frame of scientific projects lab facilities are used by students doing their experimental parts of diploma, master and doctoral thesis.

Main lab equipment:

Laminar- Ehret

Mikroskop –Olympus

Autoklav-Federgari

Kjeldahl –Gerhardt

UV-VIS i fluorescence plate reader-Tecan

Nanodrop spektrofotometar-General Electrics

Rotary RT-PCR with HRM analysis- Idaho Technology

DGGE/TGGE electrophoresis system- Ingeny







# Laboratory of the Faculty of environmental protection

**Activities:** 

Measurements of organic and inorganic pollutants in water, sediment, soil, air and living organisms. Bioindicators of the environmental status are also investigated as well as the detection of the new emerging substances.

Beside research in the frame of scientific projects lab facilities are used by students doing their experimental parts of diploma,

master and doctoral thesis.

Main lab equipment:

Gas chromatograph - Agilent 7890 BGC-FID-ECD-CTC-PAL

Liquid chromatograph - Agilent 1220 Infinity HPLC-DAD

Mercurianalyser – Milestone DMA-80

Microskop Motic BA 310E

Micowawe oven Berghof

Spectrophotometer Thermoscientific evolution 100



#### A BIO TECH LAB

A BIO TECH LAB is commercial lab that has two parts: chemical and biotechnological lab (https://educons.edu.rs/nauka/laboratorija-a-bio-tech-lab/).

Chemical lab is accredited for the determination of pesticide residues in plant products and heavy metals in food and soil. Biotechnological lab is accredited for the determination of GMO in food, seed and feed.

Laboratory is connected with teaching and academic staff of Faculty of environmental protection and Faculty of ecological agriculture in research and project activities.



ICP-OES sistem Thermo iCAP 6500 Duo



LC/MS-MS Dionex UltiMate 3000/TSQ Quantum Access Max



LC/MS-MS Dionex UltiMate 3000/TSQ Quantum Access Max



LC/MS-MS Dionex UltiMate 3000/TSQ Quantum Access Max



Real Time PCR QuantStudio 5



# Projects of Educons University in the area of Environmental protection in agriculture Participation of Educons in national projects

Project funding and ID	Project title	Project duration
Ministry of education, science and technological development of the Repulic of Serbia 31080	Biodiverzitet kao potencijal u ekoremedijacionim tehnologijama oštećenih ekosistema Biodiversity as a potential in ecoremediation technologies of damaged ecosystems	2011 -
Ministry of education, science and technological development of the Repulic of Serbia 43010	Modifikacije antioksidativnog metabolizma biljaka sa ciljem povećanja tolerancije na abiotski stres i identifikacija novih biomarkera sa primenom u remedijaciji i monitoringu degradiranih staništa Modification of antioxidant plant metabolism with the aim of increasing tolerance to abiotic stress and identifying new biomarkers with application in remediation and monitoring of degraded habitats	2011-
Provincial secretariat for high education and research 14-451-397/201-04	Tolerantnost autohtonih vrsta gljiva iz roda Trichoderma prema teškim metalima  Tolerance of autochthonous fungal species from the genus Trichoderma to heavy metals	2014
Provincial secretariat for high education and research 114-451-1977/2014-03	Primena biouglja u organskoj poljoprivredi Application of biochar in organic farming	2015



# Projects of Educons University in the area of Environmental protection in agriculture Participation of Educons in Erasmus+ K2 projects (previous Tempus programme)

Project ID	Project title	Project duration	Project objective
16964-TEMPUS-1-2011- 1-NLTEMPUS-JPHES	EDUECO Education of Teachers in the field of Ecological Food Production and Management	2011 - 2014	The project EDUECO is to build up educational capacities in universities in Serbia, Bosnia Herzegovina and Montenegro to support sustainable economic development of food production based on ecological principles
544270-TEMPUS-1- 2013-1-RS-TEMPUS- JPCR. 2013-4539/001- 001	2013-1-RS-TEMPUS- PCR. 2013-4539/001- Veterinary Education		The principal outcomes will be a) upgraded veterinary curricula with incorporated "clinical teaching methodology" in compliance with EU standards; b) new veterinary specialist curricula in compliance with Serbian Law on Veterinary Matters; c) new curriculum in organic livestock production and c) comprehensive survey on the "Present state of the veterinary profession in Serbia and vision for the future".
544072-TEMPUS-1- 2013-1-RS-TEMPUS- SMHES(4604)	CaSa Building capacity of Serbian Agricultural Education to link with Society	2011 - 2014	Strengthening links between higher education and society by building capacity of all five Serbian Faculties of Agriculture (FA) to improve teachers' competences in pedagogic skills and in their ability to provide eLearning in-service vocational training courses for agricultural secondary school (AMS) teachers and experts in extension services (ES). Networking of all stakeholders in agricultural education and project sustainability are ensured by creating a National Repository for Agricultural Education (NaRA)



# Projects of Educons University in the area of Environmental protection in agriculture Participation of Educons in Cross-Border IPA projects

Project ID	Project title	Project duration	Project objective
HUSRB/1002/214/068	Development of an infield, ecologically safe, continuosly detoxifying technology for producing bio vegetable - PHANETRI	2011 - 2013	The aim of the project is the development of an in field, ecologically safe, continuously detoxifying technology for producing bio-vegetables. Our planned product will contain two components:  A polyphenol oxidase secreting Trichoderma strain with mycoparasitic capabilities, with cellulase, xylanase, esterase, protease, chitinase, phosphatase activities, and with the capability to elicit the SAR system in plants if applied in their rhizosphere. A Phanerochaete crysosporium strain with excellent soil tolerance capabilities and with the ability to degrade wide spectrum of pollutants with its lignin-peroxidase, manganese-peroxidase and laccase enzymes. In this way the plants will develop in continuously detoxified soil: the pollutants falling down with rain and by wind will be continuously degraded.
HR–RS 182	Implementation of cross-border joint actions toward environment protection in agriculture- IMPACT ENVI	2017 - 2019	The aim is to prevent major pollution problems from agriculture in the cross-border region, raising awareness of target groups, educating producers and accepting good agricultural practices. Encourage integrated cross-border monitoring / management systems for existing risks to protect the environment and biodiversity.
HUSRB/1602/41/0031	Development of soil type adapted microbiological products promoting ecological pest management-PLANTSVITA	2018 - 2020	1.The project results in the creation of a new, innovative product family (PLANTSVITA AC optimally working at pH values between 5-7 and PLANTSVITA AL optimally working at pH values between 7-8.5) and the related technology. The products and the technology will be available to the farmers and SMEs involved in agricultural production for the restoration of soil quality.  2. The series of the promotional and knowledge-transfer activities will serve to increase the innovative capacity of the local economy actors (farmers and relevant SMEs) and young professionals, students and unemployed persons, promoting the principles of EPM and raising the awareness about the environment-friendly technology andsustainable agricultural practices.  3. The partnership under PLANTSVITA will establish the CB centre for development of new green solutions for the restoration of soil and environment, offering also service of xenobiotics monitoring in food and soil.



#### **Agri-Food Plans**



#### **Organic Farming:**

the objective is to reach 20% by 2030.

#### Plant protection:

reduction of pesticides by science-based approach

#### **Conservation & Environment**:

environmental friendly farming practices





Republic of Serbia, 21208 Sremska Kamenica, 85-87 Vojvode Putnika St. Tel. +381214893610, E-mail: info@educons.edu.rs,

www.educons.edu.rs









facebook.com/EduconsUniverzitet twitter.com/UEducons plus.google.com/+EduconsEduRsNS youtube.com/educonsuniverzitet

#EduInfo

Everything at one place

THINK DITS THE BOX

CO

Address: Vojvode Putnika 85-87, 21208 Sremska Kamenica, Serbia E-mail: info@educons.edu.rs Call centre: 00381 21 4893 610 International relation office: 00381 21 4893 619 www.educons.edu.rs/en

