

**BUGI**

Western Balkans Urban Agriculture Initiative

## Pregled aktivnosti

Pakeza Drkenda

Faculty of Agriculture and Food Sciences (UNSA)



**Otvorena vrata**

Erasmus+ project Western Balkans Urban Agriculture Initiative – BUGI /  
06.09.2019

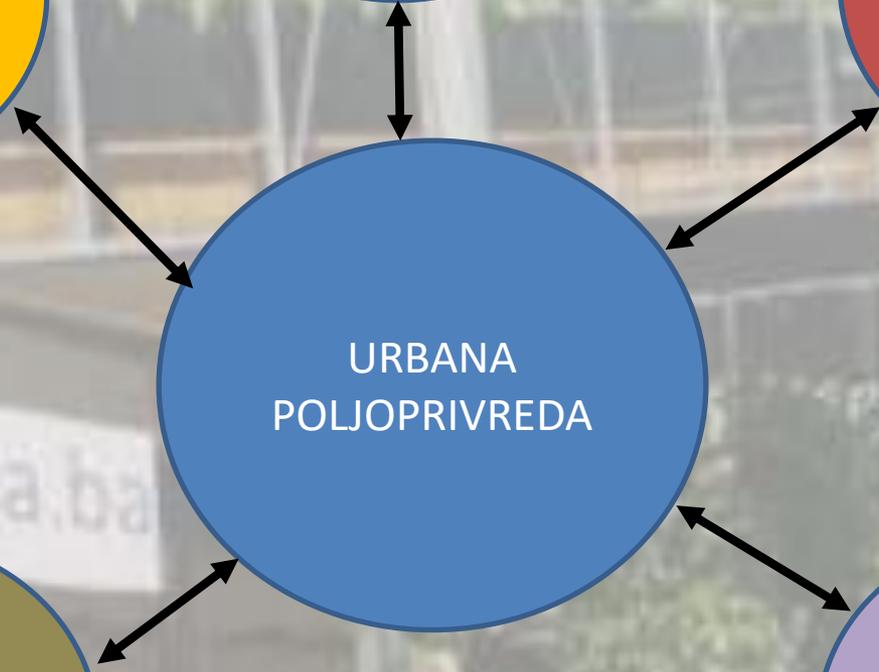
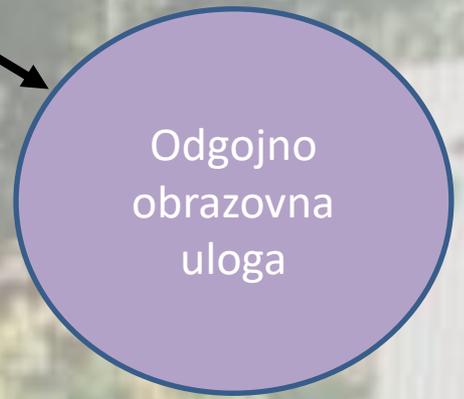
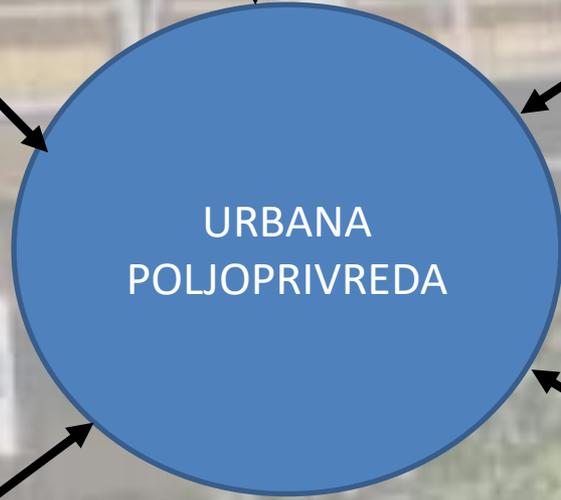
## OPEN DOOR

### ERASMUS + PROJECT

### “ WESTERN BALKANS URBAN AGRICULTURE INITIATIVE BUGI” 26.05.2021.

- 10,00 -11,00:** Opening and presentation of Greenhouse
- 11,00 – 12,00:** Hortitherapeutic work in the garden with UNSA students (in collaboration with UNSA Office for support to students with special needs)
- 13,30 – 14,30:** Online presentation of the project, Google Meet
- “Review of realized activities on the BUGI project”,**  
Prof. Dr Pakeza Drkenda, Coordinator Projekta, PPF UNSA
- “Urban agriculture - momentum of modernization and improvement of life quality”,** Prof. Dr Aleksandra Nikolić, PPF UNSA
- “The experiences of students”,** Students of master Study Progran “ Urban Agriculture”, PPF UNSA
- “International Credit Mobility, Project 2020”** Project number: 2020-1-DE01-KA107-005594, Bernd Pölling, SWUAS University





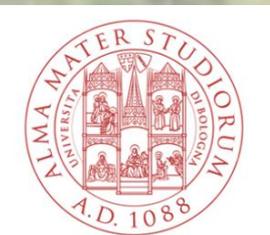
bugi.unsa.ba

# Tipovi urbane poljoprivrede

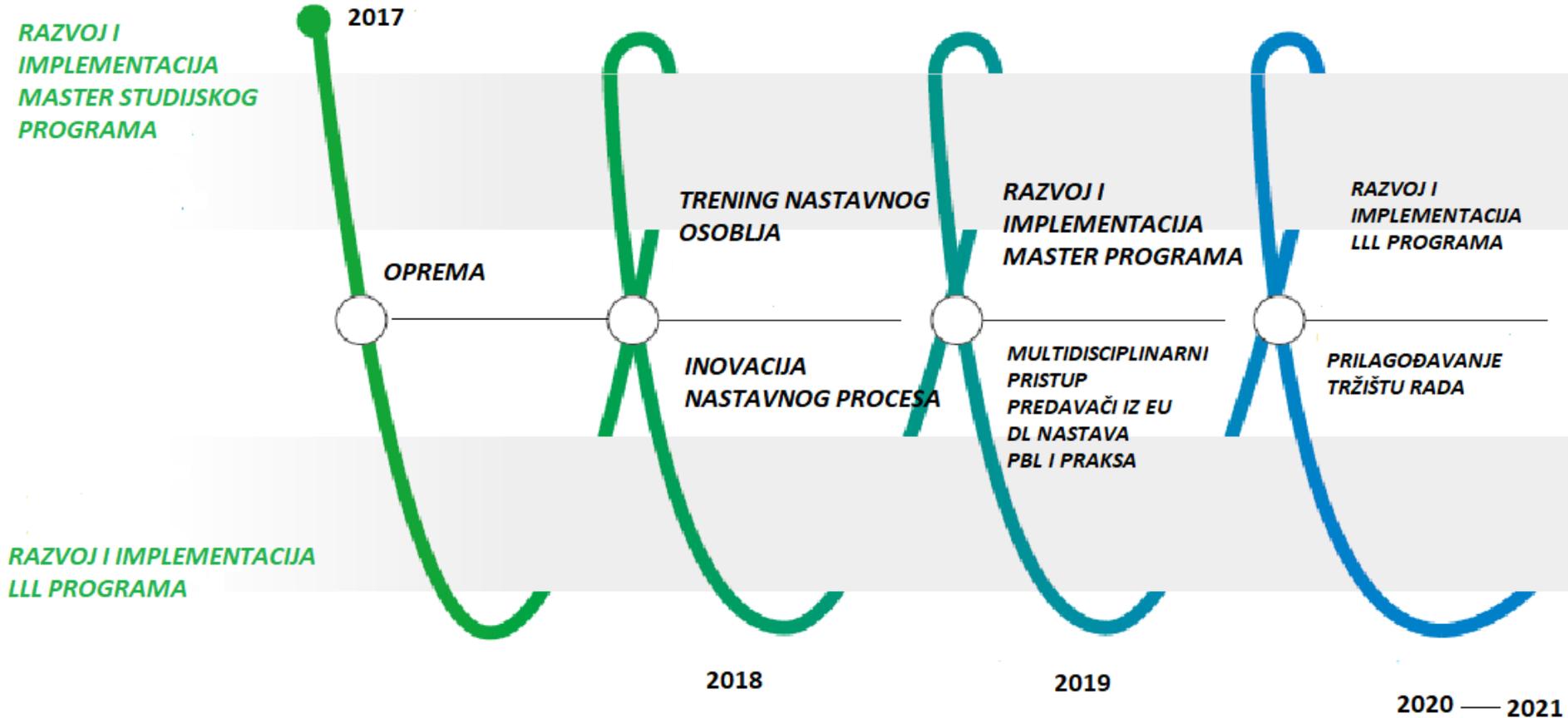
- **Urban Food Gardens**- gradska poljoprivreda obično ima socijalne ciljeve (okupiti zajednicu ili pružanja terapijskih prednosti). Osiguravanje prihoda od poljoprivrednih aktivnosti nije primarni cilj.
- **Urban farming**- gradski uzgoj: Akteri su poduzetnici koji se temelje na poslovnim modelima. Oni koriste blizine gradskog stanovništva za prodaju poljoprivrednih proizvoda i usluga.

# Šta je BUGI?

- Erasmus + Project: Capacity Building in Higher Education
- Broj projekta: 586304-EPP-1-2017-1-BA-EPPKA2-CBHE-JP
- Period implementacije: 36 mjeseci (oktobar 2017 – oktobar 2020, produženo do oktobra 2021)
- Konzorcijum:
  - Univerzitet u Sarajevu-UNSA (BiH) – projekt koordinatorski
  - Univerzitet Džemal Bijedić Mostar-UNMO (BiH)
  - Univerzitet Donja Gorica-UDG (MNE)
  - Univerzitet Priština-UP (XK)
  - Univerzitet Haxhi Zeka Peć-UHZ (XK)
  - Alma Mater Studiorum Università di Bologna-UNIBO (IT)
  - South-Westphalia University of Applied Sciences –SWUAS (DE)
  - University of Ljubljana-UL (SLO)



# Šta je BUGI?



## Aktivnosti na projektu

- **WP1: Priprema, analiza i uporedba stanja urbane poljoprivrede u zemljama regiona/Evrope**
- **WP2: Razvoj master studija Urbana poljoprivreda i programa cjeloživotnog učenja**
- **WP3: Jačanje kapaciteta univerziteta u regionu**
  - Treninzi za nastavnike u EU partnerima
  - Oprema

Bolonja, 2018

# Study Visits



# Ljubljana, 2018



# Dortmund, 2018



# Venecija, 2018



# Pordenone, 2019



# Berlin, 2019



## Tangible and intangible results achieved

- **WP4: osiguranje kvaliteta**
- **WP5: Promocija projekta i studijskog programa**
- **WP 6: Upravljanje projektom**

# Dissamination



**INFO DAN**

PREZENTACIJA ERASMUS+ PROJEKTA "WESTERN BALKANS URBAN AGRICULTURE INITIATIVE"

28.12.2018. u 10.00h

Poljoprivredno-prehrambeni fakultet  
Kampus Univerziteta u Sarajevu

Logos: Western Balkans Agriculture Initiative, University of Sarajevo, Erasmus+ logo, and European Union flag.



# Dissamination

- Nikolić, A., Uzunović, (in press) Urban agriculture and circular economies - perspectives and case study of Bosnia and Herzegovina. I., Leal, W., Smetana, S. (eds) Handbook of Climate Change and Urban Supply Chain. (ongoing)

## Promoting education and training in urban agriculture building on international projects at the Research Centre on Urban Environment for Agriculture and Biodiversity

G. Pennisi\*, F. Magrefi, N. Michelon, G. Bazzocchi, L. Maia, F. Orsini, E. Sanyé-Mengual and G. Gianquinto

RESearch Centre on Urban Environment on Agriculture and Biodiversity (RESCUE-AB), University of Bologna, Italy.

### Abstract

The RESearch Centre on Urban Environment for Agriculture and Biodiversity (RESCUE-AB), within the Department of Agricultural and Food Sciences of the University of Bologna, is committed to promote urban horticulture and biodiversity in Europe and in several countries of the Global South, bringing together skills and research expertise in the fields of horticulture, environmental sciences and entomology. Educational activities build upon a range of international projects, specifically devoted to create innovative training tools. These range from adult education for urban gardeners and school educators, to higher education curricula. Lifelong learning instruments addressing the social and environmental functions of urban horticulture have been developed within the framework of LLP-Grundtvig projects, such as the project "HORTIS" (Horticulture in Towns for Social Inclusion and Socialisation, [www.hortis-europe.net](http://www.hortis-europe.net)). Successful application of the developed educational models are already being explored within social projects, such as the Urban Innovative Action "SALUS W SPACE" (Villa SALUS as a new Sustainable Accessible Livable Usable Social space for intercultural Wellbeing, Welfare and Welcoming in the Metropolitan City of Bologna), in which urban agriculture becomes a tool for social inclusion and capacity building among communities of political refugees and immigrants. Specific training on how to design and implement educational gardens in schools is then the main objective of the ongoing project "GARDENS TO GROW" (Urban Horticulture for Innovative and Inclusive Early Childhood Education), funded by Erasmus+. The same funding scheme promoted between 2014 and 2017 the project "URBAN GREEN TRAIN" (URBAN GReen Education for ENTteRprising Agricultural Innovation), with the aim of encouraging the creation of pioneering business initiatives in Urban Agriculture (UA), by reinforcing the so called knowledge triangle among Education, Research and Business. Within the project a partnership of public and private organizations from Italy, France, Germany and the Netherlands, developed, tested and made available to different types of learners a pilot international, cross-sectoral, multi-targeted training path on Urban Agriculture Entrepreneurship. Similarly, the ongoing project Erasmus+ "BUGI" (Western Balkans Urban Agriculture Initiative) brings together the most innovative business models in urban agriculture in Europe and support their adaptation and diffusion in Eastern Europe and the Balkan context. Finally, the capacity-building of early-stage researchers was addressed in the project H2020 MSCA "SUSTURBANFOODS" (Integrated sustainability assessment of social and technological innovations towards urban food systems), where innovative research on comparative sustainability assessment of different urban horticulture models across Europe was set in place.

Keywords: urban agriculture, entrepreneurship, education, training

\*E-mail: [giuseppina.pennisi@unibo.it](mailto:giuseppina.pennisi@unibo.it)



Acta Hortic. 1279. ISHS 2020. DOI 10.17660/ActaHortic.2020.1279.7  
XXX IHC – Proc. VII International Conference on Landscape and Urban Horticulture  
Eds.: F. Larcher et al.

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University of Applied Sciences South-Westphalia

# Fachhochschule Südwestfalen

## Urban Agriculture in Western Balkan: Consumer preferences

30<sup>th</sup> Intl. Scientific-Expert Conference of Agriculture and Food Industry Sarajevo,  
September 26<sup>th</sup>/27<sup>th</sup> 2019

Bernd Pölling, Wolf Lorleberg - FH Südwestfalen

Pakeza Drkenda, Petar Glamoclija - University of Sarajevo

# Interio sajam, Sarajevo 2019



# REZULTATI

- ✓ WP1 completed
- ✓ WP2

Aktivnost	Partneri	Opis	Specific and measurable indicators of progress
<b>Master studijski program</b>	BA, ME, XK	Razvijeni i akreditovani programi	UNSA i UNMO Implementirani studijski programi UNSA: 2019/2020, 8 studenata 2020/221/4 studenta UDG, UP i UXZ – razvijeni i akreditovani studijski programi
<b>LLL program</b>	BA, ME, XK	Razvijeni i u procesu akreditacije	UNSA u saradnji sa SERD-om (UNSA i UNMO) UDG UXZ i UP



# Prvi semestar

Sylabi - silabusi	ECTS
Statistical analysis – Statistika	6
Research methodology – Metode naučnog rada	3
Urban agriculture: introduction, history and evolution – Urbana poljoprivreda: uvod, istorija i razvoj	5
Urban food system – Urbana proizvodnja hrane	4
Entrepreneurship and urban demands - Poduzetništvo	4
Urban ecology – Urbana ekologija	4
Use of technologies and ICT in UA – Informacione tehnologije u urbanoj poljoprivredi	4
Total - Ukupno	30

## Drugi semestar - obavezni

Obligatory - obavezni	ECTS
Sustainable agriculture – Održiva poljoprivreda	3
Urban fruit and vine growing – Urbana proizvodnja voća i vinove loze	6
Urban vegetable and field crop production – Urbana proizvodnja povrća i ratarskih usjeva	6
<b>Ukupno</b>	<b>15</b>

## Drugi semestar - izborni

Urban farming, nutrition and irrigation	3
Urban farming plant protection	3
Use and cultivation of ornamental plants	3
Aromatic and medicinal plants	3
Beekiping	3
Biogenic waste management	3
Application of GIS	3
Plant propagation in Urban Agriculture	3
Dynamic input and climate management in urban agriculture systems using informatic tools and DSS	3
Sustainable cities and eco inovation	3
Economic and organisation of UA production	3
Renewable energy sources: basics and applications	3
Project Cycle Management	3
Projektovanje	3
Prerada hrane	3

- Treći semestar - 30 ECTS,
- 18 PBL (Problem base learning) PBL – Učenje zasnovano na rješavanju problema - 18
- 12 Intership - praksa - 12
- Četvrti semestar- Master teza 30 ECTS
- Mogućnost online predavanja i ispita
- Ukupno 120 ECTS (30x4)

## Western Balkans Urban Agriculture Initiative

### Zastupljenost po oblastima

1.	<b>Opšti predmeti koji su obavezni na svim master studijskim programima PPF UNSA (Eksperimentalna statistika i Metode naučnog rada)</b>	<b>9 ECTS (7,5%)</b>
2.	Predmeti iz oblasti poljoprivrede	38 ECTS (31,67 %)
3.	Predmeti iz oblasti ekonomike	13 ECTS (10,8%)
4.	Predmeti iz oblasti arhitekture i urbanistike	7 ECTS (5,8 %)
5.	Predmeti iz oblasti Informacionih tehnologija	10 ECTS (8,3%)
6.	Obavezni predmeti	45 ECTS (37,5%)
7.	Izborni predmeti	15 ECTS (12,5%)
8.	Praksa:	30 ECTS (25%)
	- Praktičan rad - Učenje zasnovano na rješavanju problema (Problem-based Learning, PBL) uz tutorstvo	18 ECTS (15%)
	- Praksa u firmama/institucijama	12 ECTS (10 %)
9.	Izrada završnog rada	30 ECTS (25%)

# Predavači sa partnerskih institucija iz EU

Fachhochschule Südwestfalen

Wir geben Impulse!

Urban Agriculture in  
Ruhr Metropolitan Area, Germany

Sarajevo University

November 12<sup>th</sup>, 2020, Online - Dr. Bernd



Co-funded by the  
Erasmus+ Programme  
of the European Union

Fachhochschule Südwestfalen

Wir geben Impulse

„Vertical farming“  
...more than a hype?

Sarajevo University

and Pölling



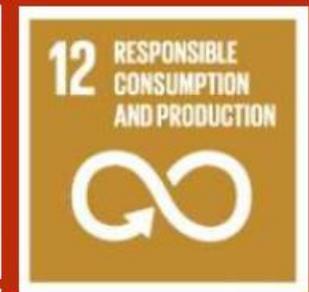
How to start in urban agriculture  
*from business idea to business plan*

Sarajevo University

November 27<sup>th</sup>, 2020, Online - Dr. Bernd Pölling



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA



# Plant factories with artificial lighting

Francesco Orsini

Department of Agricultural and Food Sciences

## Aquaponics - innovative example of urban Horticulture

Ana SLATNAR  
Biotechnical faculty, Univeristy of Ljubljana



## LIVADA LAB – innovative example of urban agriculture



# CASE STUDIES OF INTERNATIONAL AND SLOVENIAN HORTICULTURAL THERAPY

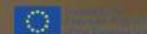


Slika 5: Buehlerjev vrt v Botaničnem vrtu v Chicago z dvignjenimi gredami različnih višin, ki omogočajo dostop različnim uporabnikom prostora: tistih na invalidskih vozičkih, slepim ali slabovidnim in dostojno kishanulogo (Linum, L. davisii, Gaulth. (2014)) – raznolikim vrstičet. Ljubljana, 2014.

DL nastava



**BUGI**  
Western Balkans Urban Agriculture Initiative



## Moodle za početnike

-priručnik-



# DL nastava

PPF Sarajevo - BUGI

You are not logged in. (Log in)

PPF Sarajevo - BUGI

## Available courses



Test

Moodle za nastavnike

Osnovi urbane poljoprivrede - OUP5

Metode naučnog rada - MNR3

Precizna poljoprivreda i pametna proizvodnja hrane - PPIP4

Eksperimentalna statistika - ES6

Urbana ekologija - UE4

Urbani sistemi distribucije hrane - USDH4

Poduzetništvo - POD4

Teacher: Aleksandra Nikolić

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moodle



## Western Balkans Urban Agriculture Initiative

### **LLL programi obuke odraslih za zanimanja iz oblasti Urbana poljoprivreda *Baštovan urbane poljoprivrede***

**LLL PROGRAM JE RAZVIJEN U SARADNJI SA SERD-om, U PROCESU  
AKREDITACIJE**

R br	<i>Obavezne nastavna jedinica</i>	Broj časova
1	<i>Osnove urbane poljoprivrede</i>	5 P + 10 PV
2	<i>Ekonomika urbane poljoprivrede</i>	5 P + 10 PV

Western Balkans Urban Agriculture Initiative

R br	<i>Izborne nastavna jedinica</i>	Broj časova
1	<i>Proizvodnja voća u urbanoj poljoprivredi</i>	5 P + 10 PV
2	<i>Proizvodnja grožđa u urbanoj poljoprivredi</i>	5 P + 10 PV
3	<i>Proizvodnja povrća u urbanoj poljoprivredi</i>	5 P + 10 PV
4	<i>Proizvodnja ljekovitog i začinskog bilja u urbanoj poljoprivredi</i>	5 P + 10 PV
5	<i>Urbano pčelarstvo</i>	5 P + 10 PV
6	<b>Proizvodnja biljnog sadnog materijala u urbanim sredinama</b>	5 P + 10 PV
7	<i>Agroturizam</i>	5 P + 10 PV
8	<i>Prerada prehrambenih proizvoda biljnog porijekla</i>	5 P + 10 PV

# Oprema







Financed by the  
European Union  
under the Erasmus+  
Programme









INSTITUTO TECNOLÓGICO Y DE INVESTIGACIONES AGROPECUARIAS  
INTECIA  
CALLE 100 No. 100-100, ZONA INDUSTRIAL  
CAYAMA, PERÚ  
TEL: (051) 071 421 1111  
WWW.INTECIA.PE



Proyecto de Investigación  
"Evaluación de la capacidad de  
producción de leche en  
vacas de raza Holstein en  
condiciones de producción  
intensiva"

bugi







WESTERN BALKANS URBAN AGRICULTURE INITIATIVE  
(BUGI)



Co-funded by the  
Erasmus+ Programme  
of the European Union

Project number: 586304-EPP-1-2017-1-BA-EPPKA2-CBHE-JP. This project has been funded with support from the European Commission.







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of the European Union



# Web stranica

- <https://www.bugi.unsa.ba/>



# NASTAVAK?!

- U saradnji sa kolegama SWUAS univerziteta iz Njemačke je u realizaciji Erasmus + projekat mobilnosti (u okviru programa KA107)
- koji uključuju razmjenu studenata i članova (ne)nastavnog osoblja PPF UNSA sa partnerskom institucijom iz Njemačke (SWUAS)
- Prioritet studenti master studijskog programa Urbana poljoprivreda
- ECTS mobilnost, praksa, treninzi, predavanja i sl.
- Više o tome će nam prezentirati Doc. Dr Bernd Pölling
- Prva grupa studenata/prva generacija studenata UP u ljeto ove godine ide na razmjenu