



## INTERNATIONAL SUMMER SCHOOL – PODGORICA, MONTENEGRO

„Grapevine growing“

# INFORMATION PACKAGE FOR STUDENTS

**PLEASE READ THIS DOCUMENT CAREFULLY**



Lifelong learning for sustainable agriculture in Alps-Danube-Adriatic Region – LifeADA is a TEMPUS IV project funded with the support of the European Union. Project Number – 544595 – TEMPUS – 1 – 2013 – 1 – HR – TEMPUS – JPHES.

Dear students,

You are invited to apply for participation on the International Summer School "**Grapevine Growing**". Summer school will be held on **English language**. Each student will be awarded with **6 ECTS** credits and Certificate of completion upon finishing the programme.

**WHERE:** Podgorica, Montenegro

**HOST INSTITUTION:** University of Montenegro Biotechnical Faculty, Mihaila Lalića 15, 81000 Podgorica, Montenegro

**WHEN:** June 27 – July 8, 2016

**NUMBER OF PARTICIPANTS:** One student from each TEMPUS LIFEADA partner institution.

List of partner institutions: <http://lifeada.agr.hr/partners>

**CRITERIA:** Graduate or Postgraduate level, English language minimum B2.

**APPLICATION FORM**

<http://www.btf.ucg.ac.me/news.php?id=5&vid=361>

**REGISTER HERE!**



**APPLICATION DEADLINE:** June 10, 2016

**SUMMER SCHOOL COSTS: NO COSTS** for students coming from partner institutions within TEMPUS LIFEADA project

Each student will receive **scholarship up to 466,67 EUR** for covering the costs of stay/daily allowance.

**Travel costs** will be covered by the University of Zagreb Faculty of Agriculture

Students must find appropriate travel ticket (bus, plane, rail) and contact [LifeADA@agr.hr](mailto:LifeADA@agr.hr) for booking and payment!

List of contact persons at Partner Institutions:

HR - PFOS: Sonja Maric [smaric@pfos.hr](mailto:smaric@pfos.hr) and Daniel Haman [dhaman@pfos.hr](mailto:dhaman@pfos.hr)

AL - AUT: Perparim Laze [perparimlaze@yahoo.com](mailto:perparimlaze@yahoo.com) and Denis Cela [cela.denis@gmail.com](mailto:cela.denis@gmail.com)

AL - FanSNoli: Ilir Nicko [ivangjelnicko@gmail.com](mailto:ivangjelnicko@gmail.com)

BiH - APTF: Zrinka Knezovic [zrinka.knezovic@sve-mo.ba](mailto:zrinka.knezovic@sve-mo.ba) and Ana Mancić [ana.sabljo@sve-mo.ba](mailto:ana.sabljo@sve-mo.ba)

BiH - PPFS: Nedžad Karić [n.karic@ppf.unsa.ba](mailto:n.karic@ppf.unsa.ba) and Arnela Okic [aokic.ppf@gmail.com](mailto:aokic.ppf@gmail.com)

RKS - UNIPR: Fadil Musa [fadil.musa@uni-pr.edu](mailto:fadil.musa@uni-pr.edu) and Bedri Dragusha [bedri.dragusha@uni-pr.edu](mailto:bedri.dragusha@uni-pr.edu)

MNE - BTF: Nedeljko Latinović [nlatin@ac.me](mailto:nlatin@ac.me) and Nataša Mirecki [mirecki@t-com.me](mailto:mirecki@t-com.me)

SI - BF: Marija Klopčič [Marija.Klopcic@bf.uni-lj.si](mailto:Marija.Klopcic@bf.uni-lj.si)

AU - BOKU: Marija Zunabovic-Pichler [marija.zunabovic@boku.ac.at](mailto:marija.zunabovic@boku.ac.at)

DE - UHOH: Angelika Thomas [angelika.thomas@uni-hohenheim.de](mailto:angelika.thomas@uni-hohenheim.de) and TetyanaTonkoshkur [t.tonkoshkur@uni-hohenheim.de](mailto:t.tonkoshkur@uni-hohenheim.de)

**ACCOMODATION:**

You are free to find accommodation in private arrangement.

**We recommend** accommodation in **Hotel "Ambiente"** located 1 km near the Faculty. Price range is 16,00 EUR per person/per night; the room type 2 or 3 beds. Breakfast is included in the price.

For all additional information please go to: [http://www.hotelambiente.me/kontakt\\_eng.html](http://www.hotelambiente.me/kontakt_eng.html)

FB: <https://www.facebook.com/Hotel-Ambiente-Podgorica-394621114031812/>

If you need any additional information feel free to contact us on [LifeADA@agr.hr](mailto:LifeADA@agr.hr) or [nlatin@ac.me](mailto:nlatin@ac.me)!

Explore • Learn • Enjoy



## INTERNATIONAL SUMMER SCHOOL „„Grapevine growing““

### VENUE

The International Summer School „Grapevine growing“ is hosted by the  
University of Montenegro Biotechnical Faculty

Address: Mihaila Lalića 15, 81000 Podgorica, Montenegro.  
URL HR: <http://www.btf.ucg.ac.me/>



### Arrival in Podgorica

By plane



Airport Golubovci (TGD) is situated in Podgorica and is one of two airports in Montenegro. Another one is situated in Tivat (TIV). Airport Golubovci is a public airport with the international traffic, and is located on 12 km far from Podgorica. All contents of this object contribute to the overall offer of the airport and it is trained in the best possible way to fulfill the expectations of travelers. Companies that regularly operate at this airport are: Montenegro Airlines, Air Serbia, Turkish Airlines, Austrian Airlines, Croatia Airlines, and during the summer, there are various charter airlines.

Tel: +382 20 444 240, +382 20 444 242

Fax: +382 20 444 241

e-mail: [dispatch.podgorica@apm.co.me](mailto:dispatch.podgorica@apm.co.me), [apm.pg.dispatch@t-com.me](mailto:apm.pg.dispatch@t-com.me)

Web: [www.montenegroairports.com](http://www.montenegroairports.com)

### By Bus

This important communication hub is now operated by the company "Intours", a private joint stock company involved in tourism, transport and services. It is located in a very good location, close to the city center, next to the Podgorica Railway Station, covering an area of around 20,000 square meters. After over than 40 years of work, it meets the most strictest requirements for arrivals and departures of buses and passengers transport in both spatial and technical terms. Over a million customers annually make the Bus station a large and important communication and social center.

Being equipped with the latest technology for ticketing, a modern solution for fast and simple passenger circulation, improved complementary facilities, PBS is one of the most representative facilities of its kind in the region and the only one in Montenegro that meets the criteria for "A" category bus station certificate it has obtained

Tel: +382 20 633 010, +382 20 621 287

Fax: +382 20 620 910, +382 20 601 998

email: [busterminal@t-com.me](mailto:busterminal@t-com.me)

Web: [www.busterminal.me](http://www.busterminal.me)

**More info:** [www.podgorica.travel/en/meet-podgorica/how-to-get-there](http://www.podgorica.travel/en/meet-podgorica/how-to-get-there)

After confirmation of time of arrival on [mirecki@t-com.me](mailto:mirecki@t-com.me) or [nlatin@ac.me](mailto:nlatin@ac.me), for all participants will be organized transportation to the Hotel Ambiente.

### Taxi

You can find taxis in front of all major hotels, the airport and bus stations and at numerous other central locations. You can also order taxi online (see the links below).

**City Taxi** ([www.citytaxi.com](http://www.citytaxi.com))

Phone: 19711

**Red line Taxi** ([www.redlinetaxi.com](http://www.redlinetaxi.com))

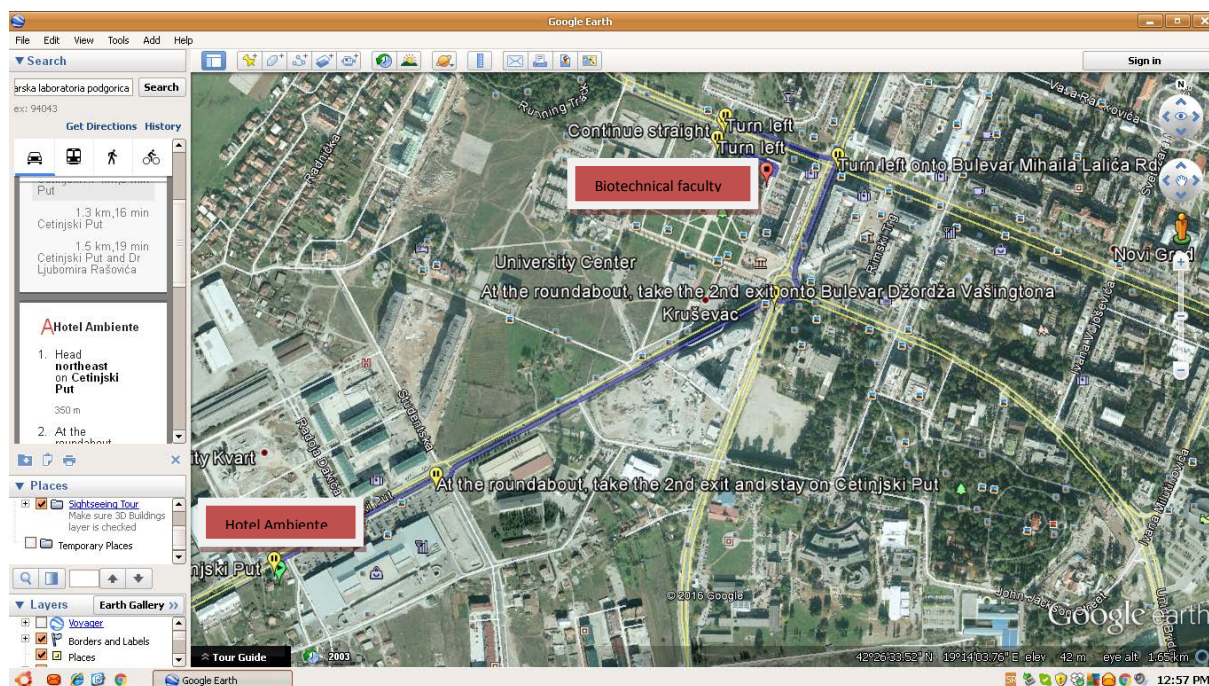
Phone: 19714

### Arrival at Biotechnical Faculty

From the hotel Ambiente to **Biotechnical Faculty** take taxi or by foot.

On the first day someone will pick you up at the Hotel. You will receive additional information by e-mail.





### City of Podgorica

Information on the city of Podgorica: <http://wikitravel.org/en/Podgorica> and [www.tripadvisor.com/Tourism-g304088-Podgorica\\_Podgorica\\_Municipality-Vacations.html](http://www.tripadvisor.com/Tourism-g304088-Podgorica_Podgorica_Municipality-Vacations.html)

### Entry in Montenegro

Passport, ID card or some other internationally recognized identification document which proves your identity and citizenship, issued by governmental authorities of your home or resident country is required to entry in the Montenegro. Tourists may remain in Montenegro for up to three months.

### Visas

Visas are not required by visitors from the following countries for visit up to 30-90 days: Albania, Austria, Bosnia and Herzegovina, Croatia, Germany, Kosovo, Serbia.

EU nationals may enter with an ID card.

Holders of a valid US or Schengen visa may transit for up to 7 days without a visa.

More info [www.mvpei.gov.me/en/sections/consular-affairs/visa-regimes-for-foreign-citizens](http://www.mvpei.gov.me/en/sections/consular-affairs/visa-regimes-for-foreign-citizens)

### Currency:

Official Montenegrin currency is euro (€).

Currency regulations: Foreign currencies can be imported and exported freely.

Foreign currencies can be exchanged at banks, exchange offices, post offices and at most tourist agencies and hotels.

### Time zone:

Central-European time GMT + one hour (during summer: GMT + two hours).

### Climate and Weather:

Montenegro is situated in southeastern Europe, between the Adriatic Sea and Serbia. It has a



mediterranean climate, with hot dry summers and autumns and relatively cold winters with heavy snowfalls inland. On average, the warmest month(s) are June, July and August. July is the driest month.

Weather forecast: [www.meteo.co.me](http://www.meteo.co.me)

Electricity:

Voltage of city power grid – 220V, frequency 50HZ

Water:

Tap water is potable throughout Montenegro.

Montenegrin-English online dictionary: <http://onlinerjecnik.com/rjecnik/engleski/crnogorski>



Funded by the European Union



INTERNATIONAL SUMMER SCHOOL „Grapevine growing“				
PROGRAMME				
DAY	DATE	TIME	TITLE OF THE LECTURE	LECTURER
DAY 1	27.6.2016.	08:30 – 09:00	Dean's welcome speech Summer school coordinator's speech	Miomir Jovanović Nedeljko Latinović
		09:00 – 11:00	Importance of sustainable agriculture	Nataša Mirecki
		11:00 – 13:00	Ampelographic and agrobiological characteristics of <i>Vitis vinifera</i>	Tatjana Popović
		13:00 – 14:30	Break	
		14:30 – 16:30	Technological characteristics of <i>Vitis vinifera</i>	Tatjana Popović
DAY 2	28.6.2016.	08:00 – 10:00	Application of methods for ampelographic description of grapevine	Tatjana Popović
		10:00 – 11:00	Application of methods for studying on vegetation cycle of grapevine	Tatjana Popović
		11:00 – 12:00	Method for ampelographic identification of grape varieties	Tatjana Popović
		12:00 – 13:30	Break	
		13:30 – 15:30	Practical work in vineyard	Tatjana Popović
DAY 3	29.6.2016.	08:00 – 10:00	Soil water balance calculation	Mirko Knežević, Ana Topalović
		10:00 – 12:00	Soil fertility	Mirko Knežević, Ana Topalović
		12:00 – 13:30	Break	
		13:30 – 15:30	Analysis and interpretation of studied data	Mirko Knežević, Ana Topalović
DAY 4	30.6.2016.	08:00 – 10:00	Factors of wine's quality; Chemical parameters of wine quality; Practical work: Analysis of chemical composition of wine	Radmila Pajović
		10:00 – 12:00	Techniques of sensory evaluation assessment of wines (OIV official method) and	Radmila Pajović



			Buxbaum method; Spectrophotometric analysis of polyphenol compounds in wine	
		12:00 – 13:30	Break	
		13:30 – 15:30	Quality evaluation of the wines: Sensory evaluation characteristics of wine; Phenolic compounds – Their importance for wine quality	Radmila Pajović
<b>DAY 5</b>	1.7.2016.	08:00 – 09:00	Analyze the parameters of the chemical composition of wine.	Radmila Pajović
		09:00 – 10:00	Analyze the sensory properties of wine;	Radmila Pajović
		10:00 – 12:00	Knowledge of the techniques for degustation of wine Spectrophotometric analysis of polyphenol compounds in wine	Radmila Pajović
		12:00 – 13:30	Break	
		13:30 – 15:30	Compost production and utilization	Nataša Mirecki
<b>DAY 6</b>	4.7.2016.	08:00 – 10:00	Field visit experimental station – irrigation system	Mirko Knežević, Ana Topalović
		10:00 – 12:00	Field visit experimental station – agrometeorological station	Mirko Knežević, Ana Topalović
		12:00 – 13:30	Break	
		13:30 – 15:30	Field visit experimental station – farmers facility	Mirko Knežević, Ana Topalović
<b>DAY 7</b>	5.7.2016.	08:00 – 12:00	Introduction to the most important grapevine diseases	Jelena Latinović
		12:00 – 13:30	Break	
		13:30 – 14:30	Forecasting of grapevine diseases	Jelena Latinović
		14:30 – 15:30	Detection of plant pathogens in the laboratory	Jelena Latinović
<b>DAY 8</b>	6.7.2016.	08:00 – 10:00	Field visit and symptoms recognition of some of the grapevine diseases	Nedeljko Latinović Jelena Latinović
		10:00 – 11:00	Disease control in conventional production	Nedeljko Latinović
		11:00 – 12:00	Disease control in organic production	Nedeljko Latinović
		12:00 – 13:30	Break	
		13:30 – 15:30	Introduction to the other important harmful organisms in grapevine and their control	Igor Pajović Nedeljko Latinović





<b>DAY 9</b>	7.7.2016.	08:00 – 09:00	Methods of determining the cost calculations and their compiling; Methods for determining indicators of economic results	Aleksandra Despotović Miljan Joksimović
		09:00 – 10:00	The concept of cost. Difference between various types of costs; Calculation of individual lines of crop production. Calculating the cost of individual plant production	Aleksandra Despotović Miljan Joksimović
		10:00 – 11:00	Economic feasibility in plant production; Optimal structure of plant production	Aleksandra Despotović Miljan Joksimović
		11:00 – 12:00	Market and marketing of agri-food products of plant origin; Concept of the market and its functioning	Aleksandra Despotović Miljan Joksimović
		12:00 – 13:30	Break	
		13:30 – 14:30	Sales channels, their advantages and disadvantages. The role and importance of market institutions	Miomir Jovanović
		14:30 – 15:30	Marketing concept of business and SWOT analysis	Miomir Jovanović
<b>DAY 10</b>	8.7.2016.	08:00 – 10:00	Written exam	Nedeljko Latinović Nataša Mirecki Jelena Latinović
		10:00 – 12:00	Group I: Oral presentations (PPT – Each student has 5 minutes for presentation + 5 minutes for discussion)	
		12:00 – 13:30	Break	
		13:30 – 14:30	Group II: Oral presentations (PPT – Each student has 5 minutes for presentation + 5 minutes for discussion)	
		14:30 – 15:30	Curriculum / teachers evaluation questionnaires Results and Certificate award	



## INTERNATIONAL SUMMER SCHOOL „Grapevine Growing“

### LECTURE SUMMARY

#### **Production of grapevine**

Tatjana Popović

Ampelographic, agrobiological and technological characteristics of *Vitis vinifera* species. Apply methods for ampelographic description of grapevine. Apply methods for studying vegetation cycle of grapevine. Understanding method for ampelographic identification grape varieties for reasearch and practical work in vineyard.

#### **Importance of sustainable agriculture**

Nataša Mirecki

Terms and terminology in sustainable agriculture. Benefits of sustainable agriculture to the health and long- term productivity of the environment, the farm family, and society as a whole.

Key concepts in natural resource management to agricultural farming systems. Understand and explain key agricultural systems concepts and perspectives at regional, national and global scales. Identify and argue constraints and opportunities for future sustainable agricultural systems.

#### **Compost production and utilization**

Nataša Mirecki

Role of composting in guaranteeing the organic waste utilisation, minimisation of their possible environmental risk and optimal use of compost products; source materials for composting, their resource, and use according their quality; composting technologies, equipment and



processing; safety requirements and monitoring of composting process; use of compost as fertiliser or as soil amendment, application norms and the environmental aspects; indicators of composts physical, chemical and biological parameters and their assessment with organoleptic methods.

### **Effect of irrigation and fertilization on the quality and yield**

Ana Topalović and Mirko Knežević

The estimation of the effect of different fertilization level and irrigation regimes on grape quality and yield. Introduction to using of ACLIMAS - program for the calculation of evapotranspiration and statistical data processing. Calculate evapotranspiration on basis of parameters of climate, soil and grapevine. Analyze and interpret the data of study. Guidance farmers and other interested parties about the procedure of sampling land for agro-chemical analysis. Interpret the results of agrochemical soil analysis.

### **Grapevine protection**

Jelena Latinović, Nedeljko Latinović and Igor Pajović

To introduce students to the most important harmful organisms of grapevine and their control. Recognition of the most important harmful organisms of grapevine the damages that can occur. Recognition of the life cycle of harmful organisms. Undertaking adequate measures for their control based on the principles of integrated or organic plant protection.

### **Production of Wine**

Radmila Pajović-Šćepanović

Factors of wine's quality; Chemical parameters of wine quality; Quality evaluation of the wines: Sensory evaluation characteristics of wine; Phenolic compounds – Their importance for wine quality. Analyses of chemical composition of wine; Techniques of sensory evaluation assessment of wines (OIV official method) and Buxbaum method; Spectrophotometric analysis of polyphenol compounds in wine.



## **Cost and calculation**

Aleksandra Despotović and Miljan Joksimović

Methods of determining the cost calculations and compiling, as well as methods of determining indicators of economic results. Define the concept of cost. Explain the difference between different types of costs. Use the calculation of individual lines of crop production. Calculating the cost of individual plant production. Assess the economic feasibility of production of certain plant production. Propose the optimal structure of plant production.

## **Marketing of agricultural products**

Miomir Jovanović

Market and marketing of agri-food products of plant origin. Explain the concept of the market and its functioning. Describe the elements, factors, the basic function and mechanism of the market. Describe the sales channels, their advantages and disadvantages. Explain the role and importance of market institutions. Prepare the basic market data. Introduce a simple analysis of the market of agricultural and food products. Describe the marketing concept of business and SWOT analysis. Distinguish instruments of the marketing mix of agrifood products.