



COURSE REGISTRATION FORM

Teacher	Braho Ličina
University	State University of Novi Pazar
Course	Microorganisms – producers of energy and nutrients
Target	Agricultural Middle Schools
Type	blended
Duration	1 day – 8 hours

Description	<p>Producing energy and nutrients (especially proteins) by the sustainability methods is one of the biggest modern and probably future problems. Potential using of the agricultural waste generated in Serbia is not enough and little known to the public. Aims of the course are presenting of wide spectrum before known and the newest practical methods using microorganisms in producing and reducing organic and non-organic (especially fixation of nitrogen), avoiding emission of the pollutants (pollutants generated in process reducing agricultural, fertilizers ...) and synchronous potential possibility producing the clean energy. There are aims to meet possibilities producing nutrients by the microorganisms from used materials and/or agricultural waste. Certainly, everything is based on active learning, relying on prior knowledge as a base and applying newer, less known methods, techniques and skills in agriculture, technology and production of energy. We're expecting from users to become prepared and motivated for applying e-learning and transferring to others (students, farm producers).</p>
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Contents	<ol style="list-style-type: none">1. Microorganisms in biosphere-circling materials2. Biodegradation3. Producing of energy4. Microorganisms in producing of food5. Microorganisms in agricultural production
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Objectives	<ol style="list-style-type: none">1. Restoring of prior knowledge (especially reducing natural and synthetic materials) and systematization of knowledge about metabolism of microorganisms.2. Applying new knowledge of metabolism of microorganisms, understanding importance of reusing it to get higher yield and genetic non-modified organisms.3. Introducing (motivating) for permanent education and distance learning (giving instructions and advices to participants-how to use contemporary literature and scientific articles).4. Understanding importance development organic agriculture, producing clean energy and achieving of partial energetic independence.
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5. Promoting organic agriculture and sustainable development in order to present them to students during school and the general public

Activities

1. Access - an introduction to the topic, access *Moodle* and the course
2. At the beginning of each topic - recovery of previously acquired knowledge.
3. The teacher sets the task (the test), the participants resolved using *Moodle*, followed by discussion participants exchanged knowledge and information
4. Monitoring lectures using *Power Point* presentations, video material and schemes (with occasional discussions with the lecturer)
5. Work in pairs - troubleshooting and "I want to know"
6. (Finding and quickly use scientific papers on topics " Microorganisms producers of clean energy " and "Microorganisms 'helpers' in agricultural production")
7. Development of the project - troubleshooting II ("Promoting organic agriculture and sustainable development" at the school level and/or a particular institution/organization the type of network (community) of agricultural producers, the municipal organization for agricultural development, environmental protection ...)
8. Presentation of results and discussion
9. Conclusion and course evaluation

Materials

1. Computer room with internet portal *Moodle*
2. Panel + scheme
3. *Power Point* presentation
4. Video material
5. Printed materials