



University – Business Alliance in Modern Biotechnology Approaches for Climate Change Mitigation Solutions

BIO-Save

Knowledge is power.

Sir Francis Bacon

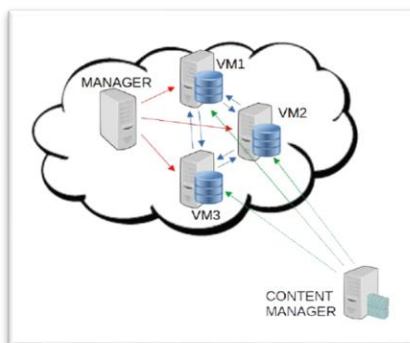
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BIO-Save knowledge empowers learning & working

- **The BIO-Save project** bridges the gap between teaching in academic institutions and the need for educated professionals in the biotech business. It boosts the quality of education for students, teachers, and practitioners with up-to-date knowledge in climate protective biotechnology approaches through ICT-based flexible, transferable Learning Outcomes with the ultimate aim establishing a competency-based learning system.
- **The BIO-Save project** promotes innovation in biotech education and business through the educational program in “Modern biotechnology approaches for climate change mitigation” presented as online/offline learning offers to academics and the business world.
- **The BIO-Save project** implements advanced knowledge and skills to promote the shift of EU education towards intelligent and green competencies. It answers the Industry 4.0 requirements for the digital transformation of the economy and the business through (re)training of the workforce.

BIO-Save knowledge: the technical background

- **The BIO-Save cloud-based web portal** hosts the b-learning platform applying the b-learning cloud-based management system (b-LMS), which is more secure, scalable, and reliable.



- **The BIO-Save b-learning platform** functions as a flexible e-medium to provide competence-based blended learning to the project target groups (students, tutors and biotech practitioners) through learning offers tailored to their needs.

BIO-Save knowledge empowers

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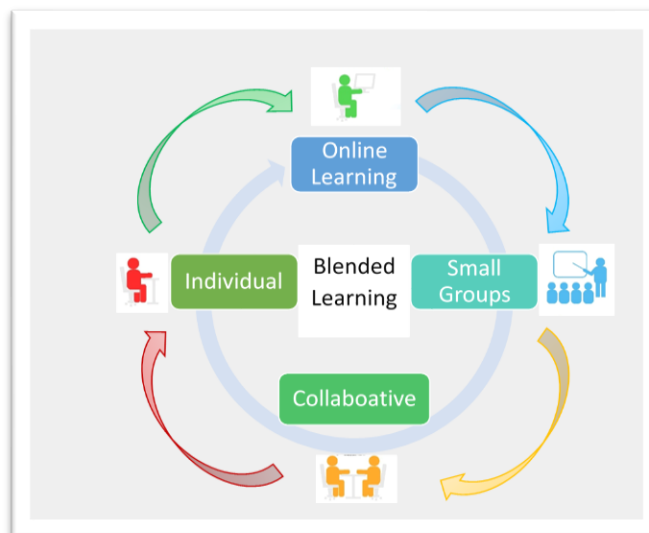
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BIO-Save knowledge: the b-learning model

- **The BIO-Save blended learning model** is a competence-based learning strategy grounded on the concept that different workforce segments in various economic sectors require distinct skills depending on the technologies they use.
- **The BIO-Save blended learning model** is:
 - Based on analysis of the needs for higher education training oriented to the BIO-Save target groups;
 - Focused on modern biotechnology approaches for climate change adaptation;
 - Relied on the partners' organizations' (and different stakeholders' and professionals') expertise to develop innovative solutions, products, and processes.
- **The BIO-Save blended learning model** analyses of the good practices/methods in teaching, learning and assessment, and their organization to allow trainees to reach the intended Learning Outcomes of a course of study. It aligns of teaching methods and assessment to the learning activities.



- **The BIO-Save blended learning model** mediates the shift to modern technology for reading competencies. The knowledge provision corresponds to Education 4.0 multi-dimensional approach for Industry 4.0. This approach interrelates the skills that various economies and businesses need and the educational offers in terms of anticipated competencies to serve individuals and institutions in the identification of skills coverage for Industry 4.0 activities.
- **The BIO-Save blended learning model** is implemented into the b-Learning Guide in Modern Biotechnology for Higher Education Professionals:
 - “New learning and teaching methods in HE programs” offers an analysis of the good practices and methods in teaching, learning, and assessment and how they allow students to reach the intended Learning Outcomes.
 - “BIO-Save project learning” describes the Learning Outcomes on the platform and defines how to use the online and offline benefits of the interactive environment.
 - “The use of ICT in HE” gives short information on ICT tools and applications usage in higher education to enhance professors’ and practitioners’ awareness and digital skills.



BIO-Save knowledge: the education program

The BIO-Save education program aims at:

- Developing and delivering an innovative modular learning content dedicated to modern biotechnology approaches for climate change mitigation.
- Meeting the needs for academic programs in accordance with the requirements of the BIO-Save targets.
- Employing the recognised EC instruments EQF/HE/ECTS and the concept of a common and user-friendly ‘language’ for transparency, transfer, and recognition of the Learning Outcomes.

BIO-Save education program is offered as:

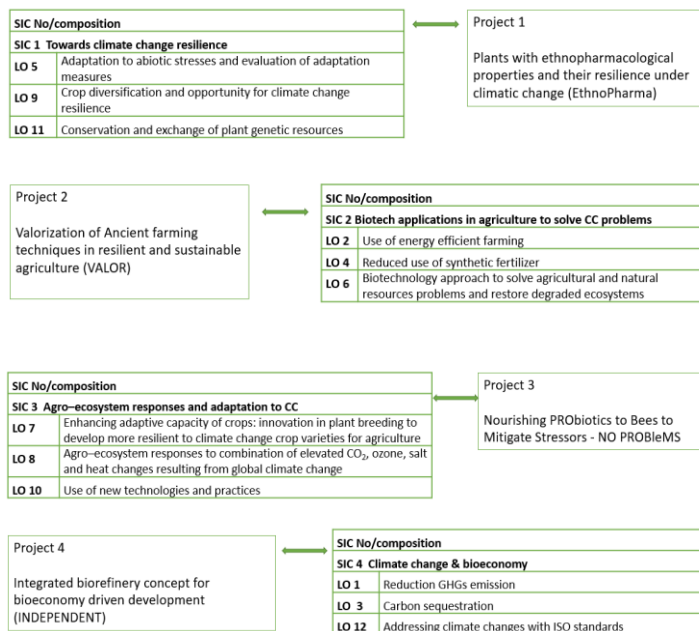
- **MSc curriculum** - composed of 12 Learning Outcomes and a Guide «Green biotech business for young entrepreneurs», and awarded by 60 ECTS credit points.



LO1. Reduction GHGs emission
LO2. Use of energy efficient farming
LO3. Carbon sequestration
LO4. Reduced use of synthetic fertilizer
LO5. Adaptation to abiotic stresses and evaluation of adaptation measures
LO6. Biotechnology approach to solve agricultural and natural resources problems and restore degraded ecosystems
LO7. Enhancing adaptive capacity of crops: Innovation in plant breeding to develop more resilient to climate change crop varieties for agriculture
LO8. Agro-ecosystem responses to combination of elevated CO ₂ , ozone, salt and heat changes resulting from global climate change
LO9. Crop diversification and opportunity for climate change resilience
LO10. Use of new technologies and practices
LO11. Conservation and exchange of plant genetic resources
LO12. Addressing climate changes with ISO standards
LO13. Guide ‘Green biotech business for young entrepreneurs’



- **Short intensive program for SMEs** - composed of 4 short intensive courses (SICs), each linked to a small research project and awarded by 9 ECTS credit points.



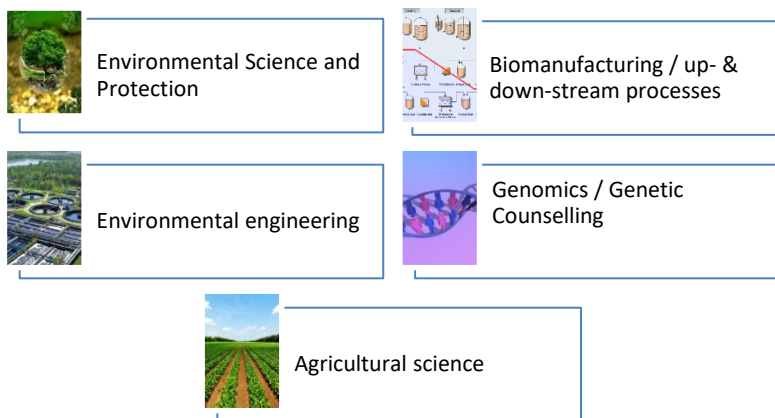
- **Post-graduate courses (HE & VET together)** - composed of 12 courses offered independently, each equipped with a learning plan and awarded by 3 ECTS credit points upon successful completion certified by a Certificate.
- **Guide ‘Green biotech business for young entrepreneurs’**



BIO-Save Competence Catalogue - transfers knowledge into practice

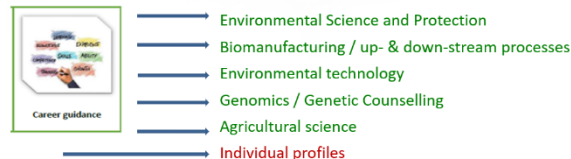
- **The BIO-Save Competence Catalogue** aims at:
 - Giving detailed view of competencies, knowledge, and skills required for HE specialists and biotech practitioners in the area.
 - Serving for better recognition of skills and competence.
 - Facilitating the transfer from academic to business environment.

➤ The BIO-Save career domains:



➤ Application of the BIO-Save Competence Catalogue:

- **In formal education** – mainstreams the MSc curriculum learning towards occupation / career advancement.



- **In the Short intensive program for SMEs** – supports the assembly of personal portfolio for better positioning at the labor market.



- **In CVET** – encourages the attendance of post-graduate courses for knowledge upgrading and up/re-skilling.



For more information visit BIO-Save web site: <https://bio-save.eu/>



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