Blended Intensive Programme

INNOVATING AGRICULTURE: SMART AND DIGITAL APPROACHES FOR SUSTAINABILITY

Important Note: Students interested in this program have to apply to their home university according to the internal procedure. Student applications made directly to the hosting institution will not be considered.

General information

Course Title	INNOVATING AGRICULTURE: SMART AND DIGITAL APPROACHES FOR SUSTAINABILITY
Coordinating Institution	University of Life Sciences "King Mihai I" from Timisoara, Faculty of Agriculture
Partner Institutions	Križevci University of Applied Sciences, Croatia, Josip Juraj Strossmayer University of Osijek, Croatia, University of Kragujevac, Serbia
BIP Code	2024-1-RO01-KA131-HED-000200842-2
Description and objectives	The blended intensive programme (BIP) entitled "Innovating Agriculture: Smart and Digital Approaches for Sustainability", organized by the University of Life Sciences "King Mihai I" in Timișoara, Romania, Faculty of Agriculture, in collaboration with partner institutions, focuses on the integration of smart and digital innovations to enhance sustainability in modern agriculture. The programme addresses current challenges faced by the agricultural sector, such as resource efficiency, climate change, environmental protection, and food security, by promoting the adoption of advanced digital technologies and innovative practices. Bringing together students, researchers, and professionals from multidisciplinary backgrounds, the programme offers a comprehensive learning experience through online preparatory activities, intensive on-site sessions, workshops, and field-based learning. Participants will explore smart farming solutions, precision agriculture, digital monitoring systems, data-driven decision-making, and sustainable agricultural strategies. By combining theoretical insights with practical applications, the programme fosters innovation, critical thinking, and collaboration, preparing participants to contribute effectively to the digital and sustainable transformation of agriculture.
Number of ECTS	5
Calendar	April 27 - May 1st, 2026, Timisoara/Romania Virtual Component: April 24 (2 hours – time to be defined), May 5th (2 hours – time to be defined)
Number of participants	15-20
Mobility Costs	To be covered with Erasmus + grants (SMS for students/STT for Staff)
Contact	Laura Smuleac (laurasmuleac@usvt.ro) – University of Life Sciences "King Mihai I" from Timisoara Raul Pascalau (raul.pascalau@usvt.ro) University of Life Sciences "King Mihai I" from Timisoara
Application	Nominations for the BIP will be sending to Laura Smuleac (laurasmuleac@usvt.ro) **until March 2nd, 2026**.

Pedagogical Information

Target group/Expected student profile	Students from the programs of studies: Agriculture, Environmental protection, Plant protection, Land measurements and cadastre.
Requirements	As the course will be taught in English, it is expected that candidates have a B1/B2 level of English.

Enrolment	**The selection will be made by the home university and nominations will be sent by March 2nd.** Nominated students must register on the platform https://erasmus-app.usab-tm.ro/#/login
Selection criteria	Participants must have minimal knowledge in the field of agriculture and digitalization.

Structure of the course

Description of the virtual component	The virtual component will take place before the presential course in Timisoara on a date to be fixed with participants (possible 24 April) and after the on-site meeting on May 5th. This will be an opening session led by a representative of the coordinating and partner institutions. During the session, on 24 April, participants will receive clarifications on the portfolios they will prepare during the course and which will be assessed by the trainers, and after the programme, on May 5th they will discuss dome feedback and the final portfolios.
Description of the physical component	The physical component of the Blended Intensive Programme will include interactive sessions with guest speakers from the BIP partner institutions and the host institution, who will share expertise, case studies, and good practices related to smart and digital innovations in sustainable agriculture. These sessions will provide participants with insights into current trends, challenges, and solutions in the field of smart farming and digital transformation. Participants, including both students and staff, will be invited to deliver short presentations introducing their home institutions, study programs, and relevant research or practical activities, fostering knowledge exchange and institutional cooperation. The on-site programme will also feature hands-on workshops and field activities focused on the application of smart and digital technologies in agriculture, aiming to enhance sustainability, improve productivity, and reduce environmental impact, including carbon footprint reduction. These activities will emphasize practical solutions for resource-efficient and environmentally responsible agricultural production. In addition, the BIP will include a social and cultural programme, featuring a guided tour of Timisoara, a city renowned for its multicultural heritage and historical landmarks, offering participants opportunities for cultural exchange and networking.
Objectives:	a) Promote Awareness Increase awareness of the importance of smart and digital innovations in advancing sustainable and resilient agricultural systems. b) Develop Technical Skills Provide participants with hands-on experience in applying smart and digital technologies, including GIS, remote sensing, sensors, data analytics, and precision agriculture tools, to improve agricultural efficiency and sustainability. c) Encourage Multidisciplinary Collaboration Facilitate collaboration among students, researchers, and professionals from diverse disciplines, encouraging the exchange of knowledge and innovative ideas for sustainable agricultural solutions. d) Bridge Theory and Practice Integrate theoretical concepts with practical applications through workshops, field activities, case studies, and problem-solving sessions focused on real-world agricultural challenges. e) Address Global Challenges Explore smart and digital strategies to address global challenges such as climate change adaptation, efficient resource management, reduction of environmental impacts, and enhancement of biodiversity in agricultural systems. f) Foster International Cooperation Strengthen international academic and professional networks by engaging participants from different countries, cultural backgrounds, and educational systems. g) Prepare Future Leaders Equip participants with the knowledge, skills, and innovative mindset required to lead and support the digital and sustainable transformation of agriculture at local, regional, and international levels.
	Upon successful completion of the Blended Intensive Programme “Innovating Agriculture: Smart and Digital Approaches for Sustainability”, participants will be able to: 1. Apply smart and digital agricultural technologies Use precision agriculture tools, GIS, remote sensing, sensors, and digital platforms to support efficient and sustainable agricultural practices.

Competences	2. Implement sustainable farming strategies Integrate sustainability principles into agricultural systems by optimizing resource use, minimizing environmental impact, and enhancing climate resilience and biodiversity. 3. Analyse agricultural data for decision-making Collect, process, and interpret digital and field data to support evidence-based decisions in farm management and sustainability planning. 4. Develop innovative solutions to agricultural challenges Identify real-world problems in agriculture and design innovative, technology-driven solutions using interdisciplinary knowledge and creative thinking. 5. Collaborate effectively in international and multidisciplinary teams Work productively with peers from diverse academic, professional, and cultural backgrounds, contributing to teamwork, communication, and shared problem-solving. 6. Demonstrate professional responsibility and leadership Show initiative, adaptability, and leadership skills in supporting the digital and sustainable transformation of agriculture at local, regional, and global levels.
Methodology:	**Lectures** delivered by academic staff and invited experts from partner and host institutions, addressing key topics such as: • smart and digital innovation in agriculture; • sustainability and environmental protection in modern farming systems; • precision agriculture technologies, digital tools, and data-driven decision-making; • climate change impacts, resource efficiency, and the environmental footprint of agriculture. **Workshops** designed to support participants in identifying, assessing, and developing smart and digital strategies to address challenges related to climate change, food security, sustainable resource management, and environmentally responsible agricultural practices. **Group discussions and collaborative activities** focused on real-life case studies and practical scenarios related to ensuring safe, efficient, and sustainable agricultural production. These sessions will encourage the exchange of experiences and good practices, highlighting solutions that reduce environmental impact and support sustainable development.
Outcomes:	The Blended Intensive Programme will result in the development of a **digital portfolio** for each participant. The digital portfolio will be based on individual work and will be developed progressively throughout the course under the guidance and supervision of the trainers. The digital portfolio will include the following components: (i) a reflective journal in which participants record and critically reflect on daily learning experiences, activities, and key topics discussed during the programme; (ii) a presentation of the participant's experiences, knowledge, or case studies related to smart and digital approaches in sustainable agriculture within an academic or professional context; (iii) a critical analysis of the smart and digital solutions identified and developed during workshops and practical activities, highlighting their contribution to sustainable and resilient agricultural systems; (iv) a reflective section outlining how the participant's professional and technical competences can be concretely improved and applied following the completion of the BIP. Participants will receive continuous feedback from trainers and peers throughout the programme. The results of the digital portfolios will be shared and discussed during the **Closing Ceremony**, fostering reflection, knowledge exchange, and dissemination of best practices among participants.