



BLENDED INTENSIVE PROGRAMME

GENERAL INFORMATION

BIP Title	Land Surveying Solutions for a Digital World
BIP Code	
Coordinating Institution – Faculty	University of Agronomic Sciences and Veterinary Medicine of Bucharest (USAMVB) – Faculty of Land Reclamation and Environmental Engineering
Dates for physical mobility	October 19–24, 2026
Proposed period for virtual component	October 12–15, 2026 November 5, 2026
Priorities addressed	Inclusion and diversity Digital transformation Environment and fight against climate change Participation in democratic life Others
ECTS	3
Objectives and short description / abstract	The Blended Intensive Program (BIP) titled „LAND SURVEYING SOLUTIONS FOR A DIGITAL WORLD” aims to offer the students a unique insight into the most recent research and developments in geomatics. The program will cover a vast range of topics and geomatic tools (GIS, GNSS, GPR, UAV, Surveying, LiDAR) that land professionals use to contribute to the development of a digital society. Moreover, another major advantage the BIP offers for the students is learning to work in teams and multicultural environments. The mobility period with theoretical and practical classes, visits to laboratories and field trips represents an experience which enriches the intercultural experience by

	combining traditions from the host country of the BIP and the students. There can be no digital world without the support of the land surveying profession.
Methods (including final evaluation method) and results / learning outcomes	Final evaluation method: project Learning outcomes – At the end of the BIP, the students will have gained knowledge on: - the role of modern measurement technologies (GPS, UAV, laser scanning, LiDAR) in creating graphical support for fields such as architecture, urban planning, environmental studies, and civil engineering; - teamwork skills and collaborative working abilities; - the interdisciplinary nature of the subject.
Partner institutions	TBA
Total number of learning hours	75 hours, divided as follows: 17hours of virtual component 48 hours of physical mobility (minimum 5 days) 10 individual study hours
Scientific coordinators	Prof. dr. Raluca MANEA (ralucamanea20@yahoo.com), Assoc. prof. dr. Andreea OLTEANU (andreea.olteanu@fifim.ro) Assoc. prof. dr. Mariana CIOLACU (mariana.ciolacu@fifim.ro)
Administrative coordinator	Assoc. prof. dr. Andreea OLTEANU (andreea.olteanu@fifim.ro)
Teaching team (professors from partner universities are welcomed to teach)	1. Assoc. prof. dr. Iulia DANA NEGULA 2. Lecturer dr. Octavian BALOTĂ 3. Eng. dr. Iulian NICHESU – Danube Delta National Institute for Research and Development 4. Eng. Iulian TEODORESCU – Komora Engineering SRL 5. Eng. Andra VIȘAN – Komora Engineering SRL 6. Eng. Cătălin MARINESCU – Topoexim SRL 7. Eng. Dan VLĂSCLEANU – PORR Construct Ro 8. Eng. Marius Daniel CRÂNGAȘ – Fugro Norway 9. Eng. Cătălin CORNESCU – STRABAG 10. Eng. George DAMIAN – Top Geocart, Leica Geosystems
Number of learners	15-20
Target group / learner profile (study level, specialisation etc)	Bachelor's or Master's degree in Geomatics, Urban Planning, Architecture, Civil Engineering, Environmental Studies, Marine Research or a closely related field.

Selection criteria (English language level, prerequisites)	English B1/B2 Knowledgeable in Word processing software (Word, Excel, PowerPoint); CAD software.
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TEACHING CONTENT

	Daily program	Content – lectures, workshops, educational trips.
Virtual component	October 12, 2026 14.00–17.00	• Welcome speech, presentation of the universities/faculties • Presentation of the blended intensive programme (BIP). • Teachers' presentation • Students' introductory presentations
	October 14, 2026 14.00–15.20 15.30–17.00	• <i>Lecture:</i> The effectiveness of UAV-based technologies in the digital modelling of geographic environments – Lecturer dr. Octavian BALOTĂ • <i>Lecture:</i> TBA
	October 14, 2026 14.00–15.20 15.30–17.00	• <i>Lecture:</i> Lecture: Earthquakes from Space: Sentinel-1 Observations of Ground Displacement – <i>Assoc. prof. dr. Iulia DANA NEGULA</i> • <i>Lecture:</i> Digitization of surveying in the development of railway infrastructure. Application of Artificial Intelligence in LiDAR Data processing and Classification – <i>Lecturer dr. Octavian BALOTĂ</i>
	October 15, 2026 14.00–15.20 15.30–17.00	• <i>Lecture:</i> Bathymetric measurements along the Danube – <i>Eng. Iulian NICHERSU</i> • Conclusions from the first virtual session
	November 5, 2026 14.00–19.00	• Students' project presentations • Round-up session and feedback

Physical mobility	October 19, 2026	
	9.00–10.00	• Welcome meeting ("Agronomie - Herăstrău" Campus, Rectorate Building, Senate Hall)
	10.00–11.00	• Guided Tour „Agronomie-Herăstrău” Campus
	11.00–11.30	• Welcome coffee - Faculty of Land Reclamation and Environmental Engineering
	11.30–13.00	• Presentation of modern technologies: GNSS, UAV - field demonstrations
	13.00–14.30	• Lunch break (1.5 hours free time)
	14.30–17.00	• Processing data taken in the field, creating a 3D model of the terrain and orthophotos
	19.00–21.00	• Romanian traditional dinner
	October 20, 2026	
	9.00–13.00	• Modern technologies for taking over the situation on the ground "Reality Capture" for the preparation of design and execution, Leica Geosystems
	13.00–14.30	• Lunch break (1.5 hours free time)
	14.30–17.00	• Case studies: 3D modeling of data obtained from mobile and terrestrial laser scanning
	19.00–21.00	• Guided Bucharest City Tour
	October 21, 2026	
	9.00–12.30	• Case studies in work groups: implementing modern technologies in the realization of the BIM, Smart City, Brownfields concept
	12.30–14.00	• Lunch break (1.5 hours free time)
	14.00–15.30	• An overview of georeferencing of optical images (airborne and spaceborne), Professor Hüseyin Topan, Zonguldak Bülent Ecevit University, Türkiye (online presentation)
	15.30–17.00	• Case studies in work groups: implementing modern technologies in the realization of the BIM, Smart City, Brownfields concept

	October 22, 2026 9.00–19.00	• Field trip in Sinaia: on the trail of cultural heritage, visit to Sinaia, resort town, pearl of Romanian mountain tourism. The conservation of cultural heritage in this city, Peles Castle, Sinaia Monastery, is done through aerial and terrestrial scanning • Workshop lunch
	October 23, 2026 9.00–13.00	• Visit to the CNC (National Center of Cartography) – a public institution with legal personality subordinated to the National Agency for Cadastre and Land Registration (NACLR): areas of interest: Design, execution, and maintenance of national geodetic networks, implementation and maintenance of the national cartographic database, implementation and maintaining the official maps of Romania in analog, digital format and digital terrain model, etc
	13.00–14.30 14.30–16.00	• Lunch break (1.5 hours free time) • Case studies: 3D modeling of data obtained from mobile and terrestrial laser scanning
	16.00–17.00	• Closing ceremony
	October 24, 2026 9.00–17.00	• Working visit: Research–Development Station for Pietroasa Viticulture and Vinification • Workshop lunch