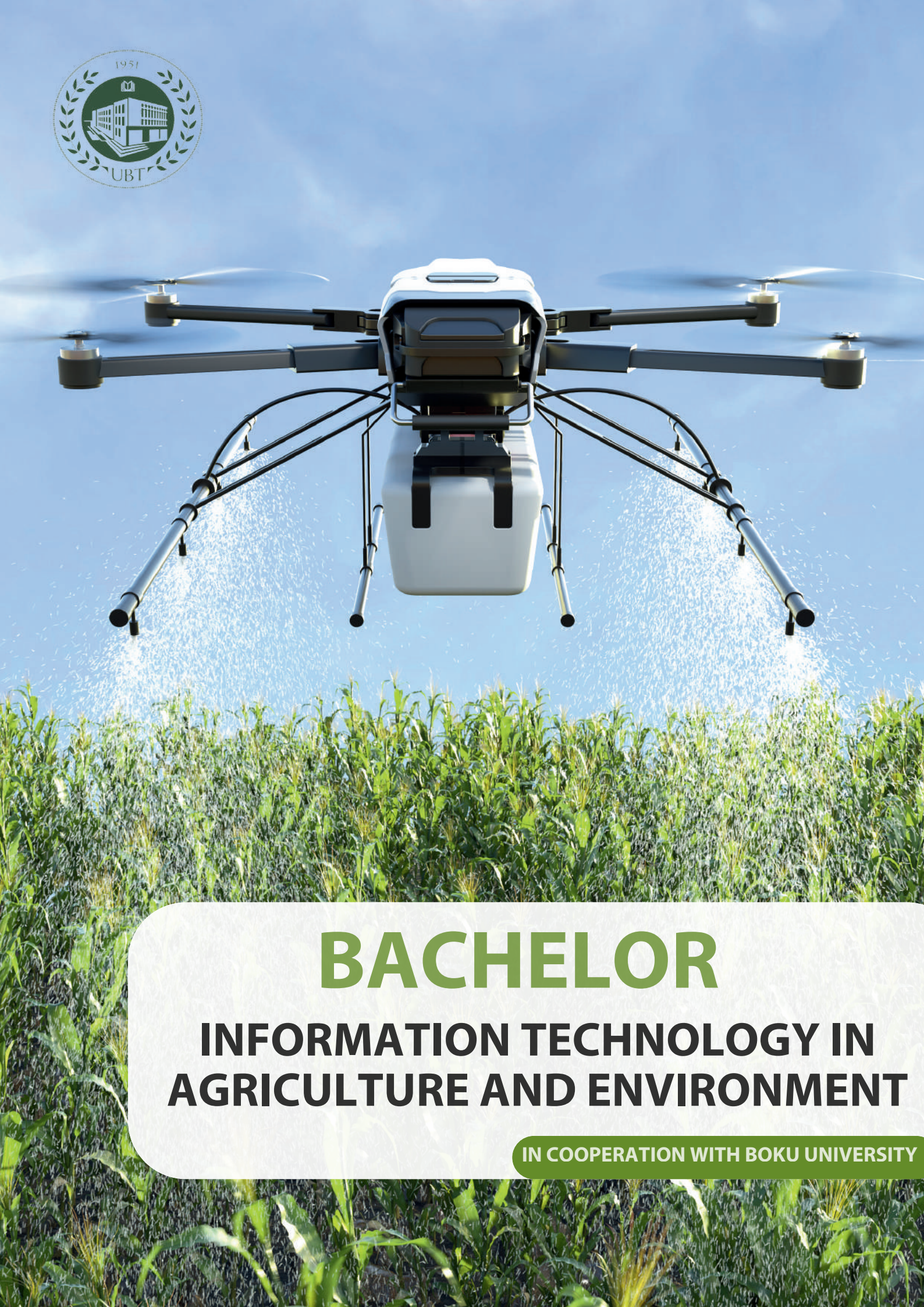
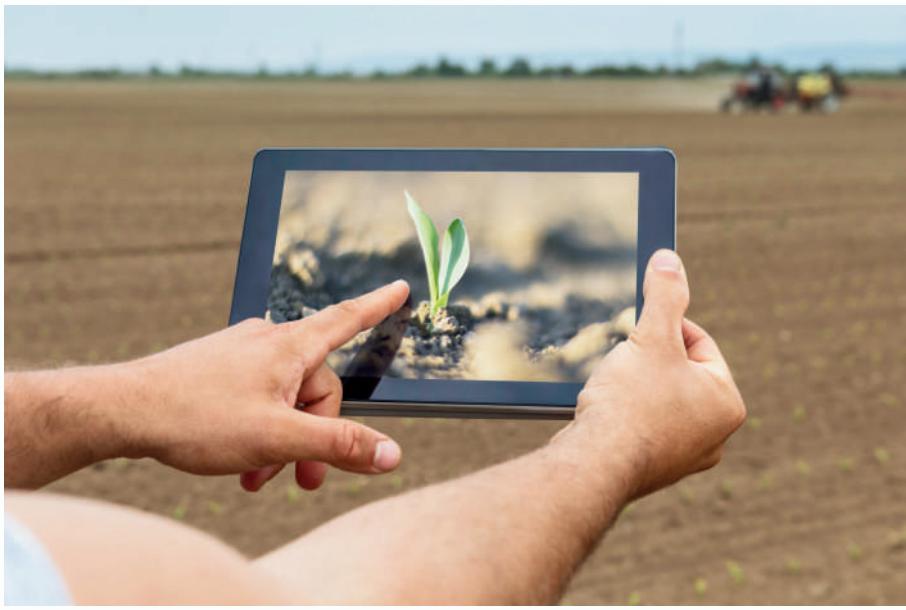


BACHELOR

INFORMATION TECHNOLOGY IN AGRICULTURE AND ENVIRONMENT

IN COOPERATION WITH BOKU UNIVERSITY

Why this study program?



The Bachelor's program "Information Technology in Agriculture and Environment", developed in cooperation with **BOKU University**, responds to the needs of the digital transformation of Albanian agriculture and the requirements of European Union integration.

The program prepares specialists who use programming, IoT, GIS, and data analytics to improve agricultural production and environmental monitoring.

Students learn how to: increase productivity,
conserve natural resources, reduce climate impact, thus contributing to the development of smart agriculture and a cleaner environment, aligned with contemporary European standards and practices.

Program Description

The program is interdisciplinary and practice-oriented, combining: computer science fundamentals (programming, databases, networks), data science, geospatial technologies, with: agronomy, agrometeorology, environmental management. Students learn to design and operate: precision agriculture systems (sensors, IoT, GPS, drones), monitoring and decision-support platforms, digital public service applications in agriculture. The program is supported by laboratories, fieldwork, and projects with farms and agribusinesses.

Internationally recognized degree

Graduate Profile / Professional Profile

Graduates are specialists capable of analyzing, designing, and implementing IT solutions for agriculture and the environment using: programming (Python/R), databases and cloud technologies, GIS & Remote Sensing, IoT devices for monitoring and resource optimization. They work in interdisciplinary teams, follow data security standards, and communicate results clearly to stakeholders.
Possible Career Profiles

- **Precision agriculture** and farm automation specialist
- **Agro-environmental data analyst** (GIS & Remote Sensing)
- **IoT engineer/integrator** for environmental monitoring
- **IT specialist** for digital public agricultural systems (registries, IACS, etc.)

Xhulio Gjeka

Administrator "Alba Agro"

"The IT Program in Agriculture and Environment supports the modernization and automation of seedling production by connecting technology with practice, standardizing processes, monitoring the microclimate, reducing losses, and increasing customer trust."

Redion Karriqi

Solution Sales Manager at Vodafone Smart Agro

"Digital agriculture is more than technology; it is a new approach to decision-making that saves resources and increases yields, where Vodafone's Smart Agriculture solutions bring transparency, efficiency, and sustainable value for farmers and agribusinesses."

Arbi Bamllari

CEO, SKAITECH

"The digitalization of agriculture is not just the future; it is a necessity. Drones are elevating agriculture to a new dimension—more precise, more intelligent, and more efficient. At SKAITECH, we believe that innovation flies over our fields and crops."

Bianca Duro

CEO "Austria Praemix"

"Livestock farming is being modernized through automation, digitalization, and artificial intelligence, improving farm management and product quality, while Austria Praemix is implementing the Smaxtec package in Albania to transform processes in cattle farms."

Key Competencies Acquired

Upon completion, students acquire competencies in:

- **Agricultural data management**: collection, storage, databases, visualization
- **Precision agriculture & IoT**: sensors, GPS, drones, telemetry, input optimization
- **GIS/Remote Sensing**: spatial analysis, mapping, soil, water, and climate monitoring
- **Automation & decision-making**: models, dashboards, alerts, and data security

STUDY STRUCTURE

CORE COURSES

Fundamentals of mathematics, physics, agronomy, and computer science (programming, algorithms).

SPECIALIZED COURSES

Databases, networks, GIS, sensors/IoT, agrometeorology and data analysis.

ADDITIONAL COURSES

Precision agriculture, automation, environmental applications, professional practice, and bachelor thesis.

Teaching is delivered through interactive lectures, seminars, practical exercises, and laboratory work.
The program includes structured lab work, study projects, and mandatory professional internships.

Employment Opportunities:

Graduates may work as:

- Precision agriculture specialist / farm manager
- GIS analyst and environmental monitoring specialist
- IoT and automation integrator
- Application developer / systems administrator
- Entrepreneur in digitalization services

Program Information

Study Level

First Cycle – Bachelor

Academic Degree

Bachelor in Information Technology in Agriculture and Environment

Duration

3 academic years / 6 semesters

Credits

180 ECTS

Study Mode

Full-time

Language of Instruction

Albanian / English

Enrollment Quota

100 students

Completion of Studies

Final comprehensive exam / Bachelor's thesis

About AUT

The Agricultural University of Tirana was founded on November 1, 1951, and has been located in Kodër Kamëz since 1956. Since its establishment, it has been a pillar of agricultural education and research in Albania.
Today, AUT plays a key role in sustainable agriculture, food safety, and rural development, strengthening international cooperation through strategic partnerships, including with BOKU University in Vienna.

For more information visit:

www.ubt.edu.al

info@ubt.edu.al

Street "Pajsi Vodica" Tiranë

FURTHER STUDY OPPORTUNITIES (MASTER'S DEGREE)

After completing the Bachelor cycle, students can pursue their Master studies at AUTor at other universities in fields such as: Data Science, GIS/Remote Sensing, Automation and Mechatronics, Environmental Engineering, Digital Agriculture and Resource Management. The program provides a strong academic foundation and opportunities for Erasmus+ mobility.

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