



ALMA MATER STUDIORUM  
UNIVERSITÀ DI BOLOGNA

**Project title:** Off-Highway Vehicle Design International Summer School

**Acronym:** OHVD International Summer School

**Name and Department of the UNIBO scientific coordinator:** Mattetti Michele - Department of Agricultural and Food Sciences

### **Project overview and objectives**

The project aims at organising a two-week hybrid programme jointly organised by the University of Bologna, KU Leuven and the University of Helsinki. It targets bachelor's, master's, and early-stage PhD students in STEM fields interested in off-highway and agricultural vehicle engineering. The programme combines an online lecture week, providing theoretical foundations and industrial context, with an on-site week in Bologna focused on hands-on prototyping projects using LEGO Technic and Python-based control. Students gain practical experience through interdisciplinary teamwork, company visits to CNH production and testing facilities, and field demonstrations at UNIBO's experimental farm. The summer school aims to strengthen students' technical skills, interdisciplinary competencies and awareness of academic and industrial career paths. It fosters international networking, collaboration between Una Europa partners and engagement with long-term industrial stakeholders. The programme also supports sustainable joint teaching formats and contributes to the internationalisation goals of the participating institutions. Overall, it provides a comprehensive learning framework in off-highway vehicle design, integrating applied engineering, innovation and professional orientation.

### **Activities**

The project is structured into four main phases: preparation, admission, implementation of the summer school, and evaluation/follow-up, jointly carried out by the University of Bologna and Una Europa partners with support from industrial collaborators. During preparation, all partners contribute their expertise to design the online and on-site programme, with UNIBO coordinating operations for the first edition while future editions will rotate the on-site component among partners. Approximately 30 students are selected through a jointly defined, transparent admission process ensuring diversity and balanced representation. The summer school combines online lectures from all partner universities, providing a shared academic foundation, with an on-site week in Bologna for hands-on prototyping, site visits, and networking. Partners actively participate in lectures, visits, social activities, and the closing event, fostering international collaboration and shared ownership of the programme. Evaluation and follow-up involve collecting feedback from students, academic staff, and industry representatives to improve future editions and maintain the professional and academic network. Expected outputs include enhanced student skills in off-highway vehicle design, interdisciplinary teamwork, and exposure to industrial and research environments. For universities and partners, the project generates reusable teaching materials, strengthens academi-industrial networks, and lays the foundation for ongoing collaborative teaching, mobility, and applied research within the Una Europa Alliance.

### **Partnership**

The project brings together three UNA Europa partners with complementary expertise, coordinated by the University of Bologna: KU Leuven and the University of Helsinki.

**Expected impact**

The summer school strengthens academic collaboration and creates a jointly designed international learning format with reusable teaching materials. Students gain hands-on experience, international exposure, and early insight into research and industry, supporting future studies and career choices. The programme reinforces Una Europa's role in promoting sustainable, high-quality and innovative European teaching collaborations.