WEIHENSTEPHAN · TRIESDORF
University of Applied Sciences

DIGITAL FARMING MASTER'S DEGREE PROGRAMME (M-DF)

SEM.	COURSE CONTENT
1st	**BASICS & INTERNATIONAL MARKETS** **Plant production**: understand the fundamentals of agricultural plant production systems. **Animal production & welfare**: explore key principles of animal production and welfare. **Foundations of programming:** develop proficiency in Python programming and fundamental computer science concepts. **Data literacy & sensors:** gain insights on sensor technologies, data collection and interpretation. **International agricultural production systems & markets:** study global farming practices, supply chains, and market dynamics. **Elective:** choose from a wide range of subject-specific and language modules.
2nd	**ADVANCED TECHNOLOGY MODULES & MANAGEMENT** **Artificial intelligence 1:** study classical machine learning and get hands-on experience. **Agricultural robotics:** explore automation, robotic systems, and their foundations in agricultural and information technology. **Precision livestock farming:** explore smart monitoring, data-driven animal management, and automation in livestock production. **Precision arable farming:** study site-specific crop management, sensor technology, and data-driven decision-making in crop production. **Project management & scientific work:** develop skills in project management, research methodologies, and academic writing. **Elective:** choose from a wide range of subject-specific and language modules.
3rd	**AI2 & PROJECT-BASED LEARNING** **Artificial intelligence 2:** dive into deep learning and computer vision with hands-on applications. **Project applied digital farming:** collaborate in teams to tackle real-world farming challenges with digital solutions with close supervision from a faculty member. **Seminar digital farming:** engage with industry experts and students from all semesters to discuss current topics and projects in digital farming. **Two Electives**: choose from a wide range of subject-specific and language modules.
4th	**Master's Thesis incl. colloquium** Dedicate the full semester to independently solving a compelling challenge in digital farming with close guidance from a faculty mentor.
Academic Qualification: **Master of Science (M.Sc.)**	

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