Internship Program at Osnabrück University of Applied Sciences

Description of lab or research project

	**Lab for Micro- and Optoelectronics** **Competence Center for Applied Agricultural Engineering (COALA)**
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Title of Project	There are several options for projects around the development, characterization and application of sensor, imaging, and mechatronic systems (such as field robots) in agriculture and horticulture. Other fields of applications for electronics, computer science, sensors, and mechatronic systems (such as automotive or production) are also possible.
Abstract	The technological focus is on: - (Image-based) Sensor Systems - Data management and analysis - Agricultural Field Robots
Tasks	There are several projects in the technological profiles given above. The focus of the research project is flexible and can be set according to the student's abilities and interests. Possible topic areas include sensor development, image processing and machine learning, the application of imaging systems and sensors, test measurements, data management, outdoor field tests, data base, field robotics (navigation, processing, swarming). The publications of the group demonstrate the range of projects, in which lab work can be integrated.

	There are also entry-level options, in particular working with laboratory experiments for the courses “Sensor systems,” “Imaging based sensors,” “Imaging quality assurance,” or “Optoelectronics”.
Requirements	Basic knowledge in mathematics, physics, electronics and programming. Interest in one of the technologies or application areas mentioned (sensors, imaging/machine vision, electronics, autonomous field robots, data management). In most cases a background in electrical engineering, computer science, or mechatronics nicely fits to the project, however, students from agriculture or life sciences with a focus on technology are also welcome.
Language Skills	English: fluent German: basic knowledge useful, but not required
Duration and time period	3 – 12 months. Specific dates and duration to be agreed upon. At least 3 months must be within either the summer semester (March – August) or the winter semester (September – February). If the project period should include lectures and exams, periods from March to July or September to January are recommended.
Further information	