Freie Universität Bozen
Libera Università di Bolzano
Università Liedia de Bulsan

Syllabus
Course description

Course title	Plant and livestock health
Course code	47305
Scientific sector	AGR/11
Degree	Smart Sustainable Agriculture Systems in Mountain Areas (SAM)
Semester	2nd
Year	1st
Credits	6
Modular	No

Total lecturing hours	36
Total lab hours	
Total exercise hours	24
Attendance	Recommended
Prerequisites	
Course page	

Specific educational objectives	This course provides an interdisciplinary introduction to the principles of plant and livestock health management. Students will learn about common diseases, pests, and environmental stresses affecting crops and animals, as well as integrated management strategies. The course emphasizes sustainable practices to enhance productivity while minimizing environmental impact. Students will learn to identify key diseases and pests in plants and livestock, understand the principles of integrated pest management (IPM) and animal health practices, develop sustainable health management strategies for agricultural systems, analyze the interplay between environmental factors and agricultural health, apply diagnostic tools and techniques to manage plant and livestock health challenges effectively. The course will provide an overview of global agriculture and the importance of plant and livestock health for food security and will introduction to sustainable agriculture practices. The course will cover the most common plant pests, introduce to diagnostic tools for plant health, pest identification and management and fundamentals of Livestock Health including Major livestock diseases and veterinary medicine and diagnostics. Finally, the course will provide an outlook on environmental and climate challenges including climate change and its impact on plant and livestock health and emerging technologies and

	practices for health monitoring and integrated health management plans.

Lecturer	Part 1: Hannes Schuler, K-0.09 email: hannes.schuler@unibz.it Part 2: NN
Scientific sector of the lecturer	AGR/11, AGR/19
Teaching language	English
Office hours	Before and after the lecture and after appointment by mail
Teaching assistant (if any)	-
Office hours	9
List of topics covered	Part 1: Sustainable plant protection The module will cover the following topics: 1. Principles of plant health, 2. Most important pests and diseases, 3. Sustainable plant protection, 4. Integrated pest management, 5. Biological control of plant pests, 6. Plant health in a changing world, 7. Case topics selected by the students. Part 2: Livestock health The course will cover the following topics: 1. Basics of disinfection and hygiene, 2. Most common diseases in cattle, small ruminants, pigs and poultry, 3. Disease control, 4. Integrated disease management, 5. Sustainable agriculture and biological control, 6. Climate change and diseases in livestock, 7. Case topics selected by the students.
Teaching format	Frontal lectures, exercises and excursions

Learning outcomes	**Knowledge and understanding:** The course will be an introduction to pest insects and diseases of plants and livestock. After successful completion of the course students know the most important agents influencing plant and livestock health and how to diagnose them. **Applying knowledge and understanding:** Students will be able to identify the most important insect pests of agricultural plants and animal disease agents. **Making judgements:** Students will be able to diagnose the most common problems for animal and livestock health. They also will be able to identify the most important pests. **Communication skills:**

	Students will improve their communication skills during discussions in class and by presenting a scientific topic. **Learning skills:** The students will learn how to diagnose pest damages and be able to understand the role of plant and livestock health for the future of global food sustainability and security. They will deepen their newly acquired knowledge by giving a short scientific seminar about a topic of their choice.

Assessment	The final assessment is based on a scientific presentation (30%) and a written exam (70%).
Assessment language	English
Evaluation criteria and criteria for awarding marks	Seminar: Scientific content and presentation performance Oral exam: Clarity of the response, ability to evaluate and summarize the most important aspects and establish relationships between the topics. In order to pass the exam, both components have to be evaluated positively.

Required readings	Handouts and supporting material will be provided by the lecturer.
Supplementary readings	• Helmu van Emden Handbook of Agricultural Entomology, ISBN:9781118469347 • Dharam P Abrol Integrated Pest Management- Current Concepts and Ecological Perspective, ISBN: 9780124017092 • Nutztierhaltung und -hygiene. Grundwissen Bachelor. Steffen Hoy, Matthias Gauly, Joachim Krieter, 2006. ISBN 978-3-8252-2801-9, UTB.