Syllabus

Course Description

Course Title	Plant Protection
Course Code	40197
Course Title Additional	
Scientific-Disciplinary Sector	AGR/12
Language	German
Degree Course	Bachelor in Agricultural, Food and Mountain Environmental Sciences
Other Degree Courses (Loaned)	
Lecturers	Prof. Dr. Hannes Schuler, Hannes.Schuler@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/34023 Prof. Dr. Sanja Baric, Sanja.Baric@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/1049
Teaching Assistant	
Semester	First semester
Course Year/s	3
CP	6
Teaching Hours	36
Lab Hours	24
Individual Study Hours	90
Planned Office Hours	18
Contents Summary	The course transmits basic knowledge and competences of plant protection. Students are first introduced to the history and basic concepts of plant protection. Subsequently, the focus of the course is laid on different methods to protect plants from harmful organisms. In addition, mechanisms of action of plant protection products are covered, their

	toxicological properties are discussed, and the legal basis and requirements for their approval are explained. Finally, technological aspects in the application of plant protection products are explained and future potential technologies are discussed. After successful completion of the course, students will understand the importance of plant protection in crop production, have knowledge how to protect plants from pathogens and pests, and be able to select suitable control strategies to protect plants from harmful organisms.
Course Topics	Introduction and historical development of plant protection Basics of integrated pest management Basic concepts for the control of plant diseases and pests Epidemiology and prediction models Exclusion methods to reduce inoculum: quarantine and inspections; pathogen-free seeds and planting material; cultural techniques Physical plant protection measures Biological control of plant diseases and pests Biotechnological control of plant diseases and pests - Resistance breeding and use of resistant plant varieties Chemical plant protection measures: legal basis, toxicological evaluation and authorisation Classification of active ingredients and modes of action of fungicides, insecticides, acaricides and herbicidesApplication techniques of plant protection products Weed management New technologies and the future of plant protection
Keywords	plant diseases, pest control, integrated plant protection, consumer protection, environmental protection
Recommended Prerequisites	Entomology und Phytopathology
Propaedeutic Courses	no
Teaching Format	This is a lecture-lab course with PowerPoint presentations and interactive elements, such as discussions and descriptive case examples. In the practical part, selected contents covered in the lectures, will be examined in greater depth.
Mandatory Attendance	no
Specific Educational	Knowledge and Understanding

Objectives and Learning Outcomes	The students will know and understand fundamental terms, concepts and strategies for the control of harmful organisms, as well as the legislative regulations for the use of plant protection measures. Making judgements The students will be able to recognise the importance of plant protection in agricultural production and will have the ability to critically evaluate the advantages and disadvantages of various plant protection strategies. Communication skills Students will improve their communication skills during discussions in the lectures and exercises. Learning skills The students will learn to address topics of plant protection critically and where to find sources about the causes of diseases and pest damage, antagonists, maximum residue levels, approved active substances and plant protection methods.
Specific Educational Objectives and Learning Outcomes (additional info.)	
Assessment	The assessment of both courses consists of two parts: Seminar presentation (30%) Final written exam (70%)
Evaluation Criteria	To pass the exam, both course components (seminar presentation and written exam) must be assessed with a positive mark. Criteria for the evaluation of the seminar presentation: correctness of the contents, ability to summarise in own words, quality and clarity of presentation, and the ability to establish a context with other related topics. Criteria for the evaluation of the written exam: correctness and clarity of answers.
Required Readings	Power Point presentations and additional teaching materials will be made available in the Microsoft-Teams group of the course.
Supplementary Readings	Börner 2009. Pflanzenkrankheiten und Pflanzenschutz, 8. Auflage. Springer, 690 pp, ISBN 978-3-540-49068-5

	Hallmann J., von Tiedemann A. 2019. Phytomedizin: Grundwissen Bachelor, 2. u¨berarbeitete Auflage. Ulmer Verlag (UTB) Stuttgart, 374 pp, ISBN 978-3825252618 Kogan M., Heinrichs E.A. 2019. Integrated Pest Management. Burleigh Dodds Science Pub LTD, 1004 pp, ISBN 978-1-78676-260-3 Poehling H.-M., Verreet J.-A. 2013. Lehrbuch der Phytomedizin, 4. Auflage. Eugen Ulmer Verlag Stuttgart, 600 pp, ISBN 978-3800151646
Further Information	
Sustainable Development Goals (SDGs)	Responsible consumption and production, Zero hunger