Syllabus

Course Description

Course Title	Forage crops and grassland management
Course Code	47306
Course Title Additional	
Scientific-Disciplinary Sector	AGRI-02/A
Language	English
Degree Course	Master in Smart Sustainable Agriculture Systems in Mountain Areas
Other Degree Courses (Loaned)	
Lecturers	Dr. Giovanni Peratoner, Giovanni.Peratoner@unibz.it https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/academic-staff/person/35053
Teaching Assistant	
Semester	Second semester
Course Year/s	1
CP	6
Teaching Hours	36
Lab Hours	24
Individual Study Hours	90
Planned Office Hours	9
Contents Summary	Learning skills are encouraged throughout the degree programme. Particular attention is paid to individual study, especially in the completion of group work on the proposed topics. These skills are enhanced during compulsory lessons, which include group work, and subsequently in the preparation of the final thesis. Learning progress is assessed regularly during the courses and during the writing of the final thesis. In particular, this practice-oriented training involves working in small groups (3-5 students) on a joint project (e.g. a plan for the development of farms in mountain areas) from the initial stages (development of objectives and measures, collection of available data) to cooperation with various

	stakeholders (e.g. public administration, mountain agriculture advisory centre, farmers' association), which also includes communication activities for agriculture and society. The projects are carried out under the supervision of two or more teachers, with an exchange between students and private companies and/or the public authorities concerned. Learning ability is assessed through continuous assessment during the learning units and in the preparation of the final thesis.
Course Topics	The course content covers the following topics: Forage crops, sward assessment, management intensity, forage quality, fertilisation, grazing (pastures), meadows (including leys), forage conservation, weed control (including neophytes), sward renewal, sward maintenance, irrigation, relationship between management intensity and diversity.
Keywords	grassland management, meadows, pastures, forage quality, forage conservation
Recommended Prerequisites	None.
Propaedeutic Courses	No
Teaching Format	The course consists of lectures, in which active student participation in the form of discussion is encouraged, and of practical exercises. Preparing a seminar paper as well as presenting and discussing it is an integral part of the course.
Mandatory Attendance	No
Specific Educational Objectives and Learning Outcomes	Knowledge and understanding --> - actively participate in research projects in the field of mountain agriculture - collaborate with other professionals in the fields of architecture, engineering and natural sciences - work in interdisciplinary, national and international teams Ability to apply knowledge and understanding --> Graduates of the Master SAM degree programme have a solid scientific and technical foundation that enables them to tackle and solve complex problems. Thanks to their scientific and technical training in the fields of agriculture, economics and management, graduates are able to develop analyses and plans for the development and management of farms in mountain regions, taking into account their specific characteristics and

	multifunctionality (ecosystem services). In these specialist areas, graduates are able to coordinate interdisciplinary teams in the agricultural sector. The ability to apply the specialist knowledge acquired is achieved through critical reflection on the teaching materials offered and classroom learning activities, supplemented by case study analysis and practical exercises by teachers. In addition, there are practical exercises in the laboratory, on the computer and in the field, excursions, bibliographic research, the development of individual and/or group projects and the preparation of the final thesis. The assessment of success (oral and written exams, seminar reports) and exercises are designed in such a way that graduates must demonstrate that they have mastered the tools of the trade, the methods learned and a critical and independent way of working. Autonomy of judgement --> - choosing the best production techniques, taking into account environmental protection; - analysing data and information to independently assess the quality and effectiveness of the results obtained in the design of strategies to control difficulties - making independent decisions on professional issues. These may relate in particular to the feasibility of projects in the field of agricultural activities - planning activities and strategies on the basis of predefined objectives, taking into account timescales and methods Communication skills --> Graduates will be able to work professionally in one or more foreign languages. Compulsory and elective courses are taught in English. In addition, some elective courses may be offered in Italian or German. In accordance with unibz's trilingual policy, the unibz Language Centre offers extracurricular courses (levels A1-C1) in Italian and German. Graduates will be able to communicate fluently with other professional groups with whom they work and will be able to participate in European projects with foreign partners thanks to the international orientation of the Master's programme. Written and oral communication skills are promoted in seminars, excursions,

	exercises and teaching activities, which include the preparation of reports and written documents and their oral presentation in English and, where applicable, in Italian and German in elective subjects. The acquisition and assessment/verification of the above communication skills also takes place through the writing of the final thesis and its discussion in English. The master's degree programme also promotes the acquisition of additional language skills in German and Italian. This should enable graduates to successfully enter the international job market (e.g. Austria-Switzerland-Italy-Germany). Learning skills --> Graduates will be able to manage complex projects thanks to the specialist knowledge acquired during their studies. They will be able to continuously expand the specialist knowledge acquired during their studies and keep it up to date. They will learn to use the most modern methods to be able to competently carry out analysis, project planning and management measures in their professional lives. Graduates will be able to use various IT systems to further their cultural and professional development. They will also be able to choose the methods and training paths best suited to their cultural and professional development. Graduates will be able to manage complex projects thanks to the specialist knowledge acquired during their studies. They will be able to continuously expand the specialist knowledge acquired during their studies and keep it up to date. They will learn to use the most modern methods to be able to competently carry out analysis, project planning and management measures in their professional lives. Graduates will be able to use various IT systems to further their cultural and professional development. They will also be able to choose the most suitable methods and training paths for their cultural and professional development. Learning skills are encouraged throughout the degree programme. Particular attention is paid to individual study, especially in the completion of group work on the proposed topics. These skills are enhanced during compulsory lessons, which include group work, and subsequently in the preparation of the final thesis. Learning progress is assessed regularly during the courses and during the writing of the final thesis. In particular, this practice-oriented training involves working in small groups (3-5 students) on a joint

	project (e.g. a plan for the development of farms in mountain areas) from the initial stages (development of objectives and measures, collection of available data) to cooperation with various stakeholders (e.g. public administration, mountain agriculture advisory centre, farmers' association), which also includes communication activities for agriculture and society. The projects are carried out under the supervision of two or more teachers, with an exchange between students and private companies and/or the public authorities concerned. Learning ability is assessed through continuous assessment during the learning units and in the preparation of the final thesis.
Specific Educational Objectives and Learning Outcomes (additional info.)	Students will be able to evaluate production systems and to identify weaknesses and strengths. Furthermore, they will be able to design production systems for a given area and adapt their management in order to improve their ecological and economic sustainability, and the integration with the surrounding environment. Knowledge and understanding: • Knowing the basics of grassland management, forage production and conservation. Applying knowledge and understanding: • Based on the knowledge gained, ability to assess and interpret real situation and elaborate solutions for subject-specific problems in forage production and environmental management Evaluation and judgement: • Based on existing knowledge, ability to analyse and evaluate various systems for forage breeding, forage production, whilst considering environmental impacts • Develop skills to evaluate and interpret the vegetation of meadows and pastures Communication: • Ability to take a position, explain, and argument it in discussions with specialists and stakeholders. Learning strategies: • Ability to assess and learn independently from scientific literature concerning grassland science.
Assessment	The exam consists of - a practical part, in which a grass forage species is identified at

	a vegetative stage and its ecological and agronomic characteristics are described; - the presentation and discussion of a seminar paper; - a theoretical exam (oral), which focuses on the knowledge acquired and the ability to link different topics together.
Evaluation Criteria	The practical exam counts for 20%, the seminar paper for 30%, and the theoretical exam for 50% of the grade.
Required Readings	Lecture materials and slides are made available on Teams just after each lecture.
Supplementary Readings	Frame, J.; Laidlaw, A.S. (2014): Improved grassland management. New edition. New York: Crowood.
Further Information	Further scientific literature mentioned during lectures in relation to the various topics.
Sustainable Development Goals (SDGs)	Quality education, Decent work and economic growth, Partnerships fot the goals, Climate action, Life on land, Industry, innovation and infrastructure