

Syllabus

Descrizione del corso

Titolo del corso	Agricoltura di montagna: sistemi di coltura e allevamento sostenibili per l'ottenimento di prodotti di qualità
Codice del corso	40404
Settore scientifico disciplinare del corso	AGR/03 – AGR/19
Corso di studio	Scienze Enogastronomiche di Montagna
Semestre	II
Anno del corso	1°
Anno accademico	2024/25
Crediti formativi	12
Modulare	Sì

Numero totale di ore di lezione	36
Numero totale di ore di esercitazioni	24
Frequenza	Raccomandata
Sito web del corso	https://www.unibz.it/it/faculties/agricultural-environmental-food-sciences/bachelor-enogastronomy-mountain-areas/

Obiettivi formativi specifici del corso	<p>Il corso è di tipo "caratterizzante" ed appartiene all'area scientifica delle produzioni primarie. Fornisce informazioni generali su sistemi sostenibili per la produzione di alimenti.</p> <p>Gli obiettivi formativi specifici del modulo "Sistemi colturali sostenibili per l'ottenimento di prodotti di qualità" sono quelli di fornire agli studenti competenze scientifiche e tecniche sui principi di base della gestione delle colture agrarie. In particolare saranno considerati sistemi colturali sostenibili in un contesto di ambiente montano. Saranno inoltre fornite indicazioni generali sulla valutazione della qualità dei prodotti, nonché sulle principali tecniche di conservazione dei prodotti agrari.</p>
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Modulo 1	Metodi di coltivazione sostenibili per produzioni di qualità
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Codice del modulo	40404A
Docente	Prof. Damiano Zanotelli Facoltà di scienze agrarie, ambientali e alimentari Piazza Università 5, 39100 Bozen-Bolzano, Edificio K, ufficio K2.06a Office: (+39) 0471 017121 email: damiano.zanotelli@unibz.it
Settore scientifico disciplinare del docente	AGRI-03/A
Lingua ufficiale del corso	Italiano
Orario di ricevimento	Su appuntamento
Collaboratore didattico (se previsto)	Dr.ssa Chiara Mesiano
Orario di ricevimento	-
Lista degli argomenti trattati	<ul style="list-style-type: none"> - inquadramento su sfide e opportunità del settore agroalimentare e dell'agricoltura di montagna - gestione efficiente delle risorse (suolo, acqua, intercettazione luminosa, nutrizione minerale delle colture,) e iterazioni pianta ambiente (clima, fenomeni atmosferici, variabili meteorologiche) - metodi di coltivazione (convenzionale, integrato, biologico) e principi di agroecologia - Classificazione dei prodotti agrari, apporto nutritivo e qualità - Approfondimento su cereali, leguminose da granella, alimentari da tubero, oleifere, frutta e ortaggi con focus sulle produzioni di montagna
Attività didattiche previste	Lezioni frontali, esercitazioni in laboratorio, visite ad aziende, interazione con portatori di interesse che si occupano di produzione agraria e prodotti agricoli
Risultati di apprendimento attesi	<p><u>Conoscenza e comprensione</u></p> <ul style="list-style-type: none"> - adeguata conoscenza e comprensione dei principali fattori coinvolti nelle produzioni primarie - adeguata conoscenza delle principali caratteristiche dei diversi metodi di coltivazione - adeguata conoscenze delle principali colture che contribuiscono a soddisfare il fabbisogno alimentare umano, con particolare riferimento alle colture adatte all'ambiente di montagna <p><u>Capacità di applicare conoscenza e comprensione</u></p> <ul style="list-style-type: none"> - Essere capaci di individuare gli aspetti positivi e negativi delle produzioni agricole in contesti di montagna - Essere in grado di riconoscere i principali caratteri qualitativi dei prodotti agrari freschi e dopo conservazione

	<p><u>Capacità trasversali /soft skills</u></p> <p>Autonomia di giudizio</p> <ul style="list-style-type: none"> - Capacità di valutazione critica dei diversi livelli di sostenibilità dei processi colturali, in particolare in contesti di montagna. <p>Abilità comunicative</p> <ul style="list-style-type: none"> - Capacità di usare un corretto linguaggio tecnico per la comunicazione di concetti complessi <p>Capacità di apprendimento ed elaborazione</p> <ul style="list-style-type: none"> - Capacità di ampliare le proprie conoscenze tramite la lettura individuale di documenti tecnici e scientifici sulle tematiche trattate nel corso ed elaborare un progetto specifico attraverso il lavoro di gruppo
<p>Metodo d'esame</p>	<p>Orale e project work: Esame orale con domande volte a comprendere il livello di comprensione degli argomenti trattati nel corso da parte dello studente. Le domande saranno rivolte anche con l'obiettivo di verificare la capacità dello studente di risolvere casi di studio relativi ad argomenti inerenti la gestione dei sistemi colturali, nonché di valutare la capacità dello studente di sviluppare un proprio pensiero critico sulle tematiche trattate dal corso. Nell'ambito del corso sarà inoltre richiesto agli studenti un lavoro di approfondimento da sviluppare in gruppo su un prodotto agroalimentare di montagna a scelta</p>
<p>Lingua dell'esame</p>	<p>Italiano</p>
<p>Criteri di misurazione e criteri di attribuzione del voto</p>	<p>Il voto finale rifletterà la qualità delle risposte fornite dallo studente nel corso dell'esame. Sarà inoltre valutata la capacità dello studente di fare collegamenti tra argomenti diversi, nonché la sua propensione a sviluppare le proprie convinzioni su argomenti di attualità in ambito agrario. Il report e la presentazione in aula del lavoro di gruppo costituiranno parte integrante del voto finale.</p>

Bibliografia fondamentale	Materiale didattico mostrato usato a lezione (pdf)
Bibliografia consigliata	<ul style="list-style-type: none">- Paolo Ceccon, Massimo Fagnano, Carlo Grignani, "Agronomia", Edises, 2017- Luigi Giardini, "L'agronomia per conservare il futuro", Patron editore Bologna, 2012- Francisco J. Villalobos, Elias Fereres, "Principles of Agronomy for Sustainable Agriculture", Springer, 2016.

Syllabus

Course description

Course title	Mountain agriculture: typical mountain products based on sustainable farming and breeding methods
Course code	40404
Scientific sector	AGR/03 – AGR/19
Degree	Bachelor in Enogastronomy in Mountain Areas
Semester	2 nd
Year	I
Academic year	2024/25
Credits	12
Modular	Yes

Total lecturing hours	36
Total exercise hours	24
Attendance	Recommended
Course page	https://www.unibz.it/en/faculties/agricultural-environmental-food-sciences/bachelor-enogastronomy-mountain-areas/

Specific educational objectives	<p>The course is classified as “caratterizzante” and belongs to the scientific area of primary production. It provides a general overview about the sustainable farming methods for food production.</p> <p>The educational objectives of the module “Sustainable cultivation methods for quality production” are to provide students with scientific and technical knowledge on the main principles of primary production. In detail, sustainable cultivation methods of production will be considered especially under the framework of the mountain environment. Students will be provided with an overview on the main aspects of products’ quality and technologies to maintain quality of agricultural products.</p>
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Module 1	Sustainable cultivation methods for quality production
Codice del modulo	40404A
Lecturer	Prof. Damiano Zanotelli Faculty of agricultural, environmental and food sciences Piazza Università 5, 39100 Bozen-Bolzano, K building: office K2.06a Office: (+39) 0471 017121 email: damiano.zanotelli@unibz.it
Scientific sector of the	AGRI-03/A

lecturer	
Teaching language	Italian
Office hours	Upon arrangement by email
Teaching assistant (if any)	Dr.ssa Chiara Mesiano
Office hours	-
List of topics covered	<ul style="list-style-type: none"> - Overview of the challenges and opportunities of the agri-food and mountain agriculture sector; - Efficient management of resources (soil, water, light interception, mineral nutrition of crops) and plant-environment iterations (climate, atmospheric phenomena, meteorological variables); - Cultivation methods (conventional, integrated, organic) and principles of agroecology; - Classification of agricultural products, nutritional intake and quality; - Overview of the main cereals, grain legumes, tuber foods, oil crops, fruit and vegetables with a focus on mountain products.
Teaching format	Lectures, laboratory exercises, visits to companies, interaction with stakeholders involved in agricultural production and agricultural products

Learning outcomes	<p>Knowledge and understanding</p> <ul style="list-style-type: none"> - adequate knowledge and understanding of the main factors involved in primary production; - adequate knowledge of the main characteristics of the different cultivation methods; - adequate knowledge of the main crops that contribute to satisfying human food needs, with a focus to crops suited to the mountain environment. <p>Applying knowledge and understanding</p> <ul style="list-style-type: none"> - Be able to identify the positive and negative aspects of agricultural production in mountain contexts - Be able to identify the most relevant traits of quality in fresh and stored products. <p>Soft skills</p> <p>Making judgments</p> <ul style="list-style-type: none"> - Ability to critically evaluate the different levels of sustainability of cultivation processes, particularly in mountain contexts. <p>Communication skills</p> <ul style="list-style-type: none"> - Ability to communicate the acquired knowledge by using a correct scientific and technical language <p>Learning and processing skills</p> <ul style="list-style-type: none"> - Ability to expand the knowledge through individual
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	reading of technical and scientific documents, and develop a specific project through group work
Assessment	<p><u>Oral and project work:</u> Oral exam with questions aimed to verify student's knowledge and comprehension of the course topics. Questions will be asked with the aim to evaluate the student's capacity to apply his/her knowledge to solve specific case studies given by the teacher on subjects related to the sustainable production methods. The making judgment capacity of the student will be evaluated also by asking his/her critical interpretation on the different subjects discussed during the exercises. As part of the course, students will also be asked to carry out an assignment to be developed in groups on a typical mountain food product of their choice.</p>
Assessment Language	Italian
Evaluation criteria and criteria for awarding marks	<p>The final mark will reflect the quality of the student's answers to the questions. Particularly important will be the capacity showed by the student to fully manage the acquired knowledge, also by showing the ability to make connections between different thematic areas. The ability to develop a personal critical view on specific scientific problems will be also positively considered. The report and presentation of the group work in the classroom will constitute an integral part of the final mark.</p>
Required readings	Lesson notes (pdf) and didactic materials (scientific papers) loaded on the dedicated course Teams
Supplementary readings	<ul style="list-style-type: none"> - Paolo Ceccon, Massimo Fagnano, Carlo Grignani, "Agronomia", Edises, 2017 - Luigi Giardini, "L'agronomia per conservare il futuro", Patron editore Bologna, 2012 - Francisco J. Villalobos, Elias Fereres, "Principles of Agronomy for Sustainable Agriculture", Springer, 2016.

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Beschreibung der Lehrveranstaltung

Titel der Lehrveranstaltung	Berglandwirtschaft: typische Bergprodukte auf Basis nachhaltiger Anbau- und Züchtungsmethoden
Code der Lehrveranstaltung	40404B
Studiengang	Bachelor in Gastronomie und Önologie in Bergregionen
Semester	2°
Studienjahr	I
Jahr	2024/2025
Kreditpunkte	12
Modular	ja

Gesamtanzahl der Vorlesungsstunden	36
Gesamtzahl der Übungsstunden	24
Anwesenheit	nein
Voraussetzungen	keine
Link zur Lehrveranstaltung	

Spezifische Bildungsziele	Das Modul vermittelt die Grundlagen der Nutztierhaltung. Dies umfasst die Gebiete der Tierzucht, Tierhaltung und Tierernährung im Rahmen der Entwicklung der notwendigen beruflichen Kompetenzen. Dabei geht es im Wesentlichen um die Darstellung der Erzeugung qualitativ hochwertiger tierischer Produkte.
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Titel des Modules	Nachhaltige Tierhaltung zur Erzeugung von Qualitätsprodukten
Modulkodex	40404B
Wissenschaftliche Bereich	AGR/19
Modul Kreditpunkte	6

Wissenschaftlicher Mitarbeiter (wenn vorgesehen)	Dr. Thomas Zanon, Universitätsplatz 5, Raum K 1.08, thomas.zanon@unibz.it, 00471017894, Webseite des Dozenten: https://www.unibz.it/en/faculties/sciencetechnology/academic-staff/person/42463-thomas-zanon
Wissenschaftlich-disziplinärer Bereich des Dozenten	AGR/19
Unterrichtssprache	deutsch
Sprechzeiten	nach Vereinbarung
Auflistung der behandelten Themen	Tierzucht: <ul style="list-style-type: none"> • Der Effekt von züchterischen Maßnahmen auf die Qualität tierischer Lebensmittel • Grundlagen der Tierzucht

	<ul style="list-style-type: none"> • Grundlagen der Populations- und Molekulargenetik (Grundlagen, Populationsparameter, Zuchtwert, Selektion, Selektionsmethoden, Inzucht, Zuchtmethoden) • Selektionsmethoden • Wichtige Zuchtziele • Organisation der Tierzucht inkl. Zuchtprogramme und Zuchtstrategien <p>Tierhaltung:</p> <ul style="list-style-type: none"> • Produktionssysteme • Gesetzliche Rahmenbedingungen der Tierhaltung • Physiologische Verhaltensweisen, ethologische und hygienische Grundlagen • Produktions- und Managementsysteme bei Nutztieren <p>Tierernährung:</p> <ul style="list-style-type: none"> • Futterzusammensetzung • Futteraufnahme, Grundlagen der Verdauung • Nährstoffe und Stoffaustausch • Energiebilanzen und Futterbewertung inkl. Futterbewertungssystemen • Mineralstoffe und Vitamine • Fütterungsgrundsätze der meistgenutzten landwirtschaftlichen Nutztiere (Schwein, Rind, Ziege, Pferd, Geflügel) • Wichtige Futtermittelgruppen
Unterrichtsform	Vorlesungen, Exkursionen

Erwartete Lernergebnisse	<p><i>Wissen und Verstehen</i></p> <ul style="list-style-type: none"> • Kenntnisse über die Grundlagen von Tierzucht, Tierhaltung und Tierernährung. • Verstehen deren Effekte auf die Produktqualität. <p><i>Anwenden von Wissen und Verstehen</i></p> <ul style="list-style-type: none"> • Mit der erlernten Ausgangsbasis können fachspezifische Probleme erkannt, beurteilt und eigenständige Lösungsansätze für den Bereich erarbeitet werden. <p><i>Urteilen</i></p> <ul style="list-style-type: none"> • Auf Grundlage der erlernten Kenntnisse können verschiedene Haltungssysteme sowie der Einfluss der Rahmenbedingungen auf die Produktqualität beurteilt und bewertet werden. <p><i>Kommunikation</i></p> <ul style="list-style-type: none"> • Relevante Informationen können gesammelt und interpretiert werden. Fachbezogene Fragen können formuliert und bestimmte Positionen im Gespräch mit Fachvertretern und Laien ausgetauscht und vertreten werden. <p><i>Lernstrategien</i></p>
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	Eigenständige Erweiterung des Wissens in den genannten Bereichen durch das Studium populärwissenschaftlicher und wissenschaftlicher Literatur.
Art der Prüfung	Die Prüfung ist schriftlich. Es werden die Grundkenntnisse aus den Bereichen Tierhaltung, -zucht und -ernährung abgefragt. Anhand der im Rahmen der Exkursionen vorgestellten Betriebe wird überprüft, ob fachspezifische Probleme erkannt, die Systeme beurteilt bzw. bewertet und eigenständige Lösungsansätze erarbeitet und kommuniziert werden können. Es wird überprüft, ob der Zusammenhang zwischen Produktionssystem und Produktqualität verstanden wird.
Prüfungssprache	Deutsch
Bewertungskriterien und Kriterien für die Notenermittlung	Die Notenermittlung erfolgt im Rahmen der schriftlichen Prüfung auf Basis der Korrektheit der Antworten, der Fähigkeit Zusammenhänge abzuleiten und Bezüge zwischen den behandelten Themen und Tierarten herzustellen.
Pflichtliteratur	Tierproduktion. Jürgen Wolfgang Weiß, Wilhelm Pabst, Susanne Granz, 14/2011. ISBN 978-3-8304-1122-20, Enke Verlag
Weiterführende Literatur	<ul style="list-style-type: none"> • Nutztierhaltung und -hygiene. Grundwissen Bachelor. Steffen Hoy, Matthias Gauly, Joachim Krieter, 2006. ISBN 978-3-8252-2801-9, UTB. • Tierzucht. Alfons Willam, Henner Simianer, 2011. ISBN 978-3-8252-3526-0, UTB. • Tierernährung. Leitfaden für Studium, Beratung und Praxis. Manfred Kirchgeßner, 14/2014. ISBN 978-3-7690-0819-7, DLG-Verlag. <p>Weitere Literatur wird im Modul benannt.</p>

Syllabus

Course description

Course title	Mountain agriculture: typical mountain products based on sustainable farming and breeding methods
Course code	40404
Degree	Bachelor in Enogastronomy in Mountain Areas
Semester	2 nd
Year	I
Academic year	2024/25
Credits	12
Modular	yes

Total lecturing hours	36
Total exercise hours	24
Attendance	no
Prerequisites	none
Course page	

Specific educational objectives	The module covers the basics of animal science. This includes the areas of animal breeding, animal husbandry and animal nutrition incl. feed science in the development of the necessary professional skills. The course explains the correlation with product quality.
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Module title	Sustainable animal husbandry systems for quality production
Module code	40404B
Module Scientific sector	AGR/19
Module Credits	6

Lecturer	Dr. Thomas Zanon, Universitätsplatz 5, Raum K 1.08, thomas.zanon@unibz.it, 004711017894, Webseite des Dozenten: https://www.unibz.it/en/faculties/sciencetechnology/academic-staff/person/42463-thomas-zanon
Scientific sector of the lecturer	AGR/19
Teaching language	German
Office hours	By request

List of topics covered	<p>Animal Breeding:</p> <ul style="list-style-type: none"> • The impact of breeding on the quality of food products • Basics of breeding • Basics in population and molecular genetics (basic concepts, population parameters, breeding value, selection, selection methods, inbreeding, breeding methods)
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	<ul style="list-style-type: none"> • Selection methods • Important breeding goals • Organization of animal breeding incl. breeding programs and strategies <p>Animal Husbandry:</p> <ul style="list-style-type: none"> • Structures of animal production • Legal principles of animal husbandry • Physiological attitude, ethological and hygienic basics • Production and management systems in livestock <p>Animal Feeding:</p> <ul style="list-style-type: none"> • Feed composition of food • Feed intake, basics of digestive processes • Nutrients (food ingredients) and their substance-exchange • Energy balance and feed evaluation incl. feed evaluation systems • Mineral and vitamins • Feeding principles of the most important farm animal species / pig, cattle, sheep, goats, horses, poultry feeding) <p>Important groups of feeds</p>
Teaching format	Lecture, Excursions
Learning outcomes	<p>The learning outcomes need to refer to the Dublin Descriptors:</p> <p>Knowledge and understanding</p> <p>Applying knowledge and understanding</p> <p>Making judgments</p> <p>Communication skills</p> <p>Learning skills</p>
Assessment	<p>The examination is written. The basic knowledge in the fields of animal husbandry, breeding and nutrition is required. Based on the excursions it is checked whether subject-specific problems are recognized, the systems can be assessed and independent approaches can be developed and communicated. Furthermore, it is examined whether in the case of a change in the conditions adaptations can be developed.</p>
Assessment language	German
Evaluation criteria and criteria for awarding marks	<ul style="list-style-type: none"> • The evaluation process takes place in the context of a written exam based on the correctness of the answers, the ability to derive relationships and create connections between the topics and animal

	species.
Required readings	Tierproduktion. Jürgen Wolfgang Weiß, Wilhelm Pabst, Susanne Granz, 14/2011. ISBN 978-3-8304-1122-20, Enke Verlag
Supplementary readings	<ul style="list-style-type: none"> • Nutztierhaltung und -hygiene. Grundwissen Bachelor. Steffen Hoy, Matthias Gauly, Joachim Krieter, 2006. ISBN 978-3-8252-2801-9, UTB. • Tierzucht. Alfons Willam, Henner Simianer, 2011. ISBN 978-3-8252-3526-0, UTB. • Tierernährung. Leitfaden für Studium, Beratung und Praxis. Manfred Kirchgeßner, 14/2014. ISBN 978-3-7690-0819-7, DLG-Verlag. <p>More references will be mentioned during the lectures.</p>