



ALMA MATER STUDIORUM
UNIVERSITÀ DI BOLOGNA

TEACHING REGULATION FOR THE PROGRAMME IN

Food Animal Metabolism and Management in the Circular Economy (FAMCE) (LM-86)

Ozzano dell'Emilia (Bologna)

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Master Programme (Second Cycle Degree) in Food Animal Metabolism and Management in the Circular Economy (FAMCE)

General information

This document summarizes the main features of the teaching regulation for the Master Programme in FAMCE (taught in English) at the University of Bologna.

Please note that the official teaching regulation is written in Italian and it is attached to this document.

In case any translated part or element of this document conflicts with the Italian version, the last one will prevail in case of legal controversies.

Art. 1 Programme Admission Requirements

Required knowledge for access

In order to be admitted to the Master Programme in Food Animal Metabolism and Management in the Circular Economy, you need to hold a valid first cycle academic qualification: three-year Higher Education Bachelor Degree.

In addition, you must meet the curricular requirements and receive a positive assessment by a special Committee on your personal preparation.

Curricular requirements

Admission to the Master Programme is subject to the possession of a 1st cycle academic qualification in one of the following Italian Degree classes, or other suitable qualification obtained abroad:

ex D.M. n. 270/2004:

classe L-26 Scienze e Tecnologie Agro-Alimentari - Food and Agriculture Science and Technology

classe L-38 Scienze Zootechniche e Tecnologie delle Produzioni Animali - Animal Production Zootechnics and Technologies;

ex D.M. n. 509/1999:

classe 20 Scienze e Tecnologie Agrarie, Agroalimentari e Forestali - Agricultural, Agrifood and Forest Sciences and Technologies

classe 40 Scienze e Tecnologie Zootechniche e delle Produzioni Animali - Animal Production and Zootechnical Sciences and Technologies

If you own a different Bachelor's Degree, you need to have in your curriculum at least 30 credits (CFU/ECTS) in one or more of the scientific-disciplinary areas mentioned in the section "Admission Procedure".

Adequate personal knowledge and skills

Admission to the Second Cycle Degree Programme is in any case subject not only to possession of the curricular requirements indicated above, but also to verification of adequate personal training, carried out as indicated below.

Admission Procedure

Students not in possession of one of the suitable qualifications mentioned above, can still apply and possibly register for the programme, provided that they have in their curriculum at least 30 credits (CFU/ECTS) in one or more of the following scientific – disciplinary areas:

VET/01 Anatomia degli animali domestici - Veterinary Anatomy

VET/02 Fisiologia animale - Veterinary Physiology

VET/03 Patologia generale e anatomia patologica veterinaria – Veterinary Pathology

VET/05 Malattie infettive degli animali domestici - Infectious Diseases of Domestic Animals
VET/06 Parassitologia e malattie parassitarie degli animali – Parasitology and Animal Parasitic Diseases
VET/07 Farmacologia e tossicologia veterinaria – Veterinary Pharmacology and Toxicology
AGR/17: Zootecnica generale e miglioramento genetico – Livestock Systems, Animal Breeding and Genetics
AGR/18: Nutrizione e alimentazione animale – Animal Nutrition and Feeding
AGR/19: Zootecnica speciale – Animal Science
AGR/20: Zoocolture - Aquaculture, Poultry and Rabbit Science
AGR/01: Economia Agraria, Alimentare ed Estimo Rurale - Agricultural Economics and Rural Appraisal
BIO/10: Biochimica - Biochemistry

Assessment of adequate personal knowledge and skills

Assessment of the adequate personal preparation will be focused on the level of knowledge of the following subjects: Mathematics, Chemistry, Physics, Domestic Animal Anatomy, Animal Physiology, General Pathology, Anatomical pathology, Infectious Diseases of Domestic Animals; Parasitology and animal parasitic diseases; Veterinary Pharmacology and Toxicology, Zootechnics, Genetic improvement, Animal nutrition and feeding, Zoo cultures, Agricultural Economics, Biochemistry.

The assessment will consist on evaluating the student's university career by the Admission Board, named by the Programme Board, following the criteria detailed in the Admission Procedure. The Admission Board might also decide to integrate the evaluation with an oral interview focused on the same subjects.

Assessment of language knowledge and skills

In order to be admitted to the Master programme, it is required to prove a B2 level of English, based on the European common frame.

Also, it is necessary to have a B2 level of Italian knowledge, and for those students who do not meet this requirement, they will have to include learning activities aimed to reach the required level in their study plan.

Art. 2 Individual study plans

The possibility of submitting individual study plans is provided according to guidelines, criteria and terms indicated through the University Portal.

Individual study plans, approved by the Programme Board, cannot, however, disregard compliance with the regulations and guidelines defined by the competent bodies.

If the study plan includes the choice of learning activities activated in restricted-access study programmes, admission to these must be previously approved by the Programme Board of these study programmes.

Art. 3 Learning activities and teaching methods

The attached Syllabus ("Piano Didattico") outlines the methods for carrying out each learning activity, along with the distribution of hours for lectures, practical exercises, or internships, as well as the types of teaching methods used.

Any additional information will be reported through the University Portal.

Art. 4 Attendance and Course unit prerequisites

The attendance requirement for the learning activities is indicated in the attached Syllabus, as well as any prerequisites for individual training activities. The methods and verification of the attendance requirement, if applicable, are established annually by the Programme Board during the presentation of the academic schedule and are made known to students before the start of the lessons through the University Portal.

Art. 5 Flexible career

Students can choose a flexible career, which allows them to complete the study programme in a shorter or longer period of time (normal duration is 3 years for Bachelor's degrees and 2 years for Master's degrees), according to the methods defined in University Teaching Regulation. The teaching activities defined in the study career might be replaced in order to guarantee the quality and sustainability of the teaching offer.

Art. 6 Evaluation of learning activities

The general syllabus specifies the cases in which the learning activities are concluded with an exam graded on a scale of thirty or with a pass/fail evaluation.

The methods of conducting assessments (oral, written, or practical forms, and any possible combinations; individual or group assessments) are established annually by the Programme Board during the presentation of the academic schedule and are made known to students before the start of the lessons through the University Portal.

Art. 7 Learning activities individually chosen by the student

Students can indicate, as freely chosen learning activities, one or more activities among those identified annually by the Programme Board and published on the University web site.

If the student intends to take an exam related on an activity which is not included among those identified by the Programme board, he/she must submit a request to the Programme Board within the deadlines annually set and published on the University Portal.

The Programme Board will evaluate the coherence of the choice with the student's career.

Art. 8 Criteria for recognition of credits (ECTS) earned in Programmes of the same class

The university credits (ECTS) earned in Programmes of the same class (according to Italian Ministerial Decree) are recognized up to the equivalent of the credits in the same scientific-disciplinary sector provided by the attached Syllabus.

If, after the recognitions have been made according to the rules of this regulation, there are unused credits remaining, the Programme Board may recognize them by evaluating the specific case based on educational and cultural affinities.

For English-taught Programmes, recognition concerns only credits earned through English-taught courses.

Art. 9 Criteria for recognition of credits earned in Programmes of a different class, in distance-learning or at foreign Universities

The recognition of credits earned in previous university studies is determined, upon request of the student, by the Programme Board on the basis of the following criteria:

- Analysis of the Syllabus;
- Evaluation of the consistency of the scientific-disciplinary sectors and the content of the learning activities in which the student has earned credits, with the specific educational objectives of the Programme and the individual learning activities to be recognized, always pursuing the goal of student mobility.

The recognition is made up to the limit of the university credits provided by the attached syllabus.

Art. 10 Criteria for recognition of extra-academic knowledge and skills

Extra-university knowledge and skills may be recognized in cases provided for by current regulations. The recognition request will be evaluated by the Programme Board, taking into account the maximum number of credits that can be recognized as established in the Programme regulations. The recognition may take place if the activity is deemed consistent with the specific educational objectives of the Programme.

Art. 11 Internship aimed at preparing for the final dissertation or linked to a training project

The Programme, upon the student's request, may allow, following the procedures established by the University's General Regulations for internships or by international mobility programs for internships, and in accordance with European Union regulations, the completion of an internship aimed at preparing for the final exam/thesis or otherwise linked to a training project designed to refine the student's learning and education process.

Such experiences, lasting a maximum of 12 months, must be completed by the date of graduation. They may be carried out with the allocation of university credits as follows:

- as part of the credits allocated to the final exam;
- for internship activities required by the study plan;
- for elective activities chosen by the student, which can also be configured as an internship.

Art. 12 Final examination

Characteristics

The final examination to obtain the Master's Degree consists of writing and publicly defending a thesis, which must be originally written and developed by the student on a topic aligned with the objectives of the Programme, under the guidance of a supervisor. The dissertation must demonstrate mastery of the subjects, critical thinking skills, the ability to work independently, and a good level of communication ability.

Procedure

The final examination consists of writing a paper in English, under the guidance of a supervisor, followed by a public defense of the thesis in front of a Commission.

The final exam assesses the candidate's ability to carry out an experimental research project independently, on a specific topic, and to clearly describe, present, and discuss the results of the project with full mastery.

The score for the final exam is assigned based on the research work, in-depth analysis, reworking, writing, and treatment of the topic during the thesis discussion.

For this purpose, the supervisor submits the thesis for evaluation to a colleague (the Opponent) in a discipline related to the subject matter.

The Opponent (not necessarily present during the graduation session) provides a written evaluation of the thesis using a specifically designed model. This model takes into account the degree of completeness, depth, presentation, updating of the theoretical and experimental parts of the thesis, as well as the quality of the editing and the bibliography of the paper.

The evaluation of the Commission is expressed in hundredths. The exam is considered passed with a minimum score of 66/110.

The maximum score available to the Commission is 9 points, allocated as follows: 3 points for the Opponent and 6 points for the Commission, which will duly consider the Supervisor's opinion. Additionally, for theses of high scientific value completed at accredited foreign institutions, an additional point may be awarded (bringing the maximum possible final score to 10 points).

In the case of the maximum score (110/110), the award of honors, at the unanimous decision of the Commission, is contingent upon having a weighted average (excluding rounding) of at least 28/30, having

received at least 2 points from the Opponent, and having one or more honors in the academic career. The final dissertation may be linked to a project or an internship activity.

Art. 13 Consistency between the credits assigned to individual learning activities and the specific learning objectives planned

The Joint Committee of Faculty and Students, on November 4th 2020, expressed a favorable opinion pursuant to Article 12, paragraph 3 of Ministerial Decree 270/04.



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REGOLAMENTO DIDATTICO DEL CORSO IN

Food Animal Metabolism and Management in the Circular Economy (FAMCE) (LM-86)

Sede di Ozzano dell'Emilia (Bologna)

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Corso di Laurea Magistrale in Food Animal Metabolism and Management in the Circular Economy (FAMCE)

Art. 1 Requisiti per l'accesso al corso

- **Conoscenze richieste per l'accesso**

Per essere ammessi al corso di laurea magistrale in Food Animal Metabolism and Management in the Circular Economy occorre essere in possesso di una laurea o del diploma universitario di durata triennale, ovvero di altro titolo di studio conseguito all'estero, riconosciuto idoneo.

Occorre, altresì, il possesso di requisiti curriculari e il superamento di una verifica dell'adeguatezza della personale preparazione.

Requisiti curriculari

Aver conseguito la Laurea in una delle seguenti classi:

ex D.M. 270

L-38 Scienze Zootecniche e Tecnologie delle Produzioni Animali (ex D.M. 270/04),

L-26 Scienze e Tecnologie Alimentari (ex D.M. 270)

ex. D.M. 509/99:

L-40 Scienze e Tecnologie Zootecniche e delle Produzioni Animali,

L-20 Scienze e Tecnologie Agrarie, Agroalimentari e Forestali

oppure

Essere in possesso di una laurea appartenente ad una classe differente da quelle indicate ed avere acquisito i crediti formativi universitari indicati nel punto "Modalità di ammissione".

Verifica dell'adeguatezza della personale preparazione

L'ammissione al corso di laurea magistrale è subordinata al superamento di una verifica dell'adeguatezza della personale preparazione che avverrà secondo le modalità definite nel punto modalità di ammissione.

- **Modalità di ammissione**

Coloro che non possiedono la Laurea in una delle classi indicate nel punto "requisiti curriculari" devono necessariamente acquisire almeno 30 CFU in uno o più dei seguenti settori scientifico-disciplinari:

VET/01 Anatomia degli animali domestici

VET/02 Fisiologia animale

VET/03 Patologia generale e anatomia patologica veterinaria

VET/05 Malattie infettive degli animali domestici

VET/06 Parassitologia e malattie parassitarie degli animali

VET/07 Farmacologia e tossicologia veterinaria

AGR/17: Zootecnica generale e miglioramento genetico

AGR/18: Nutrizione e alimentazione animale

AGR/19: Zootecnica speciale

AGR/20: Zoocolture

AGR/01: Economia ed estimo rurale
BIO/10: Biochimica

Verifica dell'adeguatezza della personale preparazione

La verifica dell'adeguatezza della personale preparazione verterà sulle conoscenze a livello universitario di matematica, chimica, fisica, anatomia degli animali domestici, fisiologia animale, patologia generale e anatomia patologica veterinaria, malattie infettive degli animali domestici, parassitologia e malattie parassitarie degli animali, farmacologia e tossicologia veterinaria, zootecnica generale e miglioramento genetico, zootecnica speciale, Nutrizione e alimentazione animale, zootecnica speciale, zoocolture, economia ed estimo rurale, biochimica.

La verifica consisterà nella valutazione della carriera universitaria del richiedente da parte di una Commissione di ammissione, su mandato del Consiglio di Corso di Studio, secondo i criteri che verranno descritti nella procedura di ammissione. La Commissione potrà eventualmente prevedere un colloquio integrativo che verterà sulle stesse conoscenze.

Accertamento delle conoscenze e competenze linguistiche

Per l'accesso al corso di studio è richiesta la conoscenza della lingua inglese di livello B2 del Quadro comune europeo di riferimento per la conoscenza delle lingue ed è verificata in sede d'ammissione come indicato nella procedura pubblicata sul sito.

Per l'accesso al corso è necessario possedere conoscenze nella lingua italiana equivalenti ad un livello non inferiore al B2 del QCER.

Gli studenti stranieri non in possesso di questo requisito dovranno inserire nel proprio piano di studi attività formative finalizzate al raggiungimento del livello richiesto.

Art. 2 Piani di studio individuali

È prevista la possibilità di presentazione di piani di studio individuali con le modalità, i criteri e i termini resi noti tramite il Portale di Ateneo.

I piani di studio individuali, approvati dal Consiglio di corso di studi, non possono comunque prescindere dal rispetto dell'ordinamento e delle linee guida definite dagli Organi competenti. Qualora il piano di studio preveda la scelta di attività formative attivate presso corsi di studio a numero programmato, l'ammissione alle stesse deve essere previamente approvata anche dal Consiglio di corso di studio a numero programmato sulla base di criteri da questo preventivamente individuati.

Art. 3 Modalità di svolgimento di ciascuna attività formativa e tipologia delle forme didattiche

Il piano didattico allegato indica le modalità di svolgimento di ciascuna attività formativa e la relativa suddivisione in ore di didattica frontale, di esercitazioni pratiche o di tirocinio, nonché la tipologia delle forme didattiche.

Eventuali ulteriori informazioni ad esse relative saranno rese note annualmente sul Portale di Ateneo.

Art. 4 Frequenza e propedeuticità

L'obbligo di frequenza alle attività didattiche è indicato nel piano didattico allegato, così come le eventuali propedeuticità delle singole attività formative.

Le modalità e la verifica dell'obbligo di frequenza, ove previsto, sono stabilite annualmente dal Corso di Studio in sede di presentazione della programmazione didattica e rese note agli studenti prima dell'inizio delle lezioni tramite il Portale di Ateneo.

Art. 5 Percorso flessibile

Lo studente può optare per il percorso flessibile che consente di completare il corso di studio in un tempo superiore o inferiore alla durata normale (3 anni per le Lauree e 2 anni per le Lauree Magistrali) secondo le modalità definite nel Regolamento Didattico di Ateneo.

Le attività formative previste dal percorso di studio, in caso di necessaria disattivazione, potranno essere sostituite, per garantire la qualità e la sostenibilità dell'offerta didattica.

Art. 6 Prove di verifica delle attività formative

Il piano didattico allegato prevede i casi in cui le attività formative si concludono con un esame con votazione in trentesimi ovvero con un giudizio di idoneità.

Le modalità di svolgimento delle verifiche (forma orale, scritta o pratica ed eventuali loro combinazioni; verifiche individuali ovvero di gruppo) sono stabilite annualmente dal Corso di Studio in sede di presentazione della programmazione didattica e rese note agli studenti prima dell'inizio delle lezioni tramite il Portale di Ateneo.

Art. 7 Attività formative autonomamente scelte dallo studente

Lo studente può indicare come attività formative autonomamente scelte dallo studente una o più attività formative tra quelle che il Consiglio di Corso di studio individua annualmente e rende note tramite Portale di Ateneo.

Se lo studente intende sostenere un esame relativo ad una attività non prevista tra quelle individuate dal Consiglio di Corso di studio, deve fare richiesta al Consiglio di Corso nei termini previsti annualmente e resi noti tramite pubblicazione sul Portale di Ateneo.

Il Consiglio valuterà la coerenza della scelta con il percorso formativo dello studente.

Art. 8 Criteri di riconoscimento dei crediti acquisiti in Corsi di Studio della stessa classe

I crediti formativi universitari acquisiti sono riconosciuti fino a concorrenza dei crediti dello stesso settore scientifico disciplinare previsti dal piano didattico allegato.

Qualora, effettuati i riconoscimenti in base alle norme del presente regolamento, residuino crediti non utilizzati, il Consiglio di Corso di studio può riconoscerli valutando il caso concreto sulla base delle affinità didattiche e culturali.

Con riferimento ai corsi di studio erogati in lingua diversa dall'italiano, il riconoscimento è relativo ad insegnamenti impartiti o alle attività formative svolte in tale lingua.

Art. 9 Criteri di riconoscimento dei crediti acquisiti in Corsi di Studio di diversa classe, presso università telematiche e in Università estere

Il riconoscimento dei crediti acquisiti nei precedenti studi universitari è determinato, su istanza dello studente, dal Consiglio di corso di studio.

I crediti formativi universitari acquisiti sono riconosciuti dal Consiglio di Corso di studio sulla base dei seguenti criteri:

- analisi del programma svolto
- valutazione della congruità dei settori scientifico disciplinari e dei contenuti delle attività formative in cui lo studente ha maturato i crediti con gli obiettivi formativi specifici del corso di studio e delle singole attività formative da riconoscere, perseguendo comunque la finalità di mobilità degli studenti.

Il riconoscimento è effettuato fino a concorrenza dei crediti formativi universitari previsti dal piano didattico allegato.

Art. 10 Criteri di riconoscimento delle conoscenze e abilità extrauniversitarie

Possono essere riconosciute conoscenze e abilità extrauniversitarie nei casi previsti dalla normativa vigente. La richiesta di riconoscimento sarà valutata dal Consiglio di corso di studio tenendo conto del numero massimo di crediti riconoscibili fissato nell'ordinamento didattico del corso.

Il riconoscimento potrà avvenire qualora l'attività sia ritenuta coerente con gli obiettivi formativi specifici del corso di studio.

Art. 11 Tirocinio finalizzato alla preparazione della prova finale o collegato ad un progetto formativo

Il Corso di Studio, su richiesta dello studente, può consentire, con le procedure stabilite dal Regolamento generale di Ateneo per lo svolgimento dei tirocini o dai programmi internazionali di mobilità per tirocinio, e in conformità alle norme dell'Unione Europea, lo svolgimento di un tirocinio finalizzato alla preparazione della **prova finale / tesi di laurea** o comunque collegato ad un progetto formativo mirato ad affinare il suo processo di apprendimento e formazione.

Tali esperienze formative della durata massima di 12 mesi, che dovranno concludersi entro la data del conseguimento del titolo di studio, potranno essere svolte prevedendo l'attribuzione di crediti formativi:

- nell'ambito di quelli attribuiti alla prova finale;
- per attività di tirocinio previsto dal piano didattico;
- per attività a scelta dello studente configurabili anche come tirocinio;

Art. 12 Modalità di svolgimento della prova finale

• Caratteristiche della Prova finale

La prova finale per il conseguimento della laurea magistrale consiste nella redazione e nella discussione pubblica di una tesi scritta ed elaborata in modo originale dallo studente su un argomento coerente con gli obiettivi del corso di studio, sotto la guida di un relatore.

La dissertazione deve dimostrare la padronanza degli argomenti, capacità critica, l'attitudine a operare in modo autonomo e una capacità di comunicazione di buon livello.

• Modalità di svolgimento della prova finale

La prova finale consiste nella redazione di un elaborato, in lingua inglese, sotto la guida di un relatore e nella successiva discussione pubblica della tesi davanti ad una Commissione.

La prova finale verifica la capacità del laureando di eseguire il progetto di ricerca di natura sperimentale in modo autonomo, su un tema specifico, e di descrivere, esporre e discutere con chiarezza e piena padronanza i risultati del progetto stesso".

Il punteggio relativo alla prova finale viene assegnato in funzione del lavoro di ricerca, approfondimento, rielaborazione, stesura e trattazione dell'argomento durante la discussione della tesi. A tal fine il Coordinatore del Corso di Studio sottopone la tesi, per la valutazione, ad un collega competente (Controrelatore) di disciplina affine all'argomento trattato. Il Controrelatore (non necessariamente presente in seduta di laurea) esprime una valutazione scritta della tesi su di un modello appositamente predisposto. Tale modello tiene conto del grado di completezza, approfondimento, esposizione, aggiornamento della parte compilativa e sperimentale della tesi nonché della qualità dell'editing e della bibliografia dell'elaborato. La valutazione della Commissione è espressa in centodecimali. La prova si intende superata con una votazione minima di 66/110.

Il punteggio massimo a disposizione della Commissione è pari a 9 punti ripartiti nel seguente modo: 3 punti a disposizione del Controrelatore e 6 punti a disposizione della Commissione, che terrà in dovuta

considerazione il giudizio del Relatore.

Inoltre per tesi di elevato valore scientifico effettuate presso accreditate istituzioni straniere potrà essere attribuito sino ad un punto aggiuntivo (per un punteggio finale massimo attribuibile pari a 10 punti).

In caso di votazione massima (110/110), l'eventuale attribuzione della lode, su decisione unanime della Commissione, è subordinata ad avere una carriera scolastica con media ponderata, al netto dell'arrotondamento, di almeno 28/30, ad avere conseguito almeno 2 punti da parte del Controrelatore ed alla contemporanea presenza di una o più lodi nella carriera stessa.

La prova finale può essere collegata a un progetto o a una attività di tirocinio.

Art. 13 Coerenza fra i crediti assegnati alle singole attività formative e gli specifici obiettivi formativi programmati

La Commissione Paritetica docenti-studenti in data 04/11/2020 ha espresso parere favorevole ai sensi dell'articolo 12 comma 3 del DM 270/04.



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Anno Accademico 2025/2026
Scuola Agraria e Medicina veterinaria
Classe LM-86 R-SCIENZE ZOOTECHNICHE E TECNOLOGIE ANIMALI
Corso 6815-FOOD ANIMAL METABOLISM AND MANAGEMENT IN THE CIRCULAR ECONOMY

Primo Anno di Corso

Gruppo: ATTIVITA' FORMATIVE OBBLIGATORIE

TAF: Ambito:

Cfu min: Cfu max:

Note:

Attività formativa	TIP	SSD	TAF	CFU	ORE F/E/L/N	FREQ.	VER.
6815 000 000 95948 - 1 - CIRCULAR AGRI-FOOD BUSINESS MODELS		AGR/01		7	32/36/0/0	No	Voto
Ambito: 2266 - Discipline economiche, statistiche, informatiche e gestionali			B				
Obiettivi: At the end of the course, students know a set of principles that explain, define and articulate the distinctive vision that differentiates the circular approach from the traditional economic and business model. Furthermore, students are able to approach resource management from a circular perspective aimed at maximising resource productivity, minimising environmental impact and keeping materials, components and products in circulation for as long as possible, enhancing their value.							
Obiettivi inglese: At the end of the course, students know a set of principles that explain, define and articulate the distinctive vision that differentiates the circular approach from the traditional economic and business model. Furthermore, students are able to approach resource management from a circular perspective aimed at maximising resource productivity, minimising environmental impact and keeping materials, components and products in circulation for as long as possible, enhancing their value.							
6815 000 000 95955 - 1 - CLINICAL AND PHARMACOLOGICAL ISSUES IN INTENSIVE ANIMAL PRODUCTION (I.C.)				6			Voto
Modulo integrato: 95973 - THE IMPACT OF DRUGS AND CONTAMINANTS ON ANIMAL PRODUCTION		VET/07		3	16/12/0/0	No	
Ambito: 2019 - Attività formative affini o integrative			C				
Obiettivi: At the end of the module, students have learned the principles of proper drug use and the problems related to environmental contaminants. In particular, they are aware of the spread of antimicrobial resistance (AMR) deriving from antibiotics use, as well as the negative effects of toxic substances on livestock. Students are able to assess the risks for both animals and consumers, the effects on the environment and the economic impact deriving from drugs and contaminants.							
Obiettivi inglese: At the end of the module, students have learned the principles of proper drug use and the problems related to environmental contaminants. In particular, they are aware of the spread of antimicrobial resistance (AMR) deriving from antibiotics use, as well as the negative effects of toxic substances on livestock. Students are able to assess the risks for both animals and consumers, the effects on the environment and the economic impact deriving from drugs and contaminants.							

Modulo integrato: 95974 - PREVENTION AND MONITORING OF METABOLIC DISEASES IN INTENSIVE ANIMAL PRODUCTION	VET/08	3	16/12/0/0	No	
Ambito: 2019 - Attività formative affini o integrative					C
Obiettivi: At the end of the module, students have learned which haematochemical performance indicators are useful to evaluate the metabolic balance of ruminants, pigs, chickens, and fishes. In addition, students are prepared to perform samples of biological material. Finally, students are prepared to perform laboratory analysis on blood and other biological samples.					
Obiettivi inglese: At the end of the module, students have learned which haematochemical performance indicators are useful to evaluate the metabolic balance of ruminants, pigs, chickens, and fishes. In addition, students are prepared to perform samples of biological material. Finally, students are prepared to perform laboratory analysis on blood and other biological samples.					
6815 000 000 95956 - 1 - HIGH-THROUGHPUT TECHNOLOGIES FOR SUSTAINABLE ANIMAL BREEDING	AGR/17	6	32/24/0/0	No	Voto
Ambito: 2283 - Discipline agro-zootecniche, delle produzioni animali, e veterinarie					B
Obiettivi: At the end of the course, students know the main technologies and applications of large-scale phenotyping and genotyping to enhance the efficiency and sustainability of animal breeding programs. Students know the main phenomics and genomics platforms and their application for sustainable livestock production, and how to design breeding programs in a circular economy perspective.					
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Obiettivi inglese: At the end of the course, students know the main technologies and applications of large-scale phenotyping and genotyping to enhance the efficiency and sustainability of animal breeding programs. Students know the main phenomics and genomics platforms and their application for sustainable livestock production, and how to design breeding programs in a circular economy perspective.					
6815 000 000 95957 - 1 - INTENSIVE AND CIRCULAR ANIMAL PRODUCTION (I.C.)		12			Voto
Modulo integrato: 95975 - SWINE AND RUMINANT FARMING IN A SUSTAINABLE AND CIRCULAR AGRICULTURE	AGR/19	6	32/24/0/0	No	
Ambito: 2283 - Discipline agro-zootecniche, delle produzioni animali, e veterinarie					B
Obiettivi: At the end of the module, students know the key performance indicators, the main interconnections between sustainable/circular agriculture, productivity and animal welfare. They are able to evaluate and discuss the consequences of different farming methods and animal management techniques on sustainability/circularity, productivity, animal welfare and health. They are able to assess existing farming systems and propose corrective strategies.					
Obiettivi inglese: At the end of the module, students know the key performance indicators, the main interconnections between sustainable/circular agriculture, productivity and animal welfare. They are able to evaluate and discuss the consequences of different farming methods and animal management techniques on sustainability/circularity, productivity, animal welfare and health. They are able to assess existing farming systems and propose corrective strategies.					
Modulo integrato: 95976 - INTENSIVE POULTRY AND FISH FARMING PERFORMANCES AND CIRCULAR ECONOMY	AGR/20	6	32/24/0/0	No	
Ambito: 2283 - Discipline agro-zootecniche, delle produzioni animali, e veterinarie					B
Obiettivi: At the end of the module, students know the main performance indicators, the main interconnections between circular/sustainable agriculture, productivity and animal welfare, are able to evaluate and discuss the consequences of different farming methods and animal management techniques on circularity/sustainability, productivity and welfare and soil health and are able to evaluate existing farming systems and propose corrective strategies.					
Obiettivi inglese: At the end of the module, students know the main performance indicators, the main interconnections between circular/sustainable agriculture, productivity and animal welfare, are able to evaluate and discuss the consequences of different farming methods and animal management techniques on circularity/sustainability, productivity and welfare and soil health and are able to evaluate existing farming systems and propose corrective strategies.					
6815 000 000 95958 - 1 - MANAGEMENT OF REPRODUCTION IN SUSTAINABLE ANIMAL PRODUCTIONS	VET/10	6	32/24/0/0	No	Voto
Ambito: 2283 - Discipline agro-zootecniche, delle produzioni animali, e veterinarie					B
Obiettivi: At the end of the course, students have acquired knowledge for the management of livestock reproduction, balancing reproductive efficiency, animal welfare and the environment. Furthermore, students acquire fundamental knowledge of reproductive biotechnologies with a major impact on the objectives mentioned above. Students also acquire the fundamentals of animal health and reproduction legislation.					
Obiettivi inglese: At the end of the course, students have acquired knowledge for the management of livestock reproduction, balancing reproductive efficiency, animal welfare and the environment. Furthermore, students acquire fundamental knowledge of reproductive biotechnologies with a major impact on the objectives mentioned above. Students also acquire the fundamentals of animal health and reproduction legislation.					

6815 000 000 95959 - 1 - METABOLISM IN FARM ANIMALS	BIO/10	4	24/12/0/0	No	Voto
Ambito: 2019 - Attività formative affini o integrative Obiettivi: At the end of the course, students are able to apply knowledge of biochemical pathways and metabolic regulation in different tissues and species and methods to evaluate cellular metabolism to maintain or improve the health and welfare of production animals Obiettivi inglese: At the end of the course, students are able to apply knowledge of biochemical pathways and metabolic regulation in different tissues and species and methods to evaluate cellular metabolism to maintain or improve the health and welfare of production animals					
6815 000 000 95963 - 1 - MORPHO-FUNCTIONAL AND PATHOLOGICAL BASIS OF ANIMAL METABOLISM AND STRESS (I.C.)		12			Voto
Modulo integrato: 95977 - ANATOMY OF THE SYSTEMS OF SPECIES OF ZOOTECHNICAL INTEREST	VET/01	3	16/12/0/0	No	
Ambito: 2019 - Attività formative affini o integrative Obiettivi: At the end of the module, students: 1.know the organization, both at the macroscopic and microscopic levels, of the farming systems of species of zootechnical interest. 2.acquire the knowledge necessary to understand the physiology and pathology. Obiettivi inglese: At the end of the module, students: 1.know the organization, both at the macroscopic and microscopic levels, of the farming systems of species of zootechnical interest. 2.acquire the knowledge necessary to understand the physiology and pathology.					
Modulo integrato: 95978 - PHYSIOLOGY OF ANIMAL METABOLISM AND STRESS	VET/02	6	32/24/0/0	No	
Ambito: 2283 - Discipline agro-zootecniche, delle produzioni animali, e veterinarie Obiettivi: At the end of the module, students: 1.know the physiological basis of animal metabolism and stress; 2.have gained sufficient knowledge to understand pathological alteration of animals. Obiettivi inglese: At the end of the module, students: 1.know the physiological basis of animal metabolism and stress; 2.have gained sufficient knowledge to understand pathological alteration of animals.					
Modulo integrato: 95979 - STRESS AND DYSMETABOLIC ASSOCIATED PATHOLOGIES	VET/03	3	16/12/0/0	No	
Ambito: 2019 - Attività formative affini o integrative Obiettivi: At the end of the module, students: 1.can explain the relationships between stress, inflammation and immune response; 2.know the main hepatic and gastrointestinal pathologies that can interfere with metabolic efficiency; 3.can correlate humoral parameters for estimating metabolic efficiency with physiological or pathological processes. Obiettivi inglese: At the end of the module, students: 1.can explain the relationships between stress, inflammation and immune response; 2.know the main hepatic and gastrointestinal pathologies that can interfere with metabolic efficiency; 3.can correlate humoral parameters for estimating metabolic efficiency with physiological or pathological processes.					
6815 000 000 95964 - 1 - SUSTAINABLE CONTROL OF TRANSMISSIBLE DISEASES IN FOOD ANIMAL PRODUCTION SYSTEMS (I.C.)		6			Voto

Modulo integrato: 95981 - STRATEGIES OF INFECTIOUS DISEASE CONTROL IN SUSTAINABLE FOOD-ANIMAL PRODUCTIONS

VET/05

3

16/12/0/0

No

C

Ambito: 2019 - Attività formative affini o integrative

Obiettivi: At the end of the module, students have acquired knowledge on the epidemiology of infectious diseases of food animals and their control through biosecurity and vaccination, for the safeguard of animal health and welfare, in order to improve the sustainability of food animal productions.

In particular students:

- 1.Acquire epidemiological knowledge of infectious diseases transmission in food animals;
- 2.Acquire criteria to evaluate the effectiveness of biosecurity plans;
- 3.Are able to evaluate the economic and health impact, especially on reducing the use of antimicrobials, of infectious disease prevention and control measures in food animal productions.

Obiettivi inglese: At the end of the module, students have acquired knowledge on the epidemiology of infectious diseases of food animals and their control through biosecurity and vaccination, for the safeguard of animal health and welfare, in order to improve the sustainability of food animal productions.

In particular students:

- 1.Acquire epidemiological knowledge of infectious diseases transmission in food animals;
- 2.Acquire criteria to evaluate the effectiveness of biosecurity plans;
- 3.Are able to evaluate the economic and health impact, especially on reducing the use of antimicrobials, of infectious disease prevention and control measures in food animal productions.

Modulo integrato: 95982 - SUSTAINABLE CONTROL OF PARASITIC DISEASES IN FOOD ANIMAL PRODUCTION SYSTEMS

VET/06

3

16/12/0/0

No

C

Ambito: 2019 - Attività formative affini o integrative

Obiettivi: At the end of the module, students can apply sustainable control of ecto and endoparasites of major concern for food animal production. In particular students acquire updated knowledge on target parasitic diseases with particular attention to their epidemiology, efficient monitoring plans and early diagnosis, rational use of antiparasitic drugs and Integrated Parasite Management (IPM) strategies, and biosecurity practices tailored on different parasites and farm conditions.

Obiettivi inglese: At the end of the module, students can apply sustainable control of ecto and endoparasites of major concern for food animal production. In particular students acquire updated knowledge on target parasitic diseases with particular attention to their epidemiology, efficient monitoring plans and early diagnosis, rational use of antiparasitic drugs and Integrated Parasite Management (IPM) strategies, and biosecurity practices tailored on different parasites and farm conditions.

Secondo Anno di Corso

Gruppo: ATTIVITA' FORMATIVE OBBLIGATORIE

TAF: **Ambito:**

Cfu min: **Cfu max:**

Note:

Attività formativa	TIP	SSD	TAF	CFU	ORE F/E/L/N	FREQ.	VER.
6815 000 000 95965 - 2 - ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING FOR BUSINESS		ING-INF/05		6	24/36/0/0	No	Voto
Ambito: 2266 - Discipline economiche, statistiche, informatiche e gestionali			B				
Obiettivi: At the end of the course the student is in possession of the basic knowledge of cutting-edge models and applications of artificial intelligence, with particular attention to machine learning. In particular, they are able to have a practical vision to select the appropriate methods to solve concrete problems							
Obiettivi inglese: At the end of the course the student is in possession of the basic knowledge of cutting-edge models and applications of artificial intelligence, with particular attention to machine learning. In particular, they are able to have a practical vision to select the appropriate methods to solve concrete problems							

6815 000 000 95966 - 2 - BUSINESS DATA ANALYSIS	SECS-S/03	6	32/24/0/0	No	Voto
C					
Ambito: 2019 - Attività formative affini o integrative Obiettivi: At the end of the course the student is familiar with the main statistical methods necessary for the study of economics. Furthermore, the student is able to use the main statistical techniques and, when possible, apply them to the contents of the sector. Obiettivi inglese: At the end of the course the student is familiar with the main statistical methods necessary for the study of economics. Furthermore, the student is able to use the main statistical techniques and, when possible, apply them to the contents of the sector.					
6815 000 000 95967 - 2 - FOOD ANIMAL NUTRITION AND FEEDING FOR SUSTAINABILITY AND SAFETY (I.C.)		9			Voto
Modulo integrato: 95983 - NUTRITION AND FEEDING TO IMPROVE FOOD ANIMAL EFFICIENCY WITHIN CIRCULAR AGRICULTURAL SYSTEM	AGR/18	6	32/24/0/0	No	
B					
Ambito: 2283 - Discipline agro-zootecniche, delle produzioni animali, e veterinarie Obiettivi: At the end of the course the student will know the basic principles of animal nutrition and feeding with particular attention to the interactions between nutrients and metabolic response in modulating the productivity and sustainability of animal production as well as the hygiene and safety of derived products. Obiettivi inglese: At the end of the course the student will know the basic principles of animal nutrition and feeding with particular attention to the interactions between nutrients and metabolic response in modulating the productivity and sustainability of animal production as well as the hygiene and safety of derived products.					
Modulo integrato: 95984 - STRATEGIES TO IMPROVE SAFETY OF FOODS OF ANIMAL ORIGIN WITHIN CIRCULAR AGRICULTURAL SYSTEM	VET/04	3	16/12/0/0	No	
C					
Ambito: 2019 - Attività formative affini o integrative Obiettivi: At the end of the course, the student is familiar with the health regulations on derived products not intended for human consumption. In particular, he knows how to analyse and evaluate the role of the feed industry and establish the risk of consumption of these products for animal and human health, he knows how to validate different nutritional strategies to improve the hygiene and safety of products of animal origin through metagenomic approaches and he knows methodologies and approaches to ensure the safety of food of animal origin. Obiettivi inglese: At the end of the course, the student is familiar with the health regulations on derived products not intended for human consumption. In particular, he knows how to analyse and evaluate the role of the feed industry and establish the risk of consumption of these products for animal and human health, he knows how to validate different nutritional strategies to improve the hygiene and safety of products of animal origin through metagenomic approaches and he knows methodologies and approaches to ensure the safety of food of animal origin.					
6815 000 000 95968 - 2 - INTERNSHIP		12	0/0/300/0	No	Giudizio
F					
Ambito: 1146 - Tirocini formativi e di orientamento Obiettivi: At the end of the internship the student is able to translate into practice the theoretical tools acquired during the course of study and acquire a greater awareness in view of future work choices. Obiettivi inglese: At the end of the internship the student is able to translate into practice the theoretical tools acquired during the course of study and acquire a greater awareness in view of future work choices.					

Gruppo: ESAMI A SCELTA DELLO STUDENTE (8 CFU)**TAF: D Ambito: 1008 - A scelta dello studente**

Cfu min: 8 Cfu max: 8 Num. Esami: 1 Num. Idoneità: 0
 Il Dipartimento garantisce che, ai fini del rispetto del limite massimo di 12 esami/5 idoneità i CFU a scelta saranno acquisibili con 1 esami e 0 idoneità

Note:

Attività formativa	TIP	SSD	TAF	CFU	ORE F/E/L/N	FREQ. VER.
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Gruppo: GRUPPO DI SCELTA PROVA FINALE**TAF: E Ambito: 1018 - Per la prova finale****Cfu min: 20 Cfu max: 20**

Note:

Attività formativa	TIP	SSD	TAF	CFU	ORE F/E/L/N	FREQ.	VER.
6815 000 000 B1495 - 2 - FINAL EXAMINATION (DISCUSSION)				8	0/0/0/0	No	
Ambito: Obiettivi: The final test consists of a discussion of a written and original work, carried out independently from which the methodological content and exhibition effectiveness can be seen. The graduate is also able to apply the knowledge acquired during the course of study and to critically address a discussion of the subject matter. Obiettivi inglese: The final test consists of a discussion of a written and original work, carried out independently from which the methodological content and exhibition effectiveness can be seen. The graduate is also able to apply the knowledge acquired during the course of study and to critically address a discussion of the subject matter.							
6815 000 000 37849 - 2 - FINAL EXAMINATION LM				20	0/0/0/0	No	
Ambito: 1018 - Per la prova finale Obiettivi: The final test consists of a discussion of a written and original work, carried out independently from which the methodological content and exhibition effectiveness can be seen. The graduate is also able to apply the knowledge acquired during the course of study and to critically address a discussion of the subject matter. Obiettivi inglese: The final test consists of a discussion of a written and original work, carried out independently from which the methodological content and exhibition effectiveness can be seen. The graduate is also able to apply the knowledge acquired during the course of study and to critically address a discussion of the subject matter.							
6815 000 000 84547 - 2 - PREPARATION FOR THE FINAL EXAMINATION				12	0/0/0/0	No	Giudizio
Ambito: 1008 - A scelta dello studente Obiettivi: At the end of the activity, the student is able to independently carry out research and stay updated, as well as autonomously organize and manage his/her work related to the final exam. Obiettivi inglese: At the end of the activity, the student is able to independently carry out research and stay updated, as well as autonomously organize and manage his/her work related to the final exam.							
6815 000 000 84548 - 2 - PREPARATION FOR THE FINAL EXAMINATION ABROAD				12	0/0/0/0	No	Giudizio
Ambito: Obiettivi: At the end of the activity abroad, the student is able to independently carry out research and stay updated, as well as autonomously organize and manage his/her work related to the final exam. Obiettivi inglese: At the end of the activity abroad, the student is able to independently carry out research and stay updated, as well as autonomously organize and manage his/her work related to the final exam.							

Legenda:

CFU: crediti formativi universitari

TAF: tipologia attività formativa (A-di base; B-caratterizzanti; C-affini o integrative; F-ulteriori attività formative; D-a scelta autonoma dello studente; S- stages e tirocini presso imprese, enti pubblici o privati, ordini professionali; E-per la prova finale)

SSD: settore scientifico disciplinare

F/E/L/N: indica le ore Frontali/Esercitazioni/Laboratori/Ore di esercitazione e/o laboratorio tenute da non docenti

Freq.: segnala l'esistenza di un obbligo di frequenza

Ver.: indica la modalità di verifica del profitto finale

TIP.: indica la tipologia delle forme didattiche. Queste possono essere CON: convenzionali, E-L: in e-learning, MIX: miste, C/E: convenzionali e/o e-learning. Il corso di studio può definire annualmente una delle modalità.