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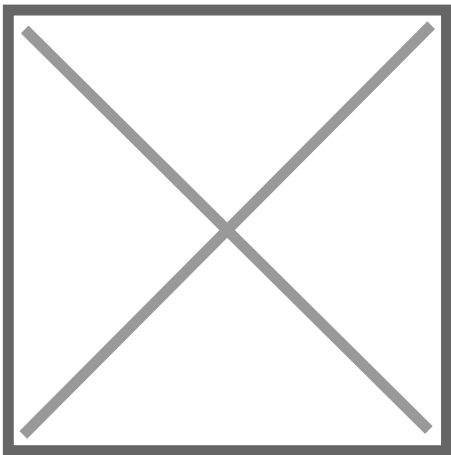
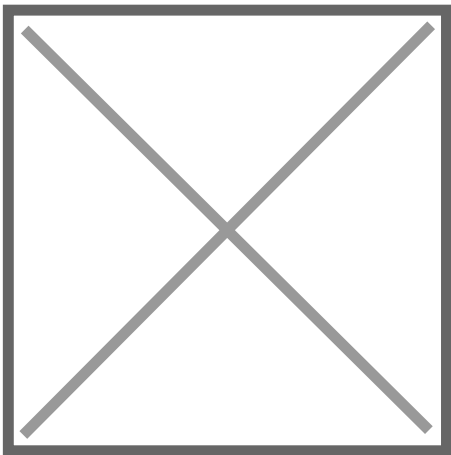
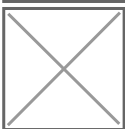
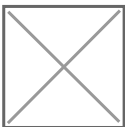
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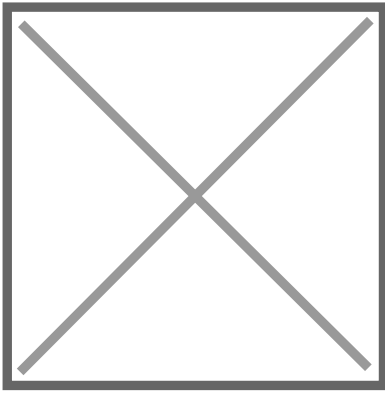
Envoyer

Une erreur est survenue. Merci de réessayer ultérieurement
Le mail de partage a bien été envoyé.

Add to Compare

M2 Predictive and Integrative Animal Biology





Master's degree

Specialisation Biologie-AgroSciences

Enrolment type

Full-time academic programmes Life-long learning

Language(s) of instruction

English

The PRIAM Master's program trains specialists in animal genetics and physiology, capable of using modeling, bioinformatics, and statistical tools to understand, enhance, and support the development of animal populations (livestock, wildlife, companion animals).

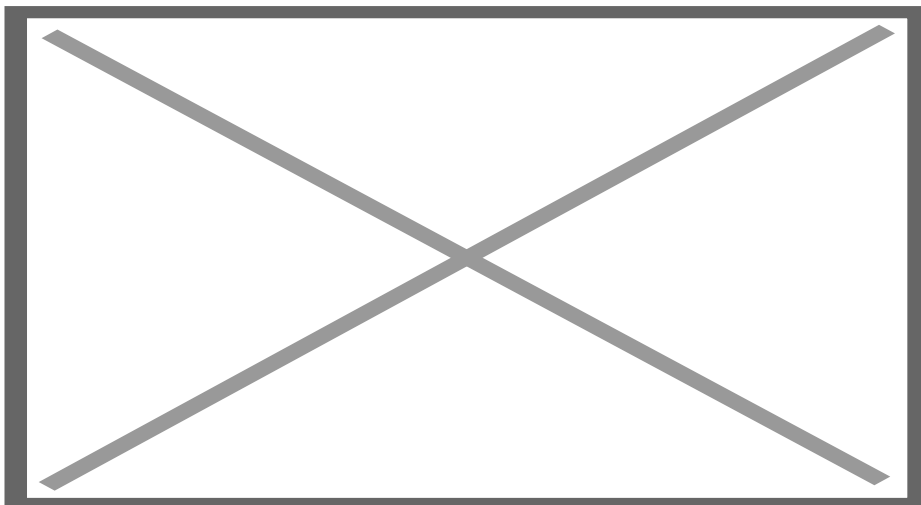
The PRIAM Master's program offers training in applied animal sciences through an integrative approach to biology, encompassing all its components (genetics, physiology, animal welfare, etc.). The program is built on a strong common foundation that equips students with the necessary tools, particularly in statistics and modeling.

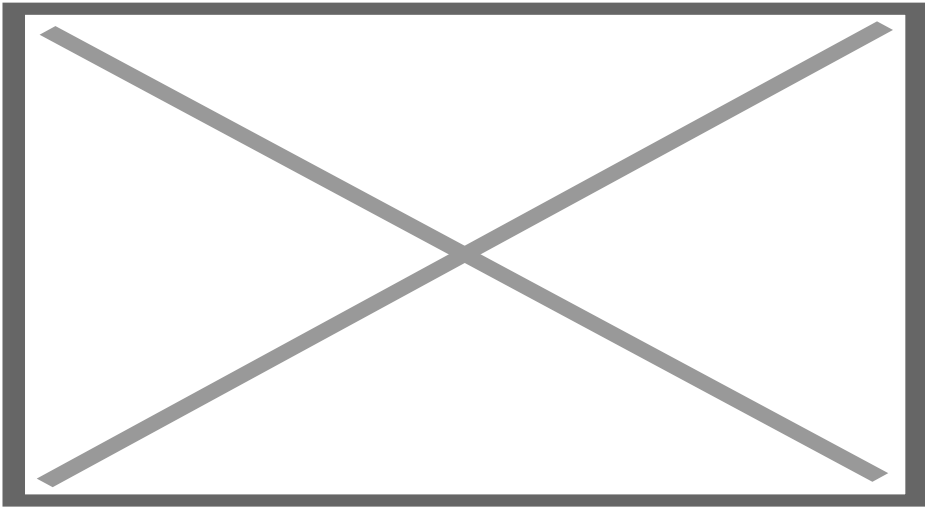
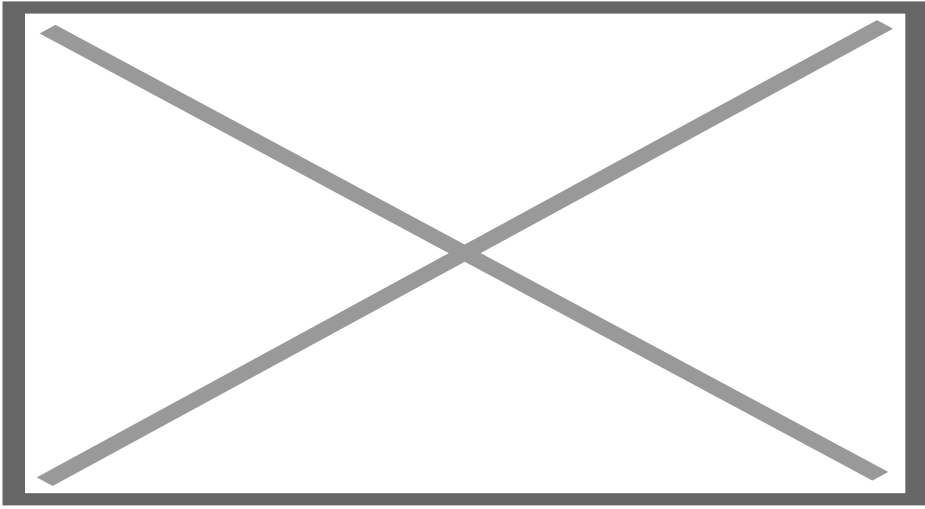
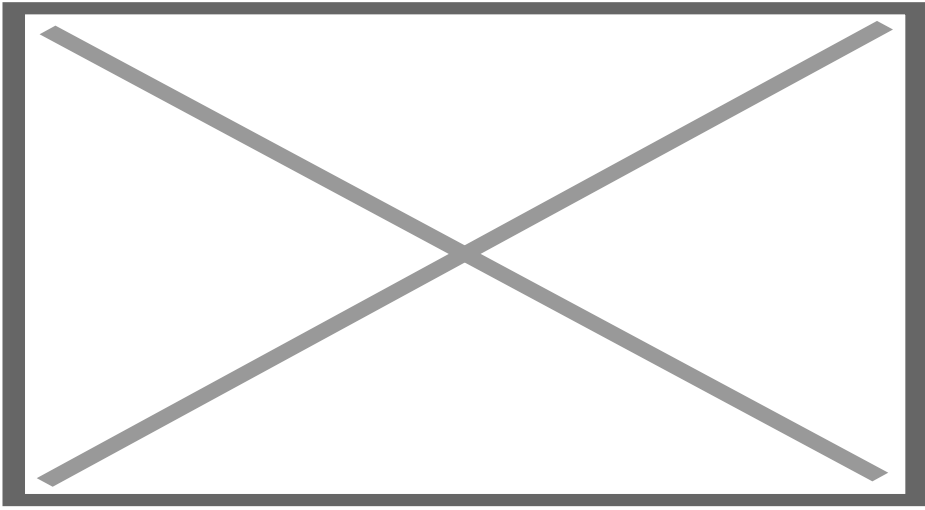
This training places special emphasis on genetics and its various branches (population, quantitative, molecular genetics, metagenomics, epigenetics). The second focus area concerns physiology, especially the nutritional and reproductive functions of livestock.

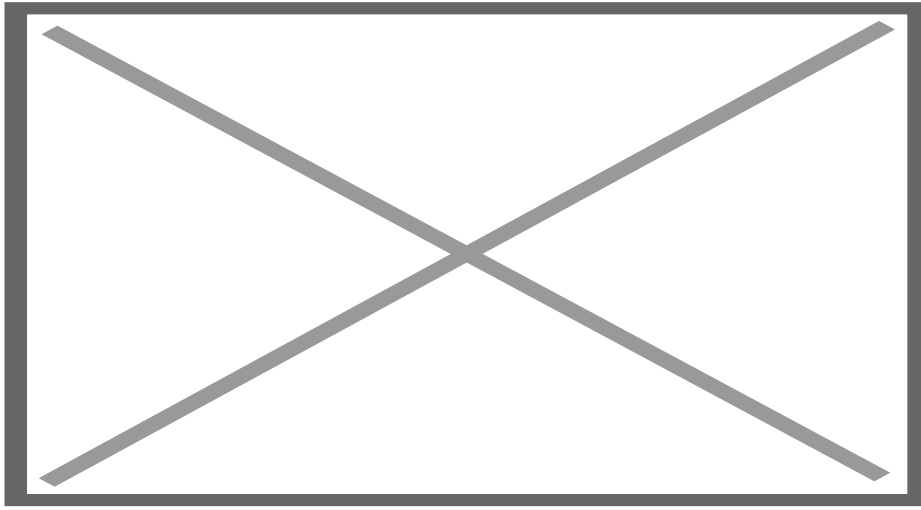
The PRIAM Master's program includes group projects as well as a six-month internship, and it maintains close connections with academic (INRAE) and socio-economic partners (companies and technical institutes).

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[Apply Now](#)







Information

- [Overview](#)
- [Application requirements](#)
- [Schedule](#)

Présentation

Skills

Block 1: Foundations for Animal Sciences and Transversal Tools

- Acquire an understanding of the fundamentals of genetics, physiology, and integrative animal biology.
- Use biostatistics, bioinformatics, and modeling tools to analyze and interpret complex data.
- Master concepts in population genetics, quantitative genetics, and genomics.
- Understand and apply emerging approaches related to holobionts, metagenomics, and epigenetics.
- Identify and integrate principles of animal experimentation, welfare, and ethics into research and breeding practices.

Block 2: Advanced Approaches in Animal Sciences

- Design and evaluate breeding, improvement, and conservation programs for animal populations.
- Model physiological and metabolic processes in nutrition and reproduction to better assess performance and anticipate animal responses to changing environments.
- Develop skills in precision livestock farming, adaptation, conservation genetics, rumen physiology, epidemiology, and omics data integration.
- Connect a mechanistic understanding of animal metabolism to innovation challenges in production, health, and sustainability.

Block 3: Practical Work Experiences and Soft Skills

- Conduct a scientific project autonomously, rigorously, and in an interdisciplinary manner.
- Apply animal sciences in the context of agroecological transitions and sustainable development goals.
- Develop skills in scientific communication, collaborative work, and intercultural competence.

- Build and refine a professional project related to academic research (PhD) or professional insertion.
- Highlight an internship experience and a research thesis related to current challenges in animal sciences.

Objectives

- Train specialists capable of using prediction and modeling tools in animal genetics and physiology, as well as cross-disciplinary tools (bioinformatics and biostatistics) to study and enhance animal populations.
- Develop advanced scientific expertise in quantitative genetics, genomics, epigenetics, metagenomics, reproduction, and animal physiology, among others.
- Design and evaluate programs for the selection, conservation, and adaptation of animals in various contexts (livestock, wildlife, domestic animals).
- Provide training in modeling and precision approaches (precision livestock farming, physiology, epidemiology, big data integration).
- Support agroecological transitions and promote the sustainability of systems.
- Promote understanding of ethical and responsible scientific practices, with respect for animal welfare and environmental challenges.
- Prepare students for research and the international professional world through the management of scientific projects, communication, intercultural experience, and the development of their career plans (PhD or qualified employment).

Débouchés

Career prospects

After a Master's + PhD: researcher or lecturer

Data scientist

Private-sector companies, including agricultural production

Research or Design Engineer

R&D Engineer

Further Study Opportunities

PhD

Fees and scholarships

The amounts may vary depending on the programme and your personal circumstances.

- [More information on tuition fees](#)
- [More information on scholarships](#)

Calendar

Start of programme (indicative date)

01/09/2026

End of programme (indicative date)

30/06/2027

Admission

Capacity

Available Places

16

Target Audience and Entry Requirements

- First year of an accredited Master's degree in biology or equivalent at Master's level (Bac +4) or accredited veterinary studies diploma.
- Entry profile: undergraduate studies in general biology, preferably including elements of academic training in animal biology.
- Keen interest in animal science and motivation to work in the discipline.

Période(s) de candidature

Inception Platform

From 15/02/2026 to 15/04/2026

Supporting documents

Compulsory supporting documents

Motivation letter.

All transcripts of the years / semesters validated since the high school diploma at the date of application.

Curriculum Vitae.

Detailed description and hourly volume of courses taken since the beginning of the university program.

Additional supporting documents

Referring contact information (compulsory for non-international applicants).

Letter of recommendation from a trainee.

Letter of recommendation from an internship supervisor

Certificate of English level (compulsory for non-English speakers).

English language level certificate B2 : IELTS score 5.5/6.5 ; TOEIC > 785 (C1>945) ; TOEFL IBT score 72/94 ; Cambridge FCE A or B grade ; or any equivalent official test.

VAP file (obligatory for all persons requesting a valuation of the assets to enter the diploma).

Recommendation letters.

Document indicating the list of local M2 choices available here : <https://urlz.fr/i3Lo>.

Supporting documents :

- Residence permit stating the country of residence of the first country
- Or receipt of request stating the country of first asylum
- Or document from the UNHCR granting refugee status
- Or receipt of refugee status request delivered in France
- Or residence permit stating the refugee status delivered in France
- Or document stating subsidiary protection in France or abroad
- Or document stating temporary protection in France or abroad.

Programme

Advanced approaches in Animal sciences

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	practical class	directed study/practical class	di
Advanced genetics and Omics data integration (elective courses C - option 2)	1	Semestre 1	20	7					



Advanced genetics and Omics data integration (elective courses C - option 2)

ECTS : 1
Semester: Semestre 1
Detail
Lecture: 20
Directed study: 7
Language(s) of instruction
Anglais
Remote teaching
non
Prerequisites

- Basic knowledge of statistics (linear models)
- Basic skills in R for data manipulation and analysis

Programme/contents

- From pedigree and genomic BLUP, through the Bayesian alphabet, to single-step GBLUP, ...
- (Multi-)omics data for functional insight
- Linking functional omics ? quantitative genetics

Learning objectives

- Understand the key concepts underlying state-of-the-art statistical methods for genomic prediction and (multi-)omics data analysis, and analyze their advantages and limitations
- Apply and critically evaluate genomic prediction models in practical use cases using R and RStudio on the Migale computing cluster
- Communicate scientific findings clearly and effectively

Overall organisation

Lectures

Practical work

Skills

- Conceptual understanding
- Data analysis and interpretation
- Critical thinking
- Application of Knowledge (R programming language)

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	directed study/practical class
Application of Modelling to animal Physiology	4	Semestre 1	27	9					

Application of Modelling to animal Physiology

ECTS : 4

Semester: Semestre 1

Detail

Lecture: 27

Directed study: 9

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

- Basic knowledge of statistics and mathematics.
- Solid understanding of animal physiology (M1 level).
- Completion of the previous UC "Tools : Biostatistics, Bioinformatics and Modelling".

Programme/contents

- Mechanistic modelling: principles, model structure, examples of physiological processes.
- Model evaluation concepts: purpose and interpretation of sensitivity analysis, parameter estimation, and identifiability.
- Applications and case studies: use of modelling in animal physiology; presentations by invited researchers.
- Group project: design, implement, and present a simple mechanistic model in small groups.

Learning objectives

- Analyze the contribution of modelling approaches to the understanding and control of animal physiological processes.
- Evaluate and discuss the relevance of different types of models to animal physiology.
- Recognize and interpret basic concepts of model evaluation, including sensitivity analysis, parameter estimation, and identifiability.
- Demonstrate the ability to design, implement, and communicate a simple mechanistic model of an animal physiological process in a collaborative setting.

Overall organisation

- Lectures: 21h

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	directed study/practical class
Adaptation (elective courses A - option 1)	1	Semestre 1	15	6					

Adaptation (elective courses A - option 1)

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 15

Directed study: 6

Project : 6

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- GXE interaction: selection of animals adapted to their environment.
- Epigenetics: placental cell development and plasticity.
- Holobionts: coevolution of the intestinal microbiome and its host.
- DOHAD (Developmental Origins of Health and Diseases).
- Evolution: from wild to domestic species.
- Amphibian metamorphosis.
- Visit of the Muséum National d'Histoire Naturelle — “Grande Galerie de l'Évolution.”

Learning objectives

- Understand the complexity of animal adaptation to various environments (mammals, birds, aquatic species).
- Identify the genetic, epigenetic, physiological, and environmental factors influencing adaptation.
- Analyze examples of adaptation through different biological levels and research approaches.
- Communicate scientific understanding through synthesis and poster presentation.

Overall organisation

- Lectures (24h): thematic sessions led by researchers from INRAE, MNHN, and partner institutions.
- Tutorials (6h): group discussions and synthesis of key concepts.
- Field visit: guided tour and applied observation at Muséum National d'Histoire Naturelle.
- Independent group work: preparation of a

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	directed study/practical class
Conservation Genetics (elective courses B - option 1)	1	Semestre 1	21	6					

Conservation Genetics (elective courses B - option 1)

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 21

Directed study: 6

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

- Basic concepts in quantitative and population genetics (M2-BLOC1)
- Basic knowledge in R computing (M2-BLOC1)

Programme/contents

- Concepts and history of conservation genetics
- In situ conservation
- Ex situ conservation
- Social and policy context

Learning objectives

- Understand the importance of genetic diversity
- Evaluate the effectiveness and limits of conservation programmes
- Propose tailored made conservation solutions

Overall organisation

- Lectures
- Guest presentations by researchers
- Practicals on computers

Skills

Conceptual understanding
Data analysis and interpretation
Critical thinking
Scientific communication

Type of assessment

Evaluation Continue non Intégrale

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di
Rumen physiology: in vitro studies for nutritional evaluation (elective courses B - option 2)	1	Semestre 1	21		6				c

Rumen physiology: in vitro studies for nutritional evaluation (elective courses B - option 2)

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 21

Practical study : 6

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

- Basic knowledge of animal physiology and microbiology.

Programme/contents

- Rumen physiology and microbiology.
- In vitro methods for feed evaluation and methane mitigation assessment.
- Practical sessions: preparation of devices, laboratory measurements and analyses, results interpretation.

Learning objectives

- Understand the rumen fermentation mechanism and its interaction with the microbiota.
- Evaluate the impact of nutritional strategies on fermentation and methane production.
- Develop practical skills in conducting in vitro experiments.
- Analyze and interpret experimental results.

Overall organisation

- Lectures
- Practical sessions (batch system in vitro)

Skills

Mastery of rumen fermentation concepts.
Ability to conduct and analyze in vitro experiments.
Critical interpretation of experimental data.
Clear scientific communication

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di
Epidemiology and Health (elective courses C - option 1)	1	Semestre 1	27						c

Epidemiology and Health (elective courses C - option 1)

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 27

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

Introduction to epidemiological approaches, including omics-based analyses.

Broadband methods to study host-pathogen interactions.

Coronavirus evolution and cross-species transmission.

Molecular typing of West Nile virus.

Development of molecular typing techniques for bacteria (MLVA) with applications to *Bartonella henselae* and *Anaplasma phagocytophilum*.

Salmonella epidemiology in herds and public health considerations.

New proteomic tools to identify proteins influencing the infectivity of *Trichinella* nematodes.

Learning objectives

- Understand fundamental concepts and approaches in animal epidemiology.
- Explore the use of “omics” methods (genomics, proteomics, metabolomics) to study host-pathogen interactions.
- Analyze and interpret epidemiological data to evaluate health risks.
- Develop skills in scientific reporting and data interpretation.

Overall organisation

- Lectures
- Location: ENVA, Maisons-Alfort

Skills

Understanding and application of epidemiological concepts

Critical analysis of host-pathogen interactions

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	directed study/practical class
<u>Animal breeding: genetics, selection and conservation</u>	3	Semestre 1	27	15					

Animal breeding: genetics, selection and conservation

ECTS : 3

Semester: Semestre 1

Detail

Lecture: 27

Directed study: 15

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

- Basic knowledge of concepts in quantitative and population genetics
- Foundations in statistics and data analysis

Programme/contents

- Response to artificial selection
- Breeding goals and selection indices
- Genetic and genomic evaluation
- Evaluation of genetic diversity
- Genome Wide Association Studies (GWAS) and post-GWAS analysis

Learning objectives

- Understand the effect of selection on the genome and on genetic diversity of population and vice-versa.
- Being able to design a breeding or conservation program. Being able to detect genomic regions involved in particular traits.

Overall organisation

- Lectures (50%)
- Practicals on computers (50%)

Skills

- Conceptual understanding of animal breeding
- Data analysis and interpretation
- Critical thinking

Type of assessment

Evaluation Continue non Intégrale

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	di
Livestock Precision Farming (elective courses A - option 2)	1	Semestre 1	10	10					c

Livestock Precision Farming (elective courses A - option 2)

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 10

Directed study: 10

Project : 6

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

Basic skills in R for data manipulation and analysis

Programme/contents

- Introduction to precision livestock farming and its applications.
- Sensor technologies and data collection in animal systems.
- Practical data analysis using accelerometer data from dairy cows and goats.
- Farm visit (dairy and goat).
- Ethical and societal issues in precision livestock farming

Learning objectives

- Understand the principles and challenges of precision livestock farming (PLF).
- Identify and use sensor-based technologies to monitor animal behaviour and health.
- Analyse and interpret real sensor data (e.g., behavioural data) to detect changes and anticipate issues.
- Reflect on ethical, societal, and sustainability aspects related to PLF

Skills

- Ability to process and analyse sensor data in animal production systems.
- Capacity to interpret behavioural indicators and link them to animal welfare and management.
- Awareness of ethical and societal implications of precision livestock farming

Type of assessment

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	directed study/practical class
Physiology and Genetics of Animal Reproduction	2	Semestre 1	8	6	4				

Physiology and Genetics of Animal Reproduction

ECTS : 2

Semester: Semestre 1

Detail

Lecture: 8

Practical study : 4

Directed study: 6

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- Introduction and in-depth study of reproductive physiology with a particular focus on spermatogenesis.
- Introduction to male fertility prediction (current approaches and future perspectives).
- Use of sperm epigenetic data to illustrate new prediction approaches (shell and R codes).
- Semen quality analysis in production centers and laboratories.

Learning objectives

- Understand the basics of reproductive physiology in ruminants.
- Understand why reproductive management is an angular stode of all animal breeding programs.
- Understand how animal reproduction is managed by breeding companies.
- Develop knowledge on semen quality evaluation.

Overall organisation

- Lectures (8h): thematic sessions led by researchers from INRAE and partner institutions or private companies.
- Pratical sessions (6h): sncRNA-seq analysis to identify fertility biomarkers.
- Field visit (1 day) : Semen production center.
- Lab work (4h): analysis of semen quality.

Special teaching arrangements

Field visit: Semen production center.

Lab work : aalysis of semen quality.

Internship

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	distance learning courses
Research thesis	30	Semestre 2							

Research thesis

ECTS : 30

Semester: Semestre 2

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

Completion of first semester of M2 PRIAM.

Programme/contents

- Practical immersion in a research laboratory, company, or institution working on animal-related topics.
- Definition and implementation of a research question.
- Data collection, analysis, and interpretation using appropriate methodologies.
- Writing of a detailed internship report and oral defense.

Learning objectives

- Conduct an independent research project related to animal science (livestock, wildlife, or domestic species).
- Apply theoretical knowledge and methodological skills acquired during the master's program (genetics, physiology, modeling, welfare, or ecology).
- Develop scientific rigor, autonomy, and problem-solving skills in an applied or academic context.
- Communicate research findings effectively in written and oral formats.

Overall organisation

- Full-time internship (6 months).
- Regular supervision by an academic tutor.
- Periodic progress meetings and feedback sessions.
- Independent work under supervision.

Skills

- Scientific autonomy and rigor.
- Data collection and analysis skills.
- Critical thinking and problem-solving.

Foundations for Animal sciences and Transversal tools

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	c
Concept of holobiont in animal breeding: Metagenomics	1	Semestre 1	6	3					

Concept of holobiont in animal breeding: Metagenomics

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 6

Directed study: 3

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- Introduction to microbiomes: definitions, fundamental concepts, and relevance for animal health, welfare and production.
- Experimental and analytical methods for microbiome studies (sampling, sequencing, pipelines for data analysis).
- Critical reading and discussion of scientific papers in microbiome research.
- Practical sessions on R Studio: processing sequencing data and comparing microbial communities (dataset of 25 samples).
- Applied perspectives: can we modulate the microbiome to improve animal phenotypes and health?

Learning objectives

- Understand the key concepts of metagenomics and their application to the study of animal-associated microbiomes.
- Analyze the interactions between animal hosts and their microbiomes in relation to health, productivity, and welfare.
- Use bioinformatics tools to process and interpret microbiome data (R programming language).
- Critically evaluate the challenges, limitations, and perspectives in gut microbiome research.

Overall organisation

- Lectures: 3 sessions (introduction, methods, perspectives).
- Tutorials: guided analysis and discussion of scientific articles.
- Practical sessions: R-based bioinformatic tools: hands-on training for microbiome data analysis.

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	class
Environmental regulation of genes expression in animal breeding and reproduction: Epigenetics	1	Semestre 1	12						

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	other
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Environmental regulation of genes expression in animal breeding and reproduction: Epigenetics

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 12

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

General principles of epigenetics and gene expression regulation.

Epigenetic mechanisms: DNA methylation, histone modifications, chromatin architecture, non-coding RNAs.

Nutritional influences on epigenetic regulation.

Learning objectives

Understand fundamental concepts in epigenetics and their role in gene expression regulation.

Explore epigenetic mechanisms during early development and their impact on animal breeding.

Analyze the influence of nutrition on epigenetic regulation.

Overall organisation

- Lectures

Skills

Understanding of epigenetic regulation and mechanisms

Application of epigenetic knowledge to animal breeding and reproduction

Type of assessment

Evaluation Continue non Intégrale

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	class
Concepts in Populations and Quantitative Genetics	3	Semestre 1	19.5						

Concepts in Populations and Quantitative Genetics

ECTS : 3

Semester: Semestre 1

Detail

Lecture: 19.5

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

-Basic skills in statistics and probabilities (random variable, distribution, mean, variance)

Programme/contents

- Introduction of population genetics (evolutionary forces & measures)
- Introduction to quantitative genetics (Construction of a phenotype, variance components and their estimations)
- Introduction to selection concepts (breeding value, intensity of selection, accuracy, response to selection)

Learning objectives

- Acquire the basic concepts of population and quantitative genetics and their applications to animal populations and livestock sector in particular.
- Understand the basics of genetic selection.

Overall organisation

- Lectures on concepts
- Practicals with computers

Skills

- Conceptual understanding of animal breeding
- Data analysis and interpretation
- Critical thinking

Type of assessment

Evaluation Continue non Intégrale

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	class
Tools : Biostatistics, Bioinformatics and Modelling	5	Semestre 1	36	22.5					

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	other
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Tools : Biostatistics, Bioinformatics and Modelling

ECTS : 5

Semester: Semestre 1

Detail

Lecture: 36

Directed study: 22.5

Language(s) of instruction

Anglais

Remote teaching

non

Prerequisites

Basic knowledge in mathematics, including understanding linear equations and writing simple summation or product formulas.

Programme/contents

Fundamental concepts in probability and statistical modelling (linear, GLM and mixed models)

Multivariate analysis and data exploration (PCA)

Mechanistic and empirical modelling, including meta-analysis

Foundations of bioinformatics and data processing pipelines

Learning objectives

Understand and apply fundamental statistical and bioinformatics methods to biological data, including meta-analysis.

Translate biological questions into appropriate mathematical or computational models.

Critically interpret and discuss analytical results, recognizing model assumptions and limitations.

Develop practical skills in R and Bash, including data analysis, visualization, and workflow management.

Communicate scientific results clearly and rigorously in written and oral form.

Overall organisation

- Lectures on concepts
- Practicals with computers

Skills

Ability to select and apply appropriate statistical and bioinformatics methods to biological data

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	class
Animal Epistemology, Experiments, Ethics and Welfare	3	Semestre 1	21	6					

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	other
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Animal Epistemology, Experiments, Ethics and Welfare

ECTS : 3

Semester: Semestre 1

Detail

Lecture: 21

Directed study: 6

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

Fundamentals of animal ethics and epistemology

Lab animal and experiments: Usage, regulation and alternative (organoids...)

Translational Genetics: Animal as a model

Animal Welfare

Learning objectives

Understand how animals are perceived, studied, and used in science, with a focus on genetics and the historical evolution of these approaches.

Evaluate the ethical, regulatory, and welfare issues related to animal experimentation, including alternatives to animal use.

Develop a critical perspective on animal biotechnologies and the role of animals as models in translational research.

Overall organisation

Lectures

Debates

Presentations

Special teaching arrangements

Practical welfare session at MoSAR Goat Farm

Skills

Observe and analyse real experimental situations involving animals

Practical work experiences and Soft skills

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	discovery learning
Intercultural module	0	Semestre 1	15						

Intercultural module

ECTS : 0

Semester: Semestre 1

Detail

Lecture: 15

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- culture & identity;
- the flexible thinking model;
- how to deal with culture shock ;
- Cultural dimensions, a useful tool to decode potential cultural gaps ;
- how to make the most of diversity in a team using Maznevski's 3 step approach (mapping, bridging and integrating)

Learning objectives

- to explore how culture impacts the way we perceive things, do things, and feel about things, how we interpret things, in other words how we interact with people
- to learn in what ways studying at APT in France might be different from studying in another school, or in another part of the world
- to learn and develop practical skills to improve communication and promote effective teamwork across cultures
- to provide a safe space in which any topic can be discussed in a respectful manner
- to explore different ways of doing things and use this semester as a laboratory to try out new ways and methods and see what works best for you, depending on context

Overall organisation

5 three-hour interactive sessions

Skills

Development of a reflexive and questioning attitude

Self-awareness

Type of assessment

Evaluation Continue Intégrale

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dis le c
Personal Professional Project	1	Semestre 1	9						

Personal Professional Project

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 9

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- Self-assessment and definition of career objectives.
- Analysis of job, internship, and doctoral offers: identification of key skills and expectations.
- Workshops on CVs, cover letters, and oral presentations.
- Networking strategies and job market exploration.
- Individual reflection on competencies to be strengthened.

Learning objectives

- Finalize one's Personal and Professional Project (PPP) considering past experiences and future career goals (employment or PhD).
- Develop clarity and conciseness in presenting one's professional project.
- Analyze and articulate competencies acquired during internships and experiences.
- Understand recruiters' expectations and adapt one's communication tools accordingly.

Overall organisation

- two mandatory sessions (2-3 hours)
- individual assessment with a human-resources consultant in a compulsory thirty-minute interview.

Skills

Career planning

Self-assessment

Communication and presentation skills

Analytical understanding of professional contexts

Adaptability and strategic professional development

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dis le c
Sustainable Development Goals	1	Semestre 1	3						

Sustainable Development Goals

ECTS : 1

Semester: Semestre 1

Detail

Lecture: 3

Project : 4.5

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- Lecture: "The role of animal diversity for an agroecological transition of livestock systems."
- Independent work: literature review and synthesis in the form of a scientific poster.

Learning objectives

- Understand livestock farming challenges.
- Explore the principles and concepts of sustainable development and agroecology.
- Identify potential solutions for facilitating the transition towards more agroecological approaches in livestock farming.

Overall organisation

- Lectures (3h): introduction to sustainable development and agroecology.
- Independent work: bibliographic research and preparation of a scientific poster.
- Tutorials (4,5h): supervised work on poster design and literature synthesis.

Skills

Teamwork skills

Written communication skills (poster)

Oral communication skills (poster session)

Scientific synthesis

Critical understanding of sustainability

Type of assessment

Evaluation Terminale

Subjects	ECTS	Semester	Lecture	directed study	practical class	Lecture/directed study	Lecture/practical class	directed study/practical class	dis c
Scientific Project	3	Semestre 1	6						

Scientific Project

ECTS : 3

Semester: Semestre 1

Detail

Lecture: 6

Project : 3

Language(s) of instruction

Anglais

Remote teaching

non

Programme/contents

- Group project (3–4 students) : literature review, data analysis and interpretation.
- Writing a scientific report in the format of an article.
- Oral presentations

Learning objectives

- Work on a real research project using real scientific data.
- Formulate and answer a defined scientific question.
- Develop teamwork, project management, and scientific communication skills.
- Apply interdisciplinary knowledge (statistics, genetics, physiology, ethics...).

Overall organisation

- Teamwork under supervision by researchers.
- Tutorials (3h) dedicated to project guidance
- Regular follow-up meetings with supervisors.
- Independent research and writing time.

Skills

Teamwork skills

Written communication skills (scientific paper)

Oral communication skills (presentation)

Scientific synthesis

Project planning

Data analysis

Scientific reasoning

Critical thinking

Type of assessment

Evaluation Continue non Intégrale

Teaching Location(s)

PALAISEAU

Contact

- **Pascal CROISEAU**

CR

- **Gwendal Restoux**

CR

- **Anaïs Cazals**

MCF

<http://www.universite-paris-saclay.fr/formation/master/biologie-agrosciences/m2-predictive-and-integrative-animal-biology>