



MSc EURAMA European Animal Management and Sustainability SYLLABUS Semester 2 in ISA LILLE – FR Spring 2018

GENERAL TARGET OF THE MSc EURAMA:

The MSc EURAMA aim at educating our students to mainly work as managers in companies in the animal sector with international dimensions.

Our graduates must have:

- Strong animal sciences AND business basis
- Positive ethic and intercultural behavior
- Capacity to anticipate evolutions

GENERAL TARGET OF THE SEMESTER:

For the second semester in ISA Lille, our main targets are:

- 1 - Deepening the WELFARE ISSUES of the animal sector
- 2 - Understanding the necessary INNOVATIONS for the livestock farming systems
- 3 - Integrating the GLOBAL AND LOCAL DIMENSIONS for the animal productions

PEDAGOGY OF THE SEMESTER:

We keep a balance between:

- the lectures
- some visits
- the personal and group works

The pedagogy has professional and international dimensions:

- Scientific topics are more often treated with their professional impacts
- Modules, particularly the “welfare” and “project” ones, will be treated with an international dimension

STRUCTURE OF THE SEMESTER:

The Semester is organized with the following three dimensions:

- WELFARE: Welfare as a major issues for livestock farmers in Europe and consumers, from farm to fork.
- HOUSING ISSUES: Housing important impacts on the quality and productivity of the production systems like on the image of the final product.
- SMART PRODUCTION SYSTEMS: Smart farming is a transversal and innovative approach for the different modules

The backbone of the semester is the TUTORED WORK which treats a professional demand in animal sector with an international dimension. This work must be done with a professional approach.

Semester 2 - ANIMAL WELFARE & SMART FARMING		
<i>Semester in ISA Lille – FRANCE (in English)</i>		
Module	Title	ECTS
Compulsory	LIVESTOCK PRODUCTION SYSTEMS	6
Compulsory	ANIMAL WELFARE, FROM CONSUMER TO FARM	3
Compulsory	LIVESTOCK HOUSING AND BUILDING CONSTRUCTION	3
Compulsory	INTRODUCTION TO SMART FARMING	3
Compulsory	AGRICULTURAL PROJECT	6
Optional	ETHICS AND MANAGEMENT	1.5
Optional	INFORMATION SYSTEMS APPLIED TO AGRICULTURAL SCIENCE	1.5
Optional	GEOPOLITICS OF FOOD	3
Optional	OTHERS (Crop Modeling, Consumer behavior, sensory evaluation, environmental risk assessment, digital communication etc.)	3
TOTAL Semester		30 ECTS

SYLLABUS Semester 2 – Spring 2018 - MSc EURAMA in ISA Lille (FR):

LIVESTOCK PRODUCTION SYSTEMS (6 ECTS)

**Lecturer researchers involved: Valérie JACQUERIE / Hélène LERUSTE /
Vanessa GUESDON / Joop LENSINK**

Language: English and French

Period: April - May

Level: MSc 1

Main objectives

- Extend your knowledge on breeding technics and livestock production systems in bovine, ovine, pig, poultry...
- Analyse technic and economic results of a dairy farm
- Address the future evolution of this sector
- Identify some professional

Knowledge acquired

- Breeding technics, livestock production systems, markets (dairy, meat bovine, pigs, ovine ...)
- Systemic approach of farms and of livestock farming sectors

Skills developed

- Analyze technic and economic results of farms
- Compare livestock production systems
- Anticipate future evolutions

Program

Lectures and visits :

- Bovine meat production
- Egg physiology, management and performances of laying hens
- Porks' market / Pig production, management and performance
- Ovine/caprine production

Group work

- Dairy farm diagnosis – ***in French*** : optional for non-french speakers

Evaluation

- Group written report on dairy farm diagnosis
- Oral individual exam on dairy farm diagnosis
- Other evaluations to precise for French and non-french speakers

ANIMAL WELFARE, FROM CONSUMER TO FARM (3 ECTS)

Lecturer researchers involved: *Hélène LERUSTE, Vanessa GUESDON*

Language: *English*

Period: *January – early February*

Level: *MSc 1*

Main objectives

- Define what is animal welfare and what influences the people's perception of animal welfare
- Discuss major factors influencing animal welfare with a specific focus on housing, nutrition and management practices (inducing pain)
- Determine how to evaluate animal welfare on a farm level, set-up and perform a simple audit and analyze the results
- Know how (European) legislation in animal welfare is constructed and what are the main aims of legislation
- Realize what is the market situation in terms of animal welfare-friendly products and the ways to increase the market
- Discuss future evolutions in terms of legislation, situation for farmers and global markets

Knowledge acquired

- Welfare definitions
- Factors influencing animal welfare
- Legislation and future evolutions

Skills developed

- Set-up (simple but valid) animal welfare scoring protocols
- Analyze results of a farm audit
- Capacity to anticipate future evolutions

Evaluations

- Group work (3 students): Farm auditing oral presentation + summary 2-4 pages: Report on your findings on farm (method, result, comparisons) 30% of the mark
- Oral Group presentation: Management of painful procedures – 15 minutes– 30% of the mark
- Individual written Exam – 1h30 – 40% of the mark

LIVESTOCK HOUSING AND BUILDING CONSTRUCTION (3 ECTS)

Lecturer researchers involved : Joop LENSINK (ISA) Anders HERLIN (Swedish university of Life Sciences)

Language: English

Period: March – May

Level: MSc 1

Main objectives

- Gain knowledge and analyze the different aspect related to livestock housing influencing the animals' performances
- Go through all steps of a project by the realization of dairy barn building project for a farmer
- Advise farmers on building aspects and project
- Realize a building quality audit

Knowledge acquired

- Knowledge on animal needs, human constraints, administrative and legislative aspects, environmental regulations related to livestock building
- Future evolution in this area specifically in terms of innovation

Skills developed

- Being able to conceive a cattle building project
- Advise farmers on building aspects and project
- Realize a building quality audit

Specific project

A major part of the knowledge on the topic of this module will be gained through the farm building project. The first visit will concern a dairy farmer that has a construction project; either a complete new building or an extension of an existing one. Students will have to identify the wishes of the farmer, the environmental, legislative and administrative constraints and realize finally building plans and budget plans for the project. The work will be evaluated through an "advisory" report and oral defense in front of the farm and an expert from the "farm building service" of the Chamber of Agriculture.

Evaluations

- Case study analysis with synthetic note to be written (20%)
- Report on the building construction project (60% of the mark)
- Oral presentation (45 min) by the groups of on their building project

AGRICULTURAL PROJECT (6 ECTS)

Lecturer researchers involved : Agricultural department ISA Lille

Language: English

Period: January – June

Level: MSc 1

Main objectives

Study a project in the farming sector, in answer to the request of a partner (farmer or professional working in connection with farms)

Knowledge acquired

- Knowledge on a specific agricultural topic

Skills developed

- Meet the expectations of the partner, with a solution in relation with the demand.
- Understand and analyze the problem.
- Define objectives.
- Manage a project (project schedule, anticipation of risks, evaluation of the resources, distribution of tasks, taken into account of the constraints)
- Develop relationships (in the group, with the partners, with the teacher)

Specific project and evaluation

One day a week, on the teachings of S1 (11 days dedicated to the study).

Projects presentation, choice of the groups and the affectation of the projects

Intermediate evaluation after 3-4 workweeks

Final oral evaluation in the presence of the partner

INTRODUCTION TO SMART FARMING (3 ECTS)

Lecturer researchers involved : B. Vandoorne

Language: English

Period: May – June

Level: MSc 1

Main objectives

Present different technologies and applications of technology in plant and animal production

Work on farm strategies in terms of equipment

Acquire skills in big data handling

Develop new information technology systems

Skills developed

(Big) data handling

Development of concepts for knowledge transfer to farmers

Contents

Introduction to Smart Farming: actual methods + perspectives in crop and animal productions

Mechanization in crop and animal production

From the sensors to the data analysis: case study

Analysis and use of the sensor(s), data management and transfer, field study, data analysis

Information system tools for agriculture

Evaluation

Group (oral) presentations and report

ETHICS AND MANAGEMENT (1,5 ECTS)

Lecturer researchers involved : S. Malésys

Language: English

Period: April

Level: MSc 1

Main objectives

The engineer as a manager concerned about ethical decisions. This module aims to work with students about their point of view on questions such as GMO, corporate social responsibility...

Skills developed

- To develop a personal approach of the ethical questioning
- To assimilate the basics of the engineer's ethics

Content

- Corporate social responsibility
- Reflection about diverse companies and management models, about welfare at work
- Case studies : ethical choices of diverse companies

Thematic tutorial classes taught alternately by teachers and professionals belonging to the business world ; conferences are added to it.

Evaluation

- Oral presentation

INFORMATION SYSTEMS APPLIED TO AGRICULTURAL SCIENCE (1,5 ECTS)

Lecturer researchers involved : S. Dupont-Wargiez

Language: English

Period: April

Level: MSc 1

Main objectives

The engineer is confronted to different information systems, computer programs applicated to his field of expertise. This module aims to familiarize students with programs such as GIS, BIM, ERP for their specialization area...

Skills developed

- Management of data
- Use of computer programs applied to their specialization area (agriculture, food technology, environment, business)

Evaluation

Oral presentation, exercises

GEOPOLITICS OF FOOD (3 ECTS)

Lecturer researchers involved : *ESPOL – school of politics – Catholic University Lille*

Language: *English*

Period: *May – June*

Level: *MSc 1*

Main objectives

Present different food systems and production in the world

Determine the impact of geopolitics, food policies on food availability and production

Learn about organizations involved in food policy and regulation (FAO, EU, WTO...)

Prospective analyses of future challenges regarding food availability and poverty in the world

Skills developed

Strategy analyzes of food policies and strategies

Development of strategic plans

Exercise of policy negotiation / debate

Evaluation

Report on food policy and strategy in the world