

**MINISTRY OF HIGHER EDUCATION AND
SCIENTIFIC RESEARCH**

**HARMONIZATION
MASTER TRAINING OFFER
ACADEMIC**

Establishment	Faculty / Institute	Department
Djilali University Bounaama Khemis Miliana	Faculty of Sciences of Nature and Life and Earth Sciences (FSNV-ST)	Science agronomic

Field: Natural and Life Sciences and Earth

Major: Agricultural Sciences

Speciality: Poultry farming

University year: 2022 / 2023

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**I – Identity card of the Master
(All fields must be filled in)**

1 - Location of training: Djilali Bounaama University Khemis Miliana

Faculty (or Institute): Nature and Life Sciences and Earth Sciences.

Department: Agricultural Sciences

2- Training Partners*:

- Other academic institutions:

- National Higher Agronomic School El Harrach-Algiers
- Saad Dahleb Blida 1 University
- Hassiba Benbouali Chlef University
- Ibn Khaldoun Tiaret University

- Companies and other socio-economic partners:

- Regional Poultry Office of the Center "Bir Oued Khelifa" (Ain Defla)
- Poultry complex Djelida-Ain Defla "khaouas Mourad"
- Poultry Complex El Abadia "Miliani Ahmed" (Ain Defla)
- National Cattle Feed Office (ONAB) of Sidi Lakhdar- Ain Defla
- Technical Institute of Livestock (ITELV) of Baba Ali (Algiers)
- Directorate of Agricultural Services (DSA Ain Defla)
- Forest Conservation (Ain Defla)
- SPA Sidi Belhadj "SIM" Arib - Ain Defla
- SPA EL MATMER Relizane

- International partners :

* = Present the conventions as an appendix to the training

3 – Context and objectives of the training

A – Conditions of access (*indicate the license specialties that can give access to the Master*)

Access to training leading to the Specialized Master's degree in Poultry farming is open to:

- Holders of Animal Production, Plant Production, Animal Production and Nutrition, Poultry, Plant Protection and other specialties in the “Agronomic Sciences” sector.
- Holders of Specialized Agronomist Engineer diplomas: Animal Production or an equivalent recognized diploma

B - Training objectives (*skills targeted, pedagogical knowledge acquired at the end - maximum of 20 lines*)

Poultry farming in the broad sense of the term is a practice that allows the supply of two main products, namely, meat and eggs for consumption. This is made possible mainly through the breeding of broilers and laying hens. In addition, other poultry species are used for this production purpose, such as quail, guinea fowl, goose, duck, ostrich, pigeon, pheasant, etc.

In another register, it is known that products of poultry origin are an excellent source of animal protein, in addition they are cheap, especially for broilers and laying hens, which has greatly contributed to the reduction of the protein deficit. in the Algerian food model.

However, the practice of poultry farming in Algeria remains dependent on a cascade of limiting factors. Firstly, the almost total dependence on imports of production inputs, including food, which consists mainly of corn and soybeans. Also, breeding equipment as well as batteries for egg production. The same is true for sanitary products. Added to this whole sphere are the particularities of the practice of these farms in Algeria. It is known that the breeding of poultry species is carried out in dilapidated buildings from the colonial period, they are of very modest size "maximum 2000 subjects installed" and whose investment in the control of the atmosphere is almost non-existent . Added to this is the lack of technicality of the breeders.

This global overview of the practice of poultry farming in Algeria leads to the appearance of periods of crisis on the market "price fluctuations" which can result from the abandonment of the activity of certain breeders thus generating additional tensions on a very fragile industry.

It is in this context that the training "Master in Poultry" sets as objectives to train students in a gradual and complementary way. It allows the initiation of candidates to new techniques of poultry farming, to produce food resources in the Algerian context, to evaluate the technical and economic performance of farms and from there, to train operational managers in the field.

C – Targeted business profiles and skills (*in terms of professional integration - maximum 20 lines*):

The proposed training enhances the knowledge already acquired in the Animal Production license course. It is also projected on a specialization allowing an initiation to the

scientific research of the students in the field of animal physiology as well as on the technical aspect of the practice of breeding.

This Master's degree specializing in Poultry includes within it learning units that affect most of the poultry sectors. Programs are offered on the anatomy and physiology of poultry species, livestock buildings and equipment, breeding techniques for different families of poultry such as phasianids and waterfowl as well as food resources.

Moreover, the training offer is in line with the socio-economic context of Algeria. The executives from this training will eventually contribute to a better mastery of the different segments of the poultry sector, making it less fragile and more efficient.

D- Regional and national employability potential of graduates

In Algeria, in view of the great demographic growth that the country is experiencing, the demand for products of animal origin, in particular meat and eggs for consumption, is experiencing an upward trend. In addition, these products have the particularity of being at an affordable price, which makes them accessible to a large segment of the population. On the other hand, given the specificities of the practice of poultry farming and the dependence on the international input market, this leads on the one hand to periods of imbalance in the sector and on the other hand to the recording of poor performance. technical and economic.

In this context, this specialized training in poultry farming is a godsend both regionally and nationally. The executives from this training will constitute active staff in the field in order to boost production and therefore counteract poor performance. Also, they will be able to popularize the activity and even train poultry farmers already operating in the field. Finally, they will participate in the promotion of the processing industry of products of poultry origin, which is a capital segment in the animal sectors. This will promote market regulation and allow stability in the supply of products.

E – Gateways to other specialties

Master in: Poultry farming, Animal production, Animal physiology.

F – Training monitoring indicators

1. Common indicators and performance targets

- Rate of passage from L3 to M1
- Success rate in license in three years
- Flow of incoming master's students: share of new incoming students - Evaluation of teaching (Quality of personal work)

2. Specific indicators




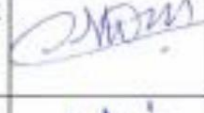


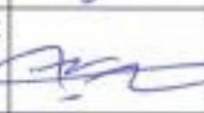

- Continuous training: number of trainees.
- Professional integration rate in master's degree
- Number of apprenticeship students
- National mobility of students integrating the master's degree
- Outgoing international mobility of students
- Proportion of the establishment's publications present in the National publications and International reference, on the total of the publications of the faculty.

G – Supervision capacity (give the number of students that it is possible to support)

The number of students that can be supported is 40.

4 – Moyens humains disponibles

A : Enseignants de l'établissement intervenant dans la spécialité :

Nom, prénom	Diplôme graduation + Spécialité	Diplôme Post graduation + Spécialité	Grade	Type d'intervention *	Emargement
KOUACHE Ben Moussa	Ingénieur d'état en Agronomie spécialité Production Animale	Magister en Agronomie spécialité Production Animale	MCB	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
MEKHATI Mohamed	Ingénieur d'état en Agronomie spécialité Production Animale	Magister en Agronomie spécialité Production Animale	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
HAMIDI Djamel	Ingénieur d'état en Agronomie spécialité Production végétale	Magister en Agronomie spécialité Production végétale	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
MOUSS Abdelhak Karim	Ingénieur d'état en Agronomie spécialité Production Animale	Magister en Agronomie spécialité Sciences Animales	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
KHELILI Ahmed	Docteur Vétérinaire	Magister en Comportement Alimentaire et Nutrition Animale	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
ALLOUCHE Nadjia	Ingénieur d'état en Agronomie spécialité Production Animale	Magister en Agronomie spécialité Sciences Animales	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
HAMMOUCHE Dalila	Ingénieur d'état en Agronomie spécialité Production Animale	Magister en Agronomie spécialité Sciences Animales	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	
AIZA Asma	Docteur vétérinaire	Magister en Epidémiologie Animale	MAA	Cours, TD, TP, Encadrement de stages, Encadrement de mémoires	

* = Cours, TD, TP, Encadrement de stage, Encadrement de mémoire, autre (à préciser)

B: External Management:

Attached institution :

Last name First Name	graduation diploma + Specialty	Post-graduation diploma + Specialty	Grade	Intervention type	sign-in
None					
None					
None					

Attached institution :

Last name First Name	graduation diploma + Specialty	Post-graduation diploma + Specialty	Grade	Intervention type	sign-in
None					
None					
None					

Attached institution :

Last name First Name	graduation diploma + Specialty	Post-graduation diploma + Specialty	Grade	Intervention type	sign-in
None					
None					
None					

* = Courses, TD, TP, Internship supervision, Memory supervision, other (to be specified)

5 – Specific material resources available

A- Pedagogical Laboratories and Equipment: Sheet of existing pedagogical equipment for the practical work of the planned training (1 sheet per laboratory)

Title of the laboratory: Biology and Animal Physiology

No.	Equipment title	Number	Comments
01	Microscope	20	
02	Analytical balance	06	
03	Dissection kit	12	
04	spectrophotometer	01	
05	Vertical electrophoresis tank	01	
06	thin layer chromatography	05	
07	overhead projector	02	
08	Slide device	01	
09	PH meter	06	
10	Electronic thermometer	08	
11	Hematocrit apparatus	01	
12	Centrifuge	02	
13	Water bath	03	
14	Magnifier	10	
15	oven	02	
16	refrigerator	01	
17	Balloon heater	04	
18	Heating plate	05	
19	Magnetic stirrer	04	
20	Biology model	20	
21	Prepared slide	A series	
22	malassess cell	10	

Title of the laboratory: Biochemistry

No.	Title of equipment	Number	Comments
01	hematocrit	05	
02		02	
03	microscope		
04	Heating plate	01	
05	Electronic balance	04	
06	pH meter	06	
07	Chromatography tank	02	
08	Electrophoresis	01	
09	Centrifuge	03	
09	Water bath	02	

Lab title: Chemistry

No.	Equipment title	Number	Observation
01	Laboratory Ph-meter	03	
02	Laboratory conductivity meter	02	
03	Portable pH meter	02	
04	Portable conductivity meter	02	
05	Oven	01	
06	Flame Photometer	01	
07	Balloon heater	02	
08	Heating plate	02	
09	Portable Scale	02	
10	Analytical Balance	01	
11	Electronic thermometer	04	
12	Vacuum pump	02	
13	Visible UV spectrophotometer	01	
14	Gas chromatography	01	
15	Portable Oximeter	01	
16	Water bath	01	
17	Case for water analysis	01	

Lab title: Physics

No.	Title of equipment	Number	Observation
	Uncertainties	05	
02	Newton's second law	02	
03	Straight motion	02	
04	The stiffness of a spring	05	
05	Free fall	01	
06	Electricity uncertainty	04	
07	Electric fields and potential	04	
08	Oscilloscope	04	
09	Ohm's Law	04	
10	Charging and discharging a capacitor 11	04	
	RLC circuits	04	

Title of the laboratory: Microbiology

No.	Equipment title	Number	Observation
01	Manual autoclave	02	
02	Automatic autoclave	01	
03	Incubator oven	02	
04	Anse Pastor	03	
05	Microscope	12	
06	Magnifier	10	
07	Bunsen burner	20	
08	Oven sterilizer	01	
09	Colony Counter	01	
10	Refrigerator	01	
11	Analytical balance	01	
12	Water bath	01	

Title of the laboratory: Plant biology

No.	Equipment title	Number	Observation
01	Autoclave	02	

02	Water bath	01	
03	Incubator oven	02	
04	Chromatography tank	03	
05	Microscope	12	
06	Magnifier	10	
07	Microtome	20	
08	Oven	01	
09	Potometer	01	
10	Distiller	01	
11	Analytical balance	01	
12	Water bath	01	

Title of the laboratory: Geology, Cartography

No.	Equipment title	Number	Comments
01	Manual Curvimeter	05	
02	Digital curvimeter	02	
03	Planimeter	01	
04	Compass	04	
05	Geological maps	08	
06	Topographic maps	07	
07	Double tape measure	01	
08	Caliper	03	
09	Electrical probe	02	
10	Digitization table	01	

B- Internship sites and in-company training:

Training place	Number of students	Duration of internship
Technical Institute of Livestock (ITELV) of Baba Ali (Algiers)	05	03 months
Department of Agricultural Services (DSA Ain Defla).	05	03 months
Forest Conservation (Ain Defla)	05	03 months
National Livestock Feed Office (ONAB) of Sidi Lakhdar-Ain Defla Poultry Complex	05	03 months
Djelida-Ain Defla "khaouas Mourad"	05	03 months
Regional Poultry Office of the Center "Bir Oueld Khlifa" (Ain Defla)	05	03 months
SPA Sidi Belhadj "SIM" Arib - Ain Defla Poultry	05	03 months
Complex El Abadia "Miliani Ahmed" (Ain Defla)	05	03 months
SPA EL MATMER Relizane	05	03 months

D- Master's support research project(s):

Title of the research project	Project code	Project start date	Project end date

E- Spaces for personal work and ICT:

Department, faculty and university libraries (reading rooms, computing centers and internet rooms).

II – Half-yearly lesson organization sheet

(Please submit the sheets for the 4 semesters)

1-Semester 1:

Teaching unit	VHS	weekly VH				Coeff	Credits	Assessment method	
	14-16 weeks	vs	TD	TP Work per	Continued			Review	
Fundamental UEF1 (O/P)									
Topic 1 : Food and rationing.	67:30	3:00	1h30	-	82:30	3	6	40 %	60%
UEF2 (O/P)									
Subject 1 : Physiology of reproduction	67:30	1h30	1h30	1h30 82h30		3	6	40 %	60%
Subject 2 : Anatomy and physiology of birds	67:30	1h30	-	3h	82:30	3	6	40 %	60%
EU methodology									
EMU1 (O/P)									
Subject 1: Livestock buildings	60:00	1h30	1h30 1h00	65h00		3	5	40 %	60%
EMU2 (O/P)									
Subject 1: Phasianidae breeding management	45:00	1h30	-	1h30 55h00		2	4	40 %	60%
EU discovery									
UED1 (O/P)									
Subject 1: Internship in poultry farming.	45:00	1h30	-	1h30 05h00		2	2	40 %	60%
transversal teaching units									
UET1 (O/P)									
Subject 1: Communication	10:30 p.m.	1h30	-	-	2h30	1	1	-	100%
Total Semester 1	375 hours	12:00 p.m.	4:30 a.m.	8:30 a.m.	375h	17	30		

2- Semester 2:

Teaching unit	VHS	weekly VH				Coeff	Credits	Assessment method	
	14-16 week	vs	TD	TP Work per	Continued			Review	
fundamental teaching units									
UEF1 (O/P)									
Subject 1 : Food Production	67:30	3:00		1h30 82h30	3	6	40 %	60%	
Subject 2 : Reproductive Biotechnology	67:30	3:00	-	1h30 82h30	3	6	40% 60%		
UEF2 (O/P)									
Subject 1 : Selection and genetic improvement	67:30	1h30	1h30 1h30	82:30	3	6	40 %	60%	
EU methodology									
EMU1 (O/P)									
Subject 1: Hygiene and prophylaxis	60:00	1h30	1h30 1h00	65:00	3	5	40 %	60%	
EMU2 (O/P)									
Subject 1 : Management of waterfowl breeding	45:00	1h30	-	1h30 55h00	2	4	40 %	60%	
EU discovery									
UED1 (O/P)									
Subject 1 : Writing a scientific document	45:00	1h30	1h30	- 5:00 a.m.	2	2	40 %	60%	
transversal teaching units									
UET1 (O/P)									
Topic 1 : Legislation	10:30 p.m.	1h30	-	- 2h30	1	1	-	100%	
Total Semester 2	375 hours	1:30 p.m.	4h30 7h00	375 hours	17	30			

3-Semester 3:

Teaching unit	VHS	weekly VH				Coeff	Credits	Assessment method	
	14-16 weeks	vs	TD	TP Work per	Continuous			Review	
fundamental teaching units									
UEF1 (O/P)									
Subject 1 : Analysis of the poultry sector	67:30	3:00	1h30	-	82:30	3	6	40%	60%
UEF2 (O/P)									
Material 1 : Processing of poultry products.	67:30	1h30	-	3h00	82h30	3	6	40%	60%
Material 2 : Valorization of EU poultry by-products UEM1	67:30	1h30	1h30	1h30	82h30	3	6	40%	60%
methodology (O/P)									
Material 1 : UEM2 production control (O/P)	60:00	1h30	-	2h30	65h00	3	5	40%	60%
Material 2 : Inputs in poultry farming	45:00	1h30	1h30	-	55:00	2	4	40%	60%
EU discovery									
UED1 (O/P)									
Subject 1 : English	45:00	1h30	1h30	-	5:00 a.m.	2	2	40%	60%
transversal teaching units									
UET1 (O/P)									
Subject 1 : Entrepreneurship	10:30 p.m.	1h30	-	-	2h30	1	1	-	100%
Total Semester 3	375 hours	12:00 p.m.	6:00 a.m.	7:00 a.m.	375h	17	30		

4- Semester 4:

Field: Natural and Life Sciences and Earth Sciences

Sector : Agricultural Sciences

Speciality: Poultry farming

Internship in a company sanctioned by a dissertation and a defence.

	VHS	coefficient	Credits
Personal work			
Company internship	500	12	20
Seminars			
other (explain, list,)	250	05	10
Total Semester 4	750	17	30

5- Global summary of the training: (indicate the separate global VH in progress, TD, for the 04 teaching semesters, for the different types of teaching units)

VH \ EU	UEF	EMU	UED	UET	Total
Course	292h30	157h30	11:30 p.m.	67:30	630h
TD	112h30	127h30	10:30 p.m.	-	262h30
TP	135h00	75h00	10:30 p.m.	-	232h30
Personal work	742h30	360h	3 p.m.	7:30 a.m.	1125h
Other (memory)	500	250	-	-	750h
Total	1782h30	970h	172:30	75h	3000h
Credits	74	36	06	04	120
% in credits for each teaching unit	61.67	30	5	3.33	100

III - Detailed program by subject (1 detailed sheet per subject)

Title of the Master: Poultry Semester: 1

Title of teaching unit: UEF1

Title of subject 1: Feeding and rationing.

Credits: 6

Coefficients: 3

Teaching objectives:

Teach the student the basics of determining nutritional needs and establishing food rations.

The most important part will be devoted to the study of the needs of birds, their feeding behavior, recommendations in terms of feeding behavior, problems associated with the feed transition as well as the effects of deficiencies and excesses.

Content of the subject

Chapter I : Basics of Poultry Feeding

Chapter II : Reminder on digestive physiology and food absorption

Chapter III : Food rationing

-How to establish a food ration

-Expression of the nutritional needs of poultry

-Dietary value of main foods

Chapter IV : Feeding behavior of poultry

Chapter V : Nutritional recommendations for poultry feed

Poultry production unit visits (food, breeding, slaughterhouse)

Personal work: Presentations, output report.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

- Feeding monogastric animals: pigs, rabbits, poultry: 2nd edition INRAA 1995.
- General principles of animal nutrition. Professor D. SAUVANT 2004-2005.
- Raising chickens Jean-claude péricket Edition rusticat 2005.
- Poultry nutrition and feed, INRAA 2004 edition.

Title of the Master: Poultry farming
Semester: 1
Unit title: UEF2
Subject 1: Reproductive Physiology Credits: 6
Coefficients: 3

Teaching objectives:

To introduce students to the physiology of reproduction in avian species as well as the peculiarities which may show?

Content of the subject

Introduction

Chapter I: Anatomy and physiology of the male and female reproductive systems

Chapter II: Neurohormonal regulation of egg laying

Chapter III: Driving system and reproductive rhythms

Chapter IV: Factors controlling reproduction

Personal work: Presentations, practical work reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

-Poultry reproduction and egg production, Edition INRAA1988.

- Raising chickens Jean-claude péricket Edition rusticat 2005.

Title of the Master: Poultry farming

Semester: I

Unit title: UEF 2

Title of subject 2: Anatomy and physiology of birds Credits: 6

Coefficients: 3

Teaching objectives: This teaching unit highlights the anatomy of the different families of poultry (phasianids and palmipeds). It will also be a question of developing knowledge in terms of the physiology of the various internal systems in poultry.

Content of the subject Introduction

Chapter I: Taxonomy, origin, evolution and domestication

- Taxonomy
- Origin, evolution and domestication
- Origin and diffusion
- Appearance of breeding and domestication
- Breeds and lines of poultry

Chapter II: Anatomy

- General morphology, skeleton, dentition, musculature
- Digestive anatomy
- Anatomy of internal devices

Chapter III : Physiology II.1

General physiology - Respiration

- Thermoregulation -Immunity
- Sensory organs and sensory perceptions -Urinary excretion
- Circulatory physiology and blood parameters II.2 Digestive physiology

Personal work: Presentations, Lab reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

- Raising chickens Jean-claude péricket Edition rusticat 2005.

Title of the Master: Poultry farming

Semester : 1

Title of the EU: UEM1

Title of subject 1: Livestock

buildings Credits: 5

Coefficients: 3

Teaching objectives

Acquisition of basic knowledge concerning the materials, the constituent elements of a building. Also knowledge of equipment as well as construction standards in poultry farm buildings.

Content of the subject

Introduction

Chapter I : Installation of livestock buildings

Chapter II : Equipment in poultry buildings

Feeding and watering equipment

Environment control equipment (heating, ventilation, humidifiers, extractors).

Breeding equipment

Chapter III : Types of poultry buildings

Chapter IV : Poultry buildings and welfare

Standards for poultry facilities in hot regions

Renovation of a building

Improve access, circulation, insulation and sealing

Improve the flow of water and the sanitary barrier

Renovate security installations

Chapter V : Crawl space in poultry farming

Visits to poultry buildings

Personal work: Presentations, output report.

Assessment method : Continuous assessment + examination

References (*Books and handouts, websites, etc.*). - Poultry

Husbandry, Feeding And General Care Forgotten Books

2018 Edition.

- Raising chickens Jean-claude péricket Edition rusticat 2005.

Title of the Master: Poultry farming

Semester : 1

Title of the EU: UEM2

Title of subject 1: Phasianid farming management

Credits: 4

Coefficients: 2

Teaching objectives

Knowledge of the basic breeding conditions and techniques to conduct efficient breeding of phasianids. It will also be a question of studying the multifactorial constraints that oppose the achievement of the desired performances and the qualities sought.

Content of the subject

Introduction

Chapter I : Phasianid species

Chapter II : Habitat and Range Requirements

Chapter III : Selection - Reproduction - Insemination

Chapter IV : Breeding and Feeding

Chapter V : Slaughter of Phasianids

Phasianid farm visits

Personal work: Presentations, practical work report, output report.

Assessment method : Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

- Breeds of hens and roosters of France. Publisher: La France Agricole 2018.
- Breeding of the guinea fowl Juliette le Coz-douin 1992.
- Let's do profitable breeding guide Edition De Vecchi 2007

Title of the Master: Poultry Semester: 1 Title of teaching

Unit: UED 1

Title of subject1: Internship in poultry farming.

Credits: 2

Coefficients: 2

Teaching objectives

To put the student in contact with the various farms and companies operating in the field of poultry production. Develop field experience through breeding audits, zootechnical trials, trade fairs and allow direct learning of jobs in the poultry industry. Students do internships organized in several day trips in poultry farms throughout the semester.

Content of the subject

The course is supervised by teachers of the sector. The student receives an internship program that will enable the objectives assigned to it to be achieved.

Personal work: Internship report.

Assessment method : Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Title of the Master: Poultry farming

Semester: 1 Unit

title: UET1

Title of subject 1: Communication

Credits: 01

Coefficients: 01

Teaching objectives

Analyze the objectives of internal and external communication and present the methodologies needed to conduct the main communication actions

Prior knowledge recommended

Linguistic basics

Content of the subject

1. Strengthening language skills
2. Methods of Communication
3. Internal and external communication
4. Meeting techniques
5. Oral and written communication

Personal work: Presentations

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Title of the Master: Poultry farming
Semester : 2
Unit title: UEF1
Subject Title 1: Food Production
Credits: 6
Coefficients: 3

Teaching objectives

This material is provided to help people understand the complexity of poultry species and the specific rules of conduct that are required for each type of production and in diverse geographical contexts. The teaching simulates the production of poultry, from the purchase of raw materials, through formulation, technological treatments, mixing, physical presentation, feed manufacturing and finally, packaging and storage.

Content of the subject

Chapter I : Basic raw materials used in poultry feed
Chapter II : Feed Manufacturing Process and Feed Formulas
Chapter III : Packaging and storage of food Chapter IV : Feed Transitions and Poultry Behavior
Chapter V : Sequential feeding in poultry
Chapter VI : Contamination of raw materials and food

Visits to poultry and livestock feed units.

Personal work : Exercises, presentations.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Feeding monogastric animals: pigs, rabbits, poultry: 2nd edition INRAA 1995.
-General principles of animal nutrition. Professor D. SAUVANT 2004-2005.
Raising chickens Jean-claude péricket Edition rusticat 2005.
- Poultry nutrition and feed, INRAA 2004 edition.

Title of the Master: Poultry farming

Semester : 2

Unit title: UEF2

Title of subject 1: Biotechnology of reproduction

Credits: 6

Coefficients: 3

Teaching objectives

To teach the student the basic knowledge used in the field of reproductive biotechnology

Content of the subject

Introduction

Chapter I: Basics of biotechnology in the field of reproduction.

Chapter II : Freezing the semen

Chapter III : Embryo collection and transfer

Chapter IV ; Sperm sexing

Chapter V : In vitro embryo production

Personal work : Exercises, practical work reports, presentations.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Biotechnology 5th Edition Tec and Doc 1999.

Hens visible genetic diversity Edition INRA 2000.

Title of the Master: Poultry farming

Semester: 2

Unit title: UEF2

Title of subject 2: Breeding and genetic improvement

Credits: 6

Coefficients: 3

Teaching objectives

This teaching focuses on learning the selection methods adopted for the creation of extremely varied strains on criteria of use of nutrients and digestive efficiency, speed of growth and yield of slaughter and cutting, quality products, resistance and defense against diseases. At the same time, it reviews the basic principles of optimizing genetic parameters related to reproduction in order to improve laying intensity and hatch results and chick quality.

Content of the subject

Introduction

Chapter I: Poultry Genetic Resources

Chapter II: Main genes to know in avian species

Chapter III: Management and promotion of local genetic resources

Chapter IV: Genetic improvement of avian species

Visits to entities practicing genetic improvement

Personal work : Exercises, presentations.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Hens visible genetic diversity Edition INRA 2000.

-Genetic improvement of breeding animals, scientific bases, selection and crossbreeding. Educagri edition, 2005.

Elements of quantitative genetics, INRA. 2002 - Summary of population genetics: course, exercises and solved problems. Ed. Dunod, Paris 2003 - Introduction to quantitative genetics. Falconer 1980.

Title of the Master: Poultry farming
Semester: 2
Title of the EU: UEM1
Title of subject 1: Hygiene and prophylaxis
Credits: 5
Coefficients: 3

Teaching objectives:

The main objective of this course is to enable future executives to understand the reactions of the animal body to various environmental attacks and to learn about the main diseases that affect animals as well as their prophylaxis.

Content:

Introduction

Chapter I : General hygiene and prophylaxis

Chapter II : Notions on the hygiene of the livestock environment (Building and equipment)

Chapter III : Application of the crawl space

Chapter IV : Disease Transmission Factors

Chapter V : Notion of eco-pathological surveys

Visit to poultry farms.

Personal work : Exercises, presentations.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

- The hen, poultry farming and development: Basic science and technology. Harmattan 2009 edition.
- Technical and economic guide to broiler breeding. Edition l'Harmattan 2010. - Breeding, Feeding And General Care Of Poultry Edition Forgotten Books 2018.
- Diseases of game birds Edition France agricole Xaviet chatanet 2014.
- Poultry Diseases Edition La France Agricole 2018.

Title of the Master: Poultry farming

Semester : 2

Title of the EU: UEM2

Title of subject 1: Management of waterfowl breeding

Credits: 4

Coefficients: 2

Teaching objectives

The teaching of this subject aims to make future executives aware of the need to develop this sector in areas with palmiped potential in order to diversify poultry products. The module provides the techniques and scientific rules for the optimal conduct of waterfowl farming for the purposes of producing animals for roasting and foie gras.

Content of the subject

Introduction

Chapter I : Species of waterfowl Ducks Geese

Chapter II : Habitat and Range Requirements

Chapter III : Selection - Reproduction - Insemination

Chapter IV : Breeding and Feeding

Rules of conduct for the start-up phases – pre-feeding

Restraint and force-feeding measures and techniques

Pre-gavage and gavage performance

Chapter V : Slaughter of waterfowl Cutting and processing Foie gras

Product quality Well-being of waterfowl

Visits to waterfowl breeding

Personal work : Exercises, presentations, practical work reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Breeds of hens and roosters of France. Publisher: La France Agricole 2018.

Geese and ducks Edition Rusticat 2014 - Production of ducks Publisher: QUAE 2012

Title of the Master: Poultry farming

Semester : 2

Unit title: UED1

Subject 2: Writing a scientific document

Credits: 2

Coefficients: 2

Teaching objectives: The objectives

of this teaching aim to introduce students to traditional and electronic documentary research for the design of reports, articles and scientific summaries. Teach the student how to interpret a result, how to present it in a synthetic and captivating way.

Content of the subject Introduction

Chapter I: Bibliographic Investigations

Scientific components of the field 2. Identification and selection tools 3. Reading a scientific document

Chapter II: Written expression and production of documents

1. Development of a plan and rules for dividing up a text 2. Writing 3. References and bibliography 4. Summary

Chapter III: Presentation of a scientific work 1. Design of a poster 2. Oral presentation

2.1. Preparing a slideshow 2.2. Introduction to oral presentation

Personal work : Exercises, presentations.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Use of end-of-study projects assigned to each student in order to advance their work.

Title of the Master: Poultry farming

Semester : 2

Title of the teaching unit: UET

Title of subject 1: Legislation

Credits: 01

Coefficients: 01

Teaching objectives

Introduce the learner to regulatory concepts, definitions and origins of legal texts and knowledge of criminal consequences. Ability to read and understand a text of law in relation to the protection of the environment. Ability to apply regulations

Content of the subject

- General notions of law (introduction to law, criminal law).
- Evolution of the Algerian legislation relating to the environment - Institutions in charge of applying the regulations (law on the protection of the environment, conservation).
- Assessment of the right to the environment
- Environmental pollution case studies

Personal work: Presentations

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

- Environmental protection and regulations in Algeria, Department of Environmental Engineering ENP, Environmental Sciences and Techniques Laboratory. Demri D., (2013).
- The environmental protection policy in Algeria, achievement and failures, Revue les Oasis, Ouargla University, 16pages. Ramdan A. (2011).
- Environmental law in Algeria, what contribution for the urban environment, Magister thesis, Polytechnic School of Architecture, Algiers, 164 pages Talmatkadi F, (2014).
- JO, (2003). Law n° 03-10 of 19 Jomada El Oula 1424 corresponding to July 19, 2003 relating to the protection of the environment within the framework of sustainable development.

Title of the Master: Poultry Semester3

Title of teaching unit: UEF1

Title of subject 1: Analysis of the poultry sector.

Credits: 6

Coefficients: 3

Teaching objectives

Teach the student to analyze an animal sector upstream and downstream. It will be a question of highlighting the different segments that constitute the sectors of different poultry species.

Content of the subject

Chapter I : Concepts and definitions of the sector concept

Chapter II : Francophone and Anglo-Saxon approaches to the poultry sector

Chapter III : Animals in poultry supply chains **Chapter IV:** Feeding in poultry value chains

Chapter 1V : Buildings in the poultry sector

Personal work: Presentations, practical work reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

"Diagrams and mode of operation of the extension system in the poultry and dairy cattle sectors in Algeria" *Mediterranean options notebooks*, vol. 2, no.1. 2010

"The long times of development: patient transformations of breeding systems in the Maghreb".
karthala-inapgedition – chapter 10 – bourbouze pages 95-107.

Poultry farming in Algeria. Collection of agronomic files 2015.

Title of the Master: Poultry Semester3

Title of teaching unit: UEF2

Title of subject 1: Processing Of poultry products.

Credits: 6

Coefficients: 3

Teaching objectives

This teaching unit aims to teach students the techniques and processes for manufacturing and packaging the main products from the breeding of avian species. It will be a question of understanding the preparation, among other things, of egg products, prepared meats, cuts and cashir.

Content of the subject

Introduction

Chapter I : Notions and concepts of agro-food technologies

Chapter II : Poultry meat cutting techniques

Chapter III : Meat Processing and Preservation **Chapter IV :** Transformations and Conservation of Eggs **Chapter V :** Egg product manufacturing process **Chapter VI :** Poultry meat manufacturing process Poultry product processing unit visits

Personal work : Exercises, presentations, practical work reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Production of table eggs in hot climate ITAVI 2003.

Poultry farming in Algeria. Collection of agronomic files 2015.

Title of the Master: Poultry farming

Semester : 3

Unit title: UEF2

Title of subject 2: Valorization of poultry by-products

Credits: 6

Coefficients: 3

Teaching objectives

This teaching unit is in continuation with that of the transformation of poultry products. It will be a question of highlighting the valorization of poultry by-products like feathers, blood, legs, the shell and shell membranes as well as digestive contents.

Content of the subject

Introduction

Chapter I : Notions and concepts of the valuation of by-products

Chapter II : Identification of by-products in poultry farming

Chapter III : Valorization of feathers and legs

Chapter IV : Valorization of egg products

Chapter V : Valorization of blood and digestive contents

Chapter VI : use of poultry by-products in agriculture and breeding.

Visits to a poultry by-product recovery unit

Personal work : Exercises, presentations, practical work reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

-Technology of charcuterie products and cured meats; Edition Tec et Doc, Paris. DURAND 2005.

-Management of environmental problems in the agro-food industries; 2nd edition Lavoisier; MOLLETA 2006.

-Circular on the recovery of poultry feet in the slaughterhouse; Federal Agency for the Safety of the Food Chain, France; HOC E 2012.

Title of the Master: Poultry farming

Semester : 3

Title of the EU: UEM1

Title of subject 1: Production control

Credits: 5

Coefficients: 3

Teaching objectives

Train the student to monitor the different growth performances in poultry production. This will make it possible to provide operational personnel on the ground to carry out poultry farming.

Content of the subject

Introduction

Chapter I : Concepts of production control

Chapter II : Control of Growth Performance

Chapter III : Control of reproductive performance **Chapter IV :** Control of spawning performance

Chapter V : Risk Management

Personal work : Exercises, presentations, practical work reports.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Poultry farming in Algeria. Collection of agronomic files 2015.

"Diagrams and mode of operation of the extension system in the poultry and dairy cattle sectors in Algeria" Mediterranean options notebooks, vol. 2, no.1. 2010 - The hen, poultry farming and development: Basic science and technology. Harmattan 2009 edition.

- Technical and economic guide to broiler breeding. Harmattan 2010 edition.

Title of the Master: Poultry farming

Semester : 3

Title of the EU: UEM2

Title of subject 2: Inputs in breeding

Credits: 4

Coefficients: 2

Teaching objectives

Introduce students to know and handle the different equipment involved in the breeding of poultry species. This will make it possible to provide operational personnel on the ground to carry out poultry farming.

Content of the subject

Introduction

Chapter I : Power Supply Unit Hardware

Chapter II : Feeding equipment

Chapter III : Watering equipment

Chapter IV : Environment Control Equipment **Chapter V :** Disinfection equipment

Visits to feed manufacturers and breeding equipment

Personal work : Exercises, presentations.

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

The hen, poultry farming and development: Basic science and technology. Harmattan 2009 edition.

Technical and economic guide to broiler breeding. Harmattan 2010 edition.

- Raising hens Jean-claude périquet Edition Rusticat 2005.

Title of the Master: Poultry farming

Semester : 3

Unit title: UED1

Title of subject 1: English

Credits: 2

Coefficients: 2

Teaching objectives

Teach students English terminology specific to poultry farming and creation of a special poultry farming linguistic repertoire through the reading of a large number of items.

Content of the subject

Recall the rules of conjugation and grammar

Main use of adverbs

Comparative, passive, interrogative and active form

Use of irregular verbs in scientific articles

Terminology Frequently Used in Poultry and Livestock Farming

Broilers and turkeys

Laying hens 5.3. Other avian species

Processing of texts and scientific articles on animal production

Assessment method: Continuous assessment + examination

References (*Books and handouts, websites, etc.*).

Scientific dictionary, books, journals as well as publications in English.

Title of the Master: Poultry farming

Semester : 3

Title of the teaching unit: UET

Title of subject 1: Entrepreneurship

Credits: 01

Coefficients: 01

Teaching objectives

Introduce the learner to setting up a project, launching it, monitoring it and carrying it out.

Material content:

Chapter I : The business and business management

Definition of the business

Business organization •Supply management:

Procurement management,

Inventory management

Organization of stores •Production management:

Production mode,

Production policy •

Commercial management and Marketing:

Product policy,

Price policy,

Advertisement,

Technical and sales team

Chapter II: Setting up a business creation project • Definition of a project • Project specifications • Project financing methods • The different phases of project implementation • Project management • Time management • The quality management • cost management • task management

Chapter III : Case studies

Personal work: study of projects

Assessment method: Examination + continuous assessment

References (*Books and handouts, websites, etc.*).

-Martin S., (1996). Marketing key concepts, Edition Chihab Eyrolles, Algiers, 222 p. -Van Laehem N, (2009). The entire marketing function, Edition Dunod, Paris, 580 p.

-Viot C., (2006). The essence of marketing, Berti, Algiers, 253 p.

-Villemus P, (2009). The marketing plan for the use of the manager, Edition d'organisation, Paris, 225 p.

-Leroy F., (2008). Strategies of the company Edition Poche.

-Papin R (2003). Strategy for business creation: creation, development, Paris,

