

Course Structure

M. Sc.Ag. (Animal Nutrition)

Major Courses

Semester	Course Code	Course Title	Credits
First	AHN 706	Principles & Practices of Animal Nutrition	3(2-0-1)
	AHM 711	Principles & Practices of Livestock Management	3(2-0-1)
Second	AHN 708	Ruminant Nutrition	3(2-0-1)
	AHN 709	Non Ruminant Nutrition	3(2-0-1)
	AHN 710	Analytical Techniques	3(2-0-1)
	AHN 899	Master's Research	05
Third	AHN 806	Animal Feed Technology	3(2-0-1)
	AHN 808	Advanced Animal Nutrition	3(2-0-1)
	AEAB 804	Research Methodology	3(2-0-1)
	AHN 826	Animal Physiology	2(2-0-0)
	AHN 880	Seminar	01
	AHN 899	Master's Research	05
Fourth	AHN 899	Master's Research	20
Total			57

Minor Courses

Semester	Course Code	Course Title	Credits
First	AHG 701	Principles of Animal Breeding	3(2-0-1)
	AHP 716	Elements of Poultry Production	3(2-0-1)
	AHH 721	Animal Health & Hygiene	3(2-0-1)
Second	AHP 718	Poultry Farm Management	3(2-0-1)
	AHM 714	Buffalo Production Management	3(2-0-1)
Total			15

Supporting Courses

Semester	Course Code	Course Title	Credits
Second	MAS 815	Experimental Design	3(2-0-1)
	CSIT 701	Computer Orientation	3(2-0-1)
Total			06

Deficiency Courses

Semester	Course Code	Course Title	Credits
First	MAS 511	Statistical Methods	3(2-0-1)
	LPM 324	Livestock Production Management	3(2-0-1)
	APM 530	Small Animal Production Management	3(2-0-1)
Total			09

Non –credit Compulsory Courses

Semester	Course Code	Course Title	Credits
First	MLI 501	Library and Information Services	1(0+1)
	LNG 502	Technical Writing and Communication Skill	1(0+1)
	ENVS 506	Disaster Management (e-Course)	1(1+0)
Second	AEAB 503	Intellectual Property and its Management in Agriculture (e-course)	1(1+0)
	AHD 504	Basic Concepts in Laboratory Techniques	1(0+1)
	AEAB 505	Agricultural Research, Research Ethics and Rural Development Programs (e-course)	1(1+0)

Minimum Credit Requirements as per Recommendations of 32nd Academic Council held on September 6, 2013

Parameters	Minimum Credit Requirement	Credits offered by the Department
Course Work	45	48
a) Major Course(including semester)	25	27
b) Minor Courses	15	15
c) Basic & Supporting Courses	05	06
Research Work	30	30
Total Credits	75	78
Non-Credit –Compulsory Courses	06	06

Course Structure
M.Sc.Ag.(Animal Genetics & Breeding)

Major Courses

Semester	Course Code	Course Title	Credits
First	AHG 701	Elements of Animal Breeding	3(2-0-1)
	AHM 711	Principles & Practices of Livestock Management	3(2-0-1)
Second	AHG 703	Fundamental Genetics	3(2-0-1)
	AHG 704	Cattle and Buffalo Breeding	3(2-0-1)
	AHG 705	Sheep, Goats and Poultry Breeding	3(2-0-1)
	AHG 899	Master's Research	05
Third	AHG 801	Population and Quantitative Genetics	3(2-0-1)
	AHG 803	Genetical Statistics	3(2-0-1)
	AEAB 804	Research Methodology	3(2-0-1)
	AHN 826	Animal Physiology	2(2-0-0)
	AHG 880	Seminar	01
	AHG 899	Master's Research	05
Fourth	AHG 899	Master's Research	20
Total			57

Minor Courses

Semester	Course Code	Course Title	Credits
First	AHN 706	Principles and Practices of Animal Nutrition	3(2-0-1)
	AHP 716	Elements of Poultry Production	3(2-0-1)
	AHH 721	Animal Health & Hygiene	3(2-0-1)
Second	AHP 718	Poultry Farm Management	3(2-0-1)
	AHM 714	Buffalo Production Management	3(2-0-1)
Total			15

Supporting Courses

Semester	Course Code	Course Title	Credits
Second	MAS 815	Experimental Design	3(2-0-1)
	CSIT 701	Computer Orientation	3(2-0-1)
Total			06

Deficiency Courses

Semester	Course Code	Course Title	Credits
First	MAS 511	Statistical Methods	3(2-0-1)
	LPM 324	Livestock Production Management	3(2-0-1)
	APM 530	Small Animal Production Management	3(2-0-1)
Total			09

Non –credit Compulsory Courses

Semester	Course Code	Course Title	Credits
First	MLI 501	Library and Information Services	1(0+1)
	LNG 502	Technical Writing and Communication Skill	1(0+1)
	ENVS 506	Disaster Management (e-Course)	1(1+0)
Second	AEAB 503	Intellectual Property and its Management in Agriculture (e-course)	1(1+0)
	AHD 504	Basic Concepts in Laboratory Techniques	1(0+1)
	AEAB 505	Agricultural Research, Research Ethics and Rural Development Programs (e-course)	1(1+0)

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Research Work	30	30
Total Credits	75	78
Non-Credit –Compulsory Courses	06	06

Course Structure

M. Sc.(Ag.) Livestock Production & Management

Major Courses

Semester	Course Code	Course Title	Credits
First	AHN 706	Principles & Practices of Animal Nutrition	3(2-0-1)
	AHM 711	Principles & Practices of Livestock Management	3(2-0-1)
Second	AHM 712	Goat and Sheep Production Management	3(2-0-1)
	AHM 713	Swine Production Management	3(2-0-1)
	AHM 714	Buffalo Production Management	3(2-0-1)
	AHM 899	Master's Research	05
Third	AHM 811	Milk Production Management	3(2-0-1)
	AHM 813	Shelter and Barn Waste Management	3(2-0-1)
	AEAB 804	Research Methodology	3(2-0-1)
	AHN 826	Animal Physiology	2(2-0-0)
	AHM 880	Seminar	01
	AHM 899	Master's Research	05
Fourth	AHM 899	Master's Research	20
Total			57

Minor Courses

Semester	Course Code	Course Title	Credits
First	AHN 706	Principles and Practices of Animal Nutrition	3(2-0-1)
	AHG 701	Principles of Animal Breeding	3(2-0-1)
	AHH 721	Animal Health & Hygiene	3(2-0-1)
Second	AHP 718	Poultry Farm Management	3(2-0-1)
	AHG 705	Sheep, Goats and Poultry Breeding	3(2-0-1)
Total			15

Supporting Courses

Semester	Course Code	Course Title	Credits
Second	MAS 815	Experimental Design	3(2-0-1)
	CSIT 701	Computer Orientation	3(2-0-1)
Total			06

Deficiency Courses

Semester	Course Code	Course Title	Credits
First	MAS 511	Statistical Methods	3(2-0-1)
	LPM 324	Livestock Production Management	3(2-0-1)
	APM 530	Small Animal Production Management	3(2-0-1)
Total			09

Non –credit Compulsory Courses

Semester	Course Code	Course Title	Credits
First	MLI 501	Library and Information Services	1(0+1)
	LNG 502	Technical Writing and Communication Skill	1(0+1)
	ENVS 506	Disaster Management (e-Course)	1(1+0)
Second	AEAB 503	Intellectual Property and its Management in Agriculture (e-course)	1(1+0)
	AHD 504	Basic Concepts in Laboratory Techniques	1(0+1)
	AEAB 505	Agricultural Research, Research Ethics and Rural Development Programs (e-course)	1(1+0)

Minimum Credit Requirements as per Recommendations of 32nd Academic Council held on September 6, 2013

Parameters	Minimum Credit Requirement	Credits offered by the Department
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i) Basic & Supporting Courses	05	06
Research Work	30	30
Total Credits	75	78
Non-Credit –Compulsory Courses	06	06

Course Structure

M. Sc.Ag.(Poultry Husbandry)

Major Courses

Semester	Course Code	Course Title	Credits
First	AHN 706	Principles & Practices of Animal Nutrition	3(2-0-1)
	AHP 716	Elements of Poultry Production	3(2-0-1)
Second	AHP 719	Egg Technology	3(2-0-1)
	AHP 718	Poultry Farm Management	3(2-0-1)
	AHP 722	Hatchery Management	3(2-0-1)
	AHP 899	Master's Research	05
Third	AHP 811	Poultry Business Management	3(2-0-1)
	AHP 823	Poultry Diseases	3(2-0-1)
	AEAB 804	Research Methodology	3(2-0-1)
	AHN 826	Animal Physiology	2(2-0-0)
	AHP 880	Seminar	01
	AHP 899	Master's Research	05
Fourth	AHP 899	Master's Research	20
Total			57

Minor Courses

Semester	Course Code	Course Title	Credits
First	AHM 711	Principles and Practices of Livestock Management	3(2-0-1)
	AHG 701	Principles of Animal Breeding	3(2-0-1)
	AHH 721	Animal Health & Hygiene	3(2-0-1)
Second	AHP 720	Meat Technology	3(2-0-1)
	AHN 709	Non Ruminant Nutrition	3(2-0-1)
Total			15

Supporting Courses

Semester	Course Code	Course Title	Credits
Second	MAS 815	Experimental Design	3(2-0-1)
	CSIT 701	Computer Orientation	3(2-0-1)
Total			06

Deficiency Courses

Semester	Course Code	Course Title	Credits
First	MAS 511	Statistical Methods	3(2-0-1)
	LPM 324	Livestock Production Management	3(2-0-1)
	APM 530	Small Animal Production Management	3(2-0-1)
Total			09

Non –credit Compulsory Courses

Semester	Course Code	Course Title	Credits
First	MLI 501	Library and Information Services	1(0+1)
	LNG 502	Technical Writing and Communication Skill	1(0+1)
	ENVS 506	Disaster Management (e-Course)	1(1+0)
Second	AEAB 503	Intellectual Property and its Management in Agriculture (e-course)	1(1+0)
	AHD 504	Basic Concepts in Laboratory Techniques	1(0+1)
	AEAB 505	Agricultural Research, Research Ethics and Rural Development Programs (e-course)	1(1+0)

Minimum Credit Requirements as per Recommendations of 32nd Academic Council held on September 6, 2013

Parameters	Minimum Credit Requirement	Credits offered by the Department
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Non-Credit –Compulsory Courses	06	06

Feeding of duck, quail and guinea fowl.
Nutritional disorders in poultry.

Swine:

Characteristic features of swine nutrition, parameters affected by quality of ration
Feeds for hogs, formulation of ration for different class of pigs.
Feeding strategies for pigs, Nutritional disorders in pigs
Non nutrient feed additives.

Practical:

- Study of feeds for poultry and feeds
- Composition of ration for poultry
- Study on maximum level of inclusion of feeds in poultry ration
- Computation of ration for different class of poultry
- Preparation of ration for different class of pigs
- Preparation of mineral mixture for pigs

AHN 710

Analytical Techniques

Credit:2-0-2=3

General laboratory instructions- Proper use of apparatus and glass wares, safety measures, laboratory accidents and first aid.
Preparation of common reagents and standard solutions used in Animal Nutrition.
Collection, processing and preservation of feeds, faeces, urine, rumen content and blood samples.
Proximate analysis of feeds- History, principles and analysis for dry matter, total ash, crude protein, ammonical nitrogen, true protein, ether extract and crude fibre.
Estimation of minerals- calcium, phosphorus, magnesium
Determination of gross energy- Van Soest method of analysis of feeds and forages

Practical:

- Determination of dry matter
- Determination of total ash
- Determination of crude protein
- Determination of calcium, phosphorus and magnesium
- Determination of crude fibre
- Determination of gross energy by Bomb calorimeter

AHN 806

Feed Technology

Credit: 2-0- 2=3

Feed Technology - Definition and importance

Present status of Animal Feed resources. Agro - industrial and Animal by- products.

Feed industry- Development in India, setting up a feed plant, mills used in feed industry –hammer and roller mills, constraints in feed industry.

Processing of feeds and fodders- purpose, methods, advantages and effect of processing of feeds on nutritive value and performance of farm animals.

Storage of feeds and fodders – methods and their effect on quality. Techniques used to improving nutritive value of low grade roughages.

Anti nutritional substances in livestock feeds, Quality control in Animal Feed industry.

Practicals:

- Study of design of feed plant
- Preparation of least cost ration
- Preservation of fodders – hay and silage
- Urea treatment of wheat / paddy straw
- Preparation of mineral mixture

AHN 808

Advanced Animal Nutrition

Credit: 2-0-2=3

Physiology and microbiology of rumen,

Digestion, absorption and metabolism of nutrients - Carbohydrates, Proteins and Lipids in ruminants and monogastric animals. Essential fatty acids, Bioenergetics- energy- kinds of energy, measurement of energy, control of energy in metabolism, Role of ATP.

Feed conversion efficiency,

Nutritional related metabolic disorders.

New concepts in feeding of high yielding animals- by pass protein, buffer feeding.

Mycotoxins in livestock and poultry nutrition.

Biotechnology in Animal Nutrition- Role of microbial feed additives, metabolic modifiers, probiotics, photochemicals and enzymes, tapping the methane potential.

Practicals:

- Handling of analytical apparatus in animal nutrition lab
- Collection, processing and preservation of sample of feeds and faeces
- Proximate analysis of feeds
- Collection and processing of rumen content for microbial analysis
- In-vitro techniques for digestibility of feeds.

AHN 826

Animal Physiology (AP)

Credit: 2-0-0=2

Intracellular organization and chemical composition of the cell.

Body fluid –blood constituents and its property.

Homeostasis and control of acid- base balance.

Reproductive system of farm animals,

Physiology of endocrines and role of hormones in lactation and reproduction,

Estrus cycle and pregnancy diagnosis in farm animals.

Digestive system of ruminants and non- ruminants

Mechanism of lactation: lactogenesis, galactopoiesis and milk let down.

M. Sc.Ag. (Animal Genetics & Breeding)

AHG 701

Elements of Animal Breeding

Credit: 2-0-2=3

Brief history of domestication of livestock. Important breeds of cattle, buffalo, sheep, goats and pigs with special reference to their economic characters.

Animal Breeding Programmes/ Schemes in India: Key Village Scheme, Intensive Cattle Development Projects, All India Coordinated Research Project on farm animals, Progeny Testing Programmes.

National Breeding Policy in India.

Role of information technology in Animal Breeding.

Practical:

- Familiarity with breed characteristics of different breeds maintained at SHIATS livestock farm
- Identification of tools used in animal breeding,
- Familiarity with different breeding records

AHG 703

Fundamental Genetics

Credit: 2-0-2=3

History and development of genetics. Mendelism and its deviations.

Cell Mechanism: Cell division-Mitosis and meiosis.

Chromosome and heredity, Linkage and Crossing over,

Mutation; types and causes of mutation.

Chromosomal aberration: variation in chromosomal structure and number.

Mechanism of sex determination: sex influenced inheritance, sex limited inheritance and sex linked genes.

Practical:

- Familiarity with animal cell organelles

- Familiarity with mitosis and meiosis
- Study of Mendelian laws of inheritance.

AHG 704

Cattle and Buffalo Breeding

Credit: 2-0-2=3

History of dairy cattle and buffalo breeding. Development in population and production of livestock in India. Inheritance of important economical traits, Male and female reproductive system, estrus cycle and pregnancy diagnosis, Mating systems and their consequences. Estimation of breeding values of cows and bulls. Sire evaluation methods using single traits, multiple traits: Construction of sire indices, Culling and replacement. Reproductive technologies for genetic improvement; A.I., ONBS, CNBS, embryo transfer technology.

Practical:

- Familiarity with Male and female reproductive organs
- Preparation of A.V.
- Collection, evaluation and dilution of semen
- Insemination in dairy cows
- Performance recording, Estimation of economic traits, Sire evaluation.

AHG 705

Sheep, Goats and Poultry Breeding

Credit: 2-0-2=3

Economic traits, Genetic parameters-selection of males and females, Estrus cycle and pregnancy diagnosis, Breeding systems, basis for culling and replacement, selection methods of obtaining superior parents for improvement of the flock, selection and storage of hatchery eggs, factors affecting fertility and hatchability of eggs, selection and mating plans for egg and meat.

Practical:

- Judging of sheep by Score card method
- Pregnancy diagnosis
- Grading of egg

AHG 801

Population and Quantitative Genetics

Credit: 2-0-2=3

Individual vs. population, Genetic structure of population, Factors affecting changes in gene and genotypic frequencies, Hardy-Weinberg law and consequences of it. Random genetic drift, effective population size, pedigreed population. Concept of heritability, repeatability and phenotypic, genetic and environmental correlation. Selection differential, response to selection, correlated response.

Practical:

- Problems related to genes and genotypic frequencies under different conditions,
- Computation of heritability, repeatability, genetic, environmental and phenotypic correlations.

AHG 803

Genetical Statistics

Credit: 2-0-2=3

Introduction to matrix algebra, types of matrices and matrix operations. Determinants and their properties, methods and finding inverse of a matrix and their application. ANOVA, regression and Correlations. Linear and non-linear regression, Methods of estimating regression parameters, Fishers' discriminant function and its application, D²-statistics in divergent analysis. Genetical evaluation of animal with different source of records.

Practical:

- Matrix applications
- Determinant and inverse of matrix
- Estimation of variance components
- Least square methods for analysis of research data
- Collection, compilation, coding and transformation and analysis of animal breeding data

M. Sc.Ag. (Livestock Production & Management)

AHM 711

Principles & Practices of Livestock Management

Credit: 2-0-2=3

Role of livestock viz. cattle, buffaloes, goats, sheep, pigs and poultry in national economy. Milk and livestock by-products related statistics of India.

Types of Dairy Farming: mixed, diversified and specialized. Starting a dairy farm.

General livestock farm management practices viz., marking, disbudding/dehorning, care of neonates and young calves, age determination in cows, goats, sheep and pigs.

Care of cows/doe/ewe/sow at and after parturition.

Familiarity with different records maintained on livestock farm.

Prerequisites for profitable poultry farming.

Practical:

- External anatomy of cow/buffalo, sheep, goats, pigs and poultry
- Identification of tools used on a livestock farm
- Marking of animals
- Disbudding
- Cleaning and disinfection of livestock farm
- Pail feeding
- Care of newly born calf/kid/lamb/piglets
- Age determination in dairy animals

AHM 712

Goat and Sheep Production Management

Credit: 2-0-2=3

Goat: Common terms used in Goat Husbandry. Importance of goat industry in India. General management practices used in goat farming; care of kids, tethering, age determination, disbudding, hoof trimming, castration. Housing of goats. Goat milk, meat, pashmina and mohair.

Sheep: Common terms used in sheep farming. Importance of sheep industry in India. General management practices used in sheep farming; care of ewe at and after lambing, care of lamb, raising orphan lamb, docking, dipping, shearing. Housing of sheep. Grading parameters for judging wool quality.

Practical:

- Identification of tools used in Goat and Sheep Production Management
- General management practices of goats and sheep farming
- Economics of goat farming
- Economics of sheep farming

AHM 713

Swine Production Management

Credit: 2-0-2=3

Common terms used in swine industry. Importance of pig farming in India and related statistics. Important breeds of pigs in India, Guidelines for selection of sow and boar, Guidelines for normal reproduction in pigs, detection of heat in sows, Feeding management of pigs, Housing of pigs, provision of Pig fenders and hog wallows, Common management practices for pigs viz. castration, marking and flushing, care of sows before and after farrowing, care and management of piglets at and after birth, removal of needle teeth, preventive measures against common diseases of pigs.

Pork: Types and composition, Economics of pig farming.

Practical:

- Identification of tools used in Swine Production Management
- External body parts and cut parts of pig carcass
- Marking of pigs
- Removal of needle teeth
- Slaughter of pigs
- Cleaning and disinfection of pig houses

- Economics of pig farming

AHM 714**Buffalo Production Management****Credit: 2-0-2=3**

Importance and significance of buffalo rearing in India and related statistics.

Important breeds of buffaloes in India.

Management of buffaloes: Care of neonate and young calves, management and care of milking herd, watering and wallowing, routine management practices viz: marking, disbudding, castration etc. in buffaloes.

Feeding management of buffaloes for optimum productive and reproductive performance.

Physiological effect of heat on buffaloes, signs of heat stress in buffaloes management of buffalo to mitigate the heat stress.

Prevention of common diseases in buffaloes, common buffalo's calf ailments.

Practical:

- Identification of various tools used in Buffalo management
- Wallowing and bathing in buffaloes
- Marking in buffaloes
- Handling and leading of buffalo
- Disposal of barn waste
- Design and layout of dairy barn

AHM 811**Milk Production Management****Credit: 2-0-2=3**

Present condition and status of dairying in India.

Characteristics of dairy cows.

Economic dairy farming.

Factors affecting cost of milk production.

Methods and principles of milking, quality production of milk.

Marketing and distribution of milk.

Good Animal Husbandry Practices (GAHP) on dairy farm.

Care and management of lactating animals for maximizing milk production.

Practical:

- Milking Practice
- Judging of dairy animals
- Grooming of dairy animals
- Cleaning and disinfection of barn
- Economics of dairy farming

AHM 813**Shelter & Barn Waste Management****Credit:2-0-2=3**

Objectives and advantages of adequate housing; General principles in planning animal houses, factors affecting layout and construction of dairy farm, systems of housing for dairy animals.

Animal air hygiene and ventilation

Lighting provisions in dairy buildings .

Stress management during summer and winter for farm animals.

Hygienic and economic disposal of barn wastes, quantity of manure voided by domestic animals,

Dung and liquid manure– objectives, methods and techniques of disposal.

Gobar gas plant– utility, advantages and limitations. Design for Bio-gas producing plant.

Practical:

- Layout of dairy farm
- Barn design – tail to tail and face to face
- Disposal of barn waste
- Design of *gobar* gas plant

M. Sc.Ag.(Poultry Husbandry)

AHP 716

Elements of Poultry Production

Credit: 2-0-2=3

Common terms used in poultry farming.

Breeds of Poultry: Reproductive systems of fowl, systems and methods of breeding.

Feeds and Feeding: Digestive system of fowl. Composition and classification of poultry feeds. Formulation of balanced ration for various classes of birds. Feeding methods.

Poultry Housing & Equipments: Management of layers and broilers. Structure, composition, and formation of egg.

Health Care & Management: General preventive measures against diseases, common ailments of birds, prevention of hatchery born diseases.

Practical:

- Body parts of fowl
- Digestive system of domestic fowl
- Slaughtering, defeathering, evisceration & cleaning of giblets
- Estimation of dressing percentages
- Candling, grading and incubation/ hatching of eggs
- Management of broilers
- Anti mortem of birds

AHH 721

Animal Health & Hygiene

Credit: 2-0-2=3

General preventive measures against infectious and contagious diseases. Observation on sick vs. healthy animals.

Immunization and vaccination of dairy cattle, buffaloes, sheep, goats and pigs.

Important diseases of farm animals; their etiology, symptoms, diagnosis, prevention and control (H.S, B.O, F.M.D, Anthrax, P.P.R., Brucellosis, Vibriosis, Trichomoniosis, Tick fever, Surra, Swine fever, Rabies Coccidiosis, Parasitic and skin diseases.

Common ailments. Mastitis and its control.

Practical:

- Cleaning and disinfection of Livestock farm
- Identification of veterinary tools and drugs
- Estimation of pulse, respiration rate and body temperature
- Lifting of legs, casting and securing of animals
- Diagnosis and treatment of sick animals
- Faecal examination
- Vaccination of animals
- Collection of blood samples
- Methods of administration of drugs
- Therapeutics of drugs
- Writing, common prescription used in veterinary practices

AHP 718

Poultry Farm Management

Credit: 2-0-2=3

Development of poultry industry. Characteristics of a good poultry farm. Comparative performance of available commercial stock, requirements and procurement of poultry farm inputs. Labour requirement and its management. Principles and systems of poultry housing and lighting. Poultry farm equipments. Environment control of poultry houses. Production of quality eggs. Management of poultry farm waste. Control of rodents and pests. Poultry project formulation.

Practical:

- Judging of layers and broilers
- Poultry farm equipments
- Layout plans for commercial poultry farms
- Grading of birds for meat purpose
- Deworming
- Debeaking
- Cleaning and disinfection of poultry house
- Poultry farm records

- Vaccination of Birds
- Culling and handling of birds

AHP 719

HATCHERY MANAGEMENT

Credit:2-0-2=3

Introduction - Methods of incubation
 Physical factors essential for incubation , Important points on operation of incubators
 Factors affecting hatchability of eggs
 Hatchery hygiene and prevention of hatchery borne diseases,
 Embryonic mortality ,
 Sexing of chicks.

Practical:

- Selection and Indications of "Broody Hen".
- Care and management of "Broody Hen".
- Selection of eggs for Incubation
- Cleaning and storages of eggs for incubation.
- Grading of eggs.
- Operation of incubator.

AHP 720

EGG TECHNOLOGY

Credit:2-0-2=3

Reproductive organs of fowl and formation of egg, Egg structure, nutritive value of egg, Egg as food. Collection, handling and storage of fresh egg. Evaluation of egg: Shape, size, quality of egg and method of preservation of fresh eggs, Examination of quality of raw eggs, external and internal examination. Storage, packaging and transportation of eggs, preparation of eggs powder.

Practical:

- Study of reproductive organs of fowls
- Collection and handling of fresh eggs
- Study of Egg parts
- Cleanliness of eggs
- Selection of eggs for incubation
- Defects in eggs and their grading
- Preparation of egg products
- Examination of eggs: without breaking and after breaking

AHP 722

MEAT TECHNOLOGY

Credit:2-0-2=3

Indian meat industries, Composition and nutritive value of meat tissues.
 Abattoir Management and structure
 Ante and post mortem examination
 Factors affecting meat quality
 Poultry production technology
 Microbial and other deteriorative changes in meat and their identification
 Method of slaughtering, Role of meat and production in Human nutrition.

Practical:

- Familiarity with the tools and equipments used in slaughtering of animals and birds
- Pre-slaughtering, handling, killing, dressing and estimation of dressing percentage of birds
- Judging of meat and mea products
- Cut-up parts of carcass- display
- Evaluation of various meats-(fresh and frozen)
- Utilization of meat industry bye-products

AHP 821

Poultry Business Management

Credit 2-0-2=3

Importance, present status and scope of poultry industry in India.

Economic viability of poultry unit of different sizes.

Management of poultry for maximizing profits.

Automation in poultry houses.

Restricted feeding.

Forced moulting.

Management of birds under stress conditions.

Judging and culling.

Management for pathogen free flocks.

Legislation and taxes in poultry.

Management for prevention of diseases.

Marketing of eggs and chickens.

Practical:

- Stress management
- Faecal examination
- Economics of broilers and layers
- Commercial rearing of broilers from day old age to attain 1 kg. live weight

AHP 823

Poultry Diseases (PD)

Credit 2-0-2=3

Prevention of Poultry Diseases, Sign of ill health of birds, Immunization and vaccination, Important disease of poultry: RD, FP, IBD, MD, CRD, Pullorum, Infectious coryza, brooder pneumonia, coccidiosis, parasites and miscellaneous conditions such as Bumbles foot, cannibalism, crop impaction, pasting up in chicks and poisoning.

Various preventive measures adopted during rearing of birds.

Uses and abuses of drugs.

Practical:

- Cleaning and disinfection of poultry houses.
- Identification of tools and medicines
- Vaccination of birds
- Postmortem of birds
- Care of treatment of sick birds
- Faecal examination