NEW AND RESTRUCTURED

POST GRADUATE CURRICULA AND SYLLABUS

for

Animal Husbandry and Dairying

Dr. Rammanohar Lohia Avadh University, Ayodhya (U.P.)

M.Sc. (Ag.) Animal Husbandry and Dairying

Third Semester

(Semester System as per ICAR 5th Dean Committee Recommendations)

w.e.f. 2020 - 2021

Submitted by :

Dean & Conveners, Board of Studies

Faculty of Agriculture

Dr. Rammanohar Lohia Avadh University, Ayodhya (U.P.)

M.Sc. (Ag.) Animal Husbandry & Dairying

First Semester			Evaluation Marks			
Code No.	Course Title	Credit Hours	Mid Term	End Term	Practical	Total
AHD. - 501	Production & Management of Dairy Animals	3(2+1)	20	50	30	100
AHD. - 502	Poultry Production & Management	3(2+1)	20	50	30	100
AHD. - 503	Market Milk Technology	3(2+1)	20	50	30	100
AS. - 501	Agricultural Statistics	3(2+1)	20	50	30	100
	Total Credit	12				
Second Semester			**Evaluation Marks**			
Code No.	**Course Title**	**Credit Hours**	**Mid Term**	**End Term**	**Practical**	**Total**
AHD. - 504	Fundamentals of Animal Nutrition	3(2+1)	20	50	30	100
AHD. - 505	Reproductive Physiology of Farm Animals	3(2+1)	20	50	30	100
AHD. - 506	Dairy Processing and Plant Management	3(2+1)	20	50	30	100
AHD. - 507	Feed Evaluation Techniques	3(2+1)	20	50	30	100
	Total Credit	12				
Third Semester			**Evaluation Marks**			
Code No.	**Course Title**	**Credit Hours**	**Mid Term**	**End Term**	**Practical**	**Total**
AHD. - 508	Microbiology of Milk & Milk Products	3(2+1)	20	50	30	100
AHD. - 509	Dairy Technology	3(2+1)	20	50	30	100
AHD. - 510	Fundamentals of Animal Breeding & Genetics	3(2+1)	20	50	30	100
CA. - 502	Computer Application in Agriculture	2(1+1)	20	50	30	100
PGS - 501	Library and Information Services (Non-Gradial Satisfactory/Unsatisfactory 50% Marks required for satisfactory Grade)	1(0+1)			100	100
	Total Credit	12				
Forth Semester			**Evaluation Marks**			
Code No.	**Course Title**	**Credit Hours**	**Mid Term**	**End Term**	**Practical**	**Total**
AHD. - 591	Master Seminar	1(0+1)				100
AHD. - 599	Master Research (Thesis)	20	Satisfactory/Unsatisfactory			
OR						
Special Papers - (20 - Credit) Satisfactory/Unsatisfactory						
AHD. - 511	Non-Ruminant Nutrition	4(3+1)	20	50	30	100
AHD. - 512	Dairy Farm Management	4(3+1)	20	50	30	100
AHD. - 513	Ruminant Nutrition	4(3+1)	20	50	30	100
AHD. - 514	Technology of Indian Dairy Products	4(3+1)	20	50	30	100
AHD. - 515	Production and Management of Sheep, Goat, Swine & Poultry	4(3+1)	20	50	30	100
	Total Credit	21				
	Total Credit Hours	57				

M.Sc. (Ag.) Animal Husbandry & Dairying

IIIrd Semester Curricula & Syllabus

S. No.	Course Code	Title of the Course	Credit
1	AHD. - 508	Microbiology of Milk & Milk Products	3(2+1)
2	AHD. - 509	Dairy Technology	3(2+1)
3	AHD. - 510	Fundamentals of Animal Breeding & Genetics	3(2+1)
4	CA. - 502	Computer Application in Agriculture	2(1+1)
5	PGS - 501	Library and Information Services (Non-Gradial Satisfactory/Unsatisfactory 50% Marks required for satisfactory Grade)	1(0+1)
		Total Credit Hours	**12**

Third Semester Animal

AHD - 508 MICROBIOLOGY OF MILK AND MILK PRODUCTS 3(2+1)

Micro-organism in milk. Milk as a nutrients media, for bacterial growth, inhibitory substances in milk. Sources of contamination during production, handling and distribution of milk. Important groups of bacteria occurring in milk. Thermoduric and thermophilic bacteria, activities of different species in milk. General principles involved in sanitary milk production. Routine bacteriological tests for quality control of market milk. Transmission of diseases of bovine and human origin through milk and milk products. Bacteriology of milk products, role of lactic acid bacteria and other micro-organisms in the manufacture of butter , cheese and fermented milk. Spoilage of various milk products by micro-organisms.

Practical

- Relevant to concerned theory topics.

AHD - 509 DAIRY TECHNOLOGY 3(2+1)

Status of dairy industry in India, Operation flood programme technology mission on dairy. National milk grid, marketing federation, their concept, achievement limitation and impact on the dairy industry in India. Recent policy changes to dairy sector (MMPO, GATT) and their impact on dairy industry in India. Importance of various milk processing techniques, significance and role of indigenous dairy product in Indian Dairy Industry and economy. Characteristics and composition of various indigenous products, their prospects and constraints. Basic principles of processing and quality aspect of different cream table half and half sterilized and high fat cream. Quality aspect and safe life.

Practical

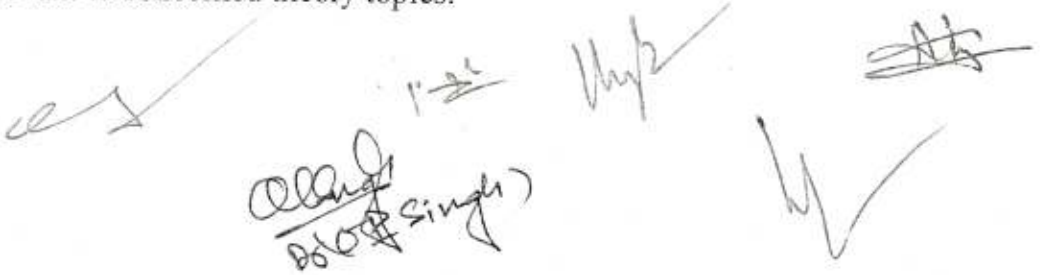
- Relevant to concerned theory topics.

AHD - 510 FUNDAMENTALS OF ANIMAL BREEDING GENETICS 3(2+1)

Genetics : Its importance in animal breeding. Mendelian Laws and its modified ratios-gene interaction. Lethal factor, qualitative & quantitative heredity, linkage and its importance in livestock improvement, inheritance of sex linkage, sex influenced and sex limited traits. Gene frequency, factors affecting gene frequency. Breeding; Inbreeding, its genotypic effect, measurement of relationship and coefficient of inbreeding. Out crossing and its importance, selective vs cross breeding, heterosis in milk production traits, grading up and species hybridization. Artificial insemination and its importance, collection of semen, handling and evaluation of semen. Dilution of semen, preservation and storage of semen, and insemination.

Practical

- Relevant to concerned theory topics.



CA - 502 COMPUTER APPLICATION IN AGRICULTURE 2(1+1)

Theory

Introduction to computer, operating system, definition and types, application of MS-Office for document creation & editing, data presentation, interpretation and graph creation, statistical analyasis, mathematical expressions, database concepts and types, uses of DBMS in Agriculture, World Wide Web (WWW); Memory, Basic Anatomy of Computer System. e-Agriculture concepts and applications, Use of ICT in Agriculture. IT Application for computation of water and nutrient requirement of crops, computer-controlled devices (automated system) for agri-input management, smart phone apps in Agriculture. Decision support systems, concepts, components and applications in agriculture.

Practical

Study of computer components, accessories, practice of important DOS Commands. Introduction of different operating system such as window, files & folders, file management. Use of MS-Word and MS Power-point for creating, editing and presenting a scientific document. MS-Excel - Creating a spreadsheet, use for statistical tools, writing expressions, creating graphs, analysis of scientific data. MS-Access - Creating database.

PGS - 501 LIBRARY AND INFORMATION SERVICES 1(0+1)

Practical

Introduction to library and its services; Role of libraries in education, research and technology transfer; Classification systems and organization of library; Sources of information - primary sources secondary sources and tertairy sources; Intricacies of abstracting and indexing services (Science Citation Index, biological abstracts, chemical abstracts, €ABI abstracts, etc.); Tracing information from reference sources; Literature survey; Citation techniques/Preparation of bibliography; Use of CD-ROM Databases, Online Public Access Catalogue and other computerized library services; Use of Internal including search engines and its resources; e-resources access methods.