Maratha Vidya Prasarak Samaj's

G. M. D. ARTS, B. W. COMMERCE & SCIENCE COLLEGE,

Nashik-Pune Highway, Sinnar, Dist.Nashik-422 103

Department of B. Voc.

(Livestock Production and Management)

Syllabus

For

Bachelor of Vocation

In

Livestock Production and Management

Annexure-II

1. **Title of the Course:** Bachelor of Vocational in **Livestock Production and Management**
2. **Course Level:** UG
3. **Syllabus to be implemented from the Academic year**: 2018-19
4. **Preamble of the Syllabus**:

Preamble:

Savitribai Phule Pune University, Pune is offering a three year Bachelor Program in Vocational Education (B. Voc.) in Livestock Production and Management from Academic year 2018-19. The curriculum design of this program is undertaken in the following framework (Preamble).

a) Although there has been remarkable progress in all sectors of education in last couple of decades, the less regulated area of the education sector-vocational training—seems to have lost its significance/importance. This has led to the widening gap between the supply and demand for skilled manpower across various food processing industries and R&D organizations. This shortage of skills has translated directly into unemployment among an increasing number of graduates who pass-out every year and are forced to bare- trained in order to become marketable. This program is designed to produce a skilled manpower so that wide variety of options in different sectors of Food Processing would be available and it will improve the opportunities for the unemployed youths in the country in both the private and public sectors.

b) According to recent survey of FICCI (Federation of Indian Chambers of Commerce & Industry) on skill demand as per the above sections, with about 12 million persons expected to join the workforce every year, and an existing skill development capacity of about 3.4 million, it is thus required to enhance the skilling and technical education capacity to about 15 million (considering that even sections of the existing workforce would have to be trained). It is expected that this 15 million would be the required skill development capacity in vocational training in itself as a large portion of the employment (as well as workforce input) would occur in the lower portions of the skill pyramid. This is also the required skill development capacity as specified in the National Skill Development Policy. This programme aims to provide some solution for this problem and this would facilitate to improve:

(i) Quality of training

(ii) High drop-out rates

(iii) Linkages with Universities and industry

(iv) Inadequacy of resources

c) This program is intended to offer practical, hands on training and skills needed to pursue an occupation. It will provide options to the students to select the courses of their choice which are directly aligned to land a job in a chosen profession or a skilled trade. The end result of this program is to enable an individual to at train self-employment.

Aims & Objectives:

1. To provide basic knowledge and application of Livestock Production and Management.
2. To offer both theoretical and practical inputs in Livestock Production and Management.
3. To develop Application skills among the students.

Program Structure:

The three year B. Voc. Course (full time) has a specific feature of multi point entry and multi point exit provision. After completing one year of course, if any student desire to leave he/she will be awarded Diploma, subject to the condition of earning the required credit points. Similarly after completing the second year he/she will be awarded Advance Diploma and once the candidate completes the third year candidate will be awarded the degree of Bachelor of Vocational (Livestock Production and Management). If any student desires to take admission to some other university, at any other stage i.e., on completing first year, he/she may take admission to second year in same branch. Similarly, on completing the second year, one can take admission to third year.

Program Outcome:

Vocational Education is education that prepares the students for specific job role in various sectors in livestock production and management organization. It trains the students from a trade, technician or professional position in R & D organizations for specific job roles.

The program outcomes are the skills and knowledge which the students have at each exit level/at the time of graduation. These outcomes are generic and are common to all exit levels mentioned in the program structure.

i. Students with vocational training can find work in several state and central government organizations, non-profit groups, and academic institutions and in private sectors as well.

ii. This program prepares students for specific types of occupations and frequently for direct entry into the market.

iii. After completion of this program students will have enough competences, to get benefit from market opportunities.

iv. This program would enable students to update their knowledge and professional skills for entering the work force executing income generating activities or occupying better positions

v. At each exit level of this program, students will be able to

   a) Apply knowledge of general education subjects and skill development subjects to the conceptualization of livestock production and management.

   b) Livestock production and management appropriate consideration for public health and safety, cultural, societal, and environmental considerations.

   c) Conduct and undertake investigations of problems of including design of processing technology in livestock production and management interpretation of data in order to provide valid conclusions.

   d) Create, select and apply appropriate processing technology/techniques, resources, modern processing tools in order to improve the quality, safety in livestock production and management.

   e) Communicate effectively on minimal processing activity and value addition to the farmers/producers/grower at large, such as being able to comprehend and write effective reports, design documentation and make effective presentations.

   f) Demonstrate understanding of the social, health, safety, legal and cultural issues and the consequent responsibilities relevant to livestock production and management.

   g) Understand and commit to professional ethics and responsibilities and norms/regulation for manufacturing of livestock production & management.

   h) Understand the impact of livestock production and management in a societal context and demonstrate technical know-how and understanding of livestock production and management, quality for sustainable development.

STRUCTURE OF SYLLABUS

To be implemented from the academic year 2018-19

- **Title of the course:** BACHELOR OF VOCATION (LIVESTOCK PRODUCTION AND MANAGEMENT)
- **Skills to be acquired after completion of 1st Year :**

After successful completion of the 1st year, the student shall be able to perform the following skills.

1. Student will be able to know Fundamentals of Livestock production and management, Animal nutrition and feed technology & Fodder production and management.

2. Student will obtain knowledge Livestock production and management, Avian production management & Applied nutrition

- **Self-Employment and Employment Opportunities:** On successful completion of the course the candidates can either get employed, or become a self-employed / performer in any one of the following fields.
    1. To develop different Livestock production and management Farms.
    2. To works in different Livestock production and management Farms

- **Skills to be acquired after completion of 2nd Year :**

After successful completion of the 2nd year, the student shall be able to perform the following skills.

1. Livestock production and management-II
2. Avian production management
3. Applied nutrition
4. Livestock and poultry breeding
5. Commercial poultry production and hatchery management-I
6. Milk and meat hygiene

- **Self-Employment and Employment Opportunities:** On successful completion of the course the candidates can either get employed, or become a self-employed / performer in any one of the following fields.
    1. Students will get job in poultry production and hatchery
    2. Can start its own poultry production and hatchery.

➢ **Skills to be acquired after completion of 3rd Year :**

After successful completion of the 3rd year, the student shall be able to perform the following skills.

1. Epidemiology and zoonoses
2. Meat science
3. Pet animal breeding and management
4. Veterinary Clinical Medicine
5. Animal Welfare, Ethics
6. Environment and environmental hygiene
7. Livestock entrepreneurship

- **Self-Employment and Employment Opportunities:** On successful completion of the course the candidates can either get employed, or become a self-employed / Entrepreneur in any one of the following fields.
    1. Student can start own livestock production
    2. Student can start own business.

5. **Faculty of the Course : B.Voc.**
6. **Eligibility for Admission:**

   The eligibility condition for admission to B. Voc. Programme shall be **10+2 or equivalent,** in any stream **from any recognized board or university.**

   The candidate with 10+2 year or ITI/ Agri course in any branch is eligible for the course.

7. **Duration of the Course**:

   The duration of the B. Voc. Course will be of **Three Years.**

   - **First Year : B. Voc. - Diploma in Livestock Production and Management**
   - **Second Year : B. Voc. - Advanced Diploma in Livestock Production and Management**
   - **Third Year : B. Voc. – Bachelor of Vocational in Livestock Production and Management**

Exit Options:

Bachelor of Vocation (B. Voc.) is launched under the scheme of University Grants Commission for skill development based on higher education leading to Bachelor of Vocation (B. Voc.) Degree with multiple exits as Diploma/Advanced Diploma under the National Skill Qualification Framework (NSQF). The B. Voc. programme incorporates specific job roles and their National Occupational Standards along with broad based general education.

1. B. Voc. Programme has been designed as per National Skill Qualification Framework emphasizing on skill based education.
2. LEVELS OF AWARD:

i) The certification levels shall lead to certificate/Diploma/Advanced Diploma/ B. Voc. Degree in livestock production and management.

Award	**Duration**	**Corresponding NSQF level**
Certificate in Livestock Production and Management	6 Months	4
Diploma in Livestock Production and Management	1 Year	5
Advanced Diploma in Livestock Production and Management	2 Years	6
B. VOC. Degree in Livestock Production and Management	3 Years	7

The suggested credits for each of the years are as follows:

NSQF level	**Skill component credits**	**General education credits**	**Normal calendar duration**	**Exit point /awards**
6 Months	18	12	One Semester	Certification in Livestock Production and Management
Year 1	36	24	Two Semesters	Diploma in Livestock Production and Management
Year 2	36	24	Four Semesters	Advanced Diploma in Livestock Production and Management

Year 3	36	24	Six Semesters	Degree in Livestock Production and Management
Total	**108**	**72**		

Eligibility criteria for Admission:

1. A candidate will be eligible to join 1st semester of B. Voc. Livestock Production and Management course, if he/she has passed 10+2 examination (Science Stream) or 10+2 vocational stream related to Food Production/Food Processing of recognized Board/university, or any other examination recognized as equivalent thereto.
2. The course of study of B. Voc. shall be divided in to six semesters and university examination will be held at the end of every semester in the months of November/December (for semester I, III & V) and May/June (for semester II, IV & VI) or as fixed by the University.
3. Semester examination will be open to regular candidates who have been on the rolls of a college affiliated to this University and meet the attendance and other requirements.

Admission, Registration and Promotion Process:

Admission will be done on the basis of Percent mark obtained by candidate in Twelfth science or Common entrance test conducted by college or admission criteria as decided by the authority for first semester.

The students will have to clear / qualify at least 50% of theory papers / courses from second semester and all papers / courses (inclusive of theory and practical) from first semester for getting promoted to second year. Similarly the students will have to clear / qualify at least 50% of theory papers / courses from fourth semester and all papers / courses (inclusive of theory and practical) from third semester for getting promoted to third year.

Dropout students will be allowed to register for second or third year as and when the concerned courses are offered by the College, however he/she should not exceed more than twice the duration of the course from the date of first registration at the Centre. Therefore, for obtaining B. Voc. degree a student will have to complete all semesters successfully within 6 years/12 semesters.

Admission fees:

The admission fees for B. Voc. (Livestock Production and Management) would be as decided by the University.

Vocational Educational Programme Implementation Committee (VEPIC):

The Vocational Educational Programme Implementation Committee (VEPIC) will consist of the Principal as a Chairman, course coordinator and two faculty of the concern course/specialization as members. The Committee will monitor the smooth functioning and implementation of the B. Voc. program in Livestock Production and Management.

Choice Based Credit and Grading System (CBCS):

The choice based credit and grading system has been adopted. This provides flexibility to make the system more responsive to the changing needs of our students, the professionals and society. It gives greater freedom to students to determine their own pace of study.

- Students will have to earn 30 credits for the award of Six Month Certificate in Vocational in Livestock Production and Management.
- Students will have to earn 60 credits for the award of one year Diploma in Vocational (D. Voc.) in Livestock Production and Management.
- Students will have to earn 120 credits for the award of two year Advance Diploma in Vocational (Adv. D. Voc.) in Livestock Production and Management.
- Students will have to earn 180 credits for the award of three year Bachelor Degree in Vocational (B. Voc.) in Livestock Production and Management.

Credit-to-contact hour Mapping:

- One Credit would mean equivalent of 15 periods of 60 minutes each for theory lecture.
- For laboratory course/ workshops/internship/field work/project, the credit weightage for equivalent hours shall be 50% that for lectures.
- For self-learning, based on e-content or otherwise, the credit weightage for equivalent hours of study should be 50% or less of that for lectures.

Attendance:

Students must have 75 % of attendance in each course for appearing examination otherwise he / she will not be strictly allowed for appearing the examination of each course. However,

students having 65 % attendance may request Head of the concerned Institution for the condolence of attendance on medical ground.

8. **Intake Capacity of Students:** Maximum 50
9. **Examination:**

Evaluation Methods:-

The assessment will be based on Continuous Internal Assessment (CIA) and semester end examination (SEE).

There shall Continuous Internal Assessment for each theory paper. In each semester, 35 marks shall be for CIA and 40 marks for ESE for the paper carrying total 75 marks. For papers carrying total 50 /100 marks marks, there shall be 25/50 marks for CIA and 25/50 marks for ESE. CIA and ESE shall be added while declaring the final result.

Continuous Internal Assessment (CIA):-

The internal marks shall be assigned on the basis of tutorials/home assignment/seminar presentation and weekly tests/class test/ preliminary examination to be conducted by the concerned college. These marks shall be communicated to the University before commencement of semester end examination.

End Semester Examination (ESE):

- The end semester examination for each theory and practical paper shall be conducted by the University at the end of each semester.
- Duration of theory examination shall be of three hours for a paper of 75 marks and two and half hour for a paper of 50/40 marks. Practical examinations shall be of three hour duration for every semester end examinations respectively.
- The respective college is advised to arrange maximum number of experiments from the list of experiments provided with the syllabus or experiments based on theory syllabus.
- Assessment of laboratory courses and project will also have same weightage for internal and semester end assessment. Semester end practical examination will be of 40 marks and 35 marks will be for internal examination. Student must perform at least eight experiments from each laboratory course. The semester end practical examination will be conducted at the end of each semester along with the theory examination.
- Students without certified journal shall not be allowed to appeared for the practical examination.

Examination Scheme

- A student shall be evaluated for his/her academic performance in a course through class tests, tutorials, practicals, homework assignments, term papers, field work, seminars, quizzes, Test examinations, teachers assessments and the End-Semester Examination as applicable.
- At the end of the semester, there would be an End Semester Examination as per syllabus. For the examination of First Year for the academic year 2018-2019, the minimum percentage for passing for each course code, practical examination and ESE is 40 %, failing which he/she will get F grade for that course code. This rule will be progressively applicable for higher classes in next consecutive years.
- The project work shall be evaluated by midterm seminar(s), quality of work carried out, project report submission and the viva-voce examinations.
- The industrial/field training shall be evaluated through the quality of work carried out, the report submission and presentation(s).

Rule for combined passing:

- To pass the examination a candidate must obtain minimum 40% of Marks in End Semester Examination & CIA taken together, however the candidate must obtain minimum 30% of Marks at the End Semester Examination and CIA.
- To pass a subject where there is no provision of class test, the candidate must obtain 40% of Marks in the End Semester Examination.
- If the candidate remains absent for CIA, his performance should be treated as "Zero" Marks.

Results Grievances / Redressal

Grievances / redressal committee will be constituted in the college to resolve all grievances relating to the evaluation. The committee shall consist of the Principal of the college, the concerned teacher of a particular course and senior faculty member. The decision of Grievances / redressal committee will have to be approved by Competent Authority.

Earning Credits:

At the end of every semester, a letter grade will be awarded in each course for which a student had registered. A student's performance will be measured by the number of credits that he/she earned by the weighted Grade Point Average (GPA). The SGPA (Semester Grade Point Average) will be awarded after completion of respective semester and the CGPA (Cumulative Grade Point Average) will be awarded by the university at the respective exit point.

Grading System:

The grading reflects a student-own proficiency in the course. A ten point rating scale shall be used for the evaluation of the performance of the students to provide letter grade for each course and overall grade for the B. Voc. Program. Grade points are based on the total number of marks obtained by him / her in all heads of the examination of the course. The grade points and their equivalent range of marks are shown in Table-I

Table I: Ten point grade and grade description

Marks Obtained (%)	Grade Point	Letter Grade	Description
90-100	9.00- 10	O	Outstanding
80-89	8.00-8.90	A++	Exceptional
70-79	7.00-7.90	A+	Excellent
60-69	6.00-6.90	A	Very Good
55-59	5.50-5.90	B+	Good
50-54	5.00-5.40	B	Fair
45-49	4.50-4.90	C++	Average (Above)
41-44	4.1-4.49	C	Average
40	4.0	P	Pass
< 40	0.0	F	Fail (Unsatisfactory)
	0.0	AB	Absent

- Non-appearance in any examination / assessment shall be treated as the students have secured zero marks in that subject examination / assessment.
- Minimum P grade (4.00 grade points) shall be the limit to clear / pass the course / subject. A student with F grade will be considered as "failed" in the concerned course and he / she has to clear the course by appearing in the next successive semester examinations. There will be no revaluation or recounting under this system.
- Every student shall be awarded grade points out of maximum 10 points in each subject (based on 10 point scale). Based on the grade points obtained in each subject, Semester Grade Point Average (SGPA) and then Cumulative Grade Point Average (CGPA) shall be computed. Results will be announced at the end of each semester and CGPA will be given at respective exit point.

Computation of SGPA (Semester Grade Point Average) and CGPA (Cumulative Grade Point Average)

Grade in each subject / course will be calculated based on the summation of marks obtained in all modules.

The computation of SGPA and CGPA will be as below

Semester Grade Point Average (SGPA) is the weighted average points obtained by the students in a semester and will be computed as follows

$$SGPA = \frac{\text{Sum (Course Credits) X Number of Grade Points in concerned Course Gained by the Student}}{\text{Sum (Course Credits)}}$$

The SGPA will be mentioned on the grade card at the end of every semester.

- The Cumulative Grade Point Average (CGPA) will be used to describe the overall performance of a student in all semester of the course and will be computed as under.

$$CGPA = \frac{\text{Sum (All six Semester SGPA)}}{\text{Total Number of Semester}}$$

The SGPA and CGPA shall be rounded off to the second place of decimal.

Grade Card

Results will be declared and the grade card (containing the grades obtained by the student along with SGPA) will be issued by the university after completion of every semester. The grade card will be consisting of following details.

- Title of the courses along with code opted by the student.
- Credits associated with the course.
- Grades and grade points secured by the student.
- Total credits earned by the student in a particular semester.
- Total credits earned by the students till that semester.
- SGPA of the student.

- CGPA of the student (at respective exit point).

Cumulative Grade Card

The grade card showing details grades secured by the student in each subject in all semesters along with overall CGPA will be issued by the University at respective exit point.

Paper Code Description:

The course offered by the university shall have an alphanumeric course code consisting of a string of six characters. The first three characters in a course code shall be capital letters identifying the responsible general component (BVG) and skill development components in Livestock Production and Management (LPM) of the B. Voc. course. The next three numerical digits give the following information. The first digit specifies the first semester of first year of the UG course. Second and third digit specifies the serial number of the general and skill development component.

10. Structure of the Course:

Course Structure of F.Y. B. Voc. (Livestock Production and Management)

Semester-I				**Mark**		
Paper Code	**Title**	**No. of Credits**	**Hrs. /week**	**Internal (CIA)**	**External (ESE)**	**Total**
Total Credits = Skill Development Components + General Education Components (**18 + 12 = 30**)						
Skill Development Components						
LPM-101	Livestock production and management-I	3	3	35	40	75
LPM-102	Animal nutrition and feed technology	3	3	35	40	75
LPM-103	Fodder production and management	3	3	35	40	75
LPM-104	Lab- Livestock production and management-I	3	6	35	40	75
LPM-105	Lab- Animal nutrition and feed technology	3	6	35	40	75
LPM-106	Lab- Fodder production and grassland management	3	6	35	40	75

General Education Components						
LPM-107	Communication English	4	4	50	50	100
LPM-108	Functional Marathi	4	4	50	50	100
LPM-109	Introduction to Constitution	2	2	25	25	50
LPM-110	Democracy, Election and Governance	2	2	25	25	50
Physical Education						Grade
Total		**30**	**39**	**350**	**400**	**750**
Semester-II				**Mark**		
Paper Code	**Title**	**No. of credits**	**Hrs. /week**	**Internal (CIA)**	**External (ESE)**	**Total**
Total Credits = Skill Development Components + General Education Components (**18 + 12 = 30**)						
Skill Development Components						
LPM-111	Livestock production and management-II	3	3	35	40	75
LPM-112	Avian production management	3	3	35	40	75
LPM-113	Applied nutrition	3	3	35	40	75
LPM-114	Lab- Livestock production and management-II	3	6	35	40	75
LPM-115	Lab- Avian production management	3	6	35	40	75
LPM-116	Lab- Applied nutrition	3	6	35	40	75
General Education Components						
LPM-117	Basics of Computer	3	3	35	40	75
LPM-118	Soft Skills	3	3	35	40	75
LPM-119	Lab- Basics of Computer	3	3	35	40	75
LPM-120	Lab- Soft Skills	3	3	35	40	75
Total		**30**	**39**	**350**	**400**	**750**

B. Voc. (Livestock Production and Management) Semester III & IV

Semester-III				Mark		
Paper Code	**Title**	**No. of Credits**	**Hrs. /week**	**Internal (CIA)**	**External (ESE)**	**Total**
Total Credits = Skill Development Components + General Education Components (**18 + 12 = 30**)						
Skill Development Components						
LPM-201	Livestock and poultry breeding	3	3	35	40	75
LPM-202	Commercial poultry production and hatchery management-I	3	3	35	40	75
LPM-203	Milk and meat hygiene	3	3	35	40	75
LPM-204	Lab- Livestock and poultry breeding	3	6	35	40	75
LPM-205	Lab- Commercial poultry production and hatchery management-I	3	6	35	40	75
LPM-206	Lab- Milk and meat hygiene	3	6	35	40	75
General Education Components						
LPM-207	Personality Development	3	3	35	40	75
LPM-208	Human Values	3	3	35	40	75
LPM-209	Lab- Personality Development	3	6	35	40	75
LPM-210	Lab- Human Values	3	6	35	40	75
Total		**30**	**45**	**350**	**400**	**750**

Semester-IV				Mark		
Paper Code	**Title**	**No. of credits**	**Hrs. /week**	**Internal (CIA)**	**External (ESE)**	**Total**
Total Credits = Skill Development Components + General Education Components (**18 + 12 = 30**)						
Skill Development Components						
LPM-211	Milk and milk products technology	3	3	35	40	75
LPM-212	Abattoir practices and animal products technology	3	3	35	40	75
LPM-213	Avian pathology	3	3	35	40	75

LPM-214	Lab- Milk and milk products technology	3	6	35	40	75
LPM-215	Lab- Abattoir practices and animal products technology	3	6	35	40	75
LPM-216	Lab- Avian pathology	3	6	35	40	75
General Education Components						
LPM-217	Environment Science	4	4	50	50	100
LPM-218	Applied Psychology	4	4	50	50	100
LPM-219	Marketing Strategies	4	4	50	50	100
Total		**30**	**39**	**350**	**400**	**750**

Bachelor of Vocation (Livestock Production and Management)

B. Voc. Third Year (V and VI Semester)

Semester- V				**Mark**		
Paper Code	**Subject Title**	**No. of Credits**	**Hrs. /week**	**Internal (CIA)**	**External (ESE)**	**Total**
Total Credits = Skill Development Components + General Education Components (**18 + 12 = 30**)						
Skill Development Components						
LPM-301	Epidemiology and zoonoses	4	4	50	50	100
LPM-302	Pet animal breeding and management	4	4	50	50	100
LPM-303	Veterinary Clinical Medicine-I	4	4	50	50	100
LPM-304	Lab- Epidemiology and zoonoses	3	6	35	40	75
LPM-305	Project / On Field Training	3	6	35	40	75
General Education Components						
LPM-306	Entrepreneurship-I	4	4	50	50	100
LPM-307	Human Resource Management	4	4	50	50	100
LPM-308	Project / Survey /Seminar /Model	4	4	50	50	100
		30	**36**	**370**	**380**	**750**

Semester- VI						
Paper Code	**Subject Title**	**No. of Credits**	**Hrs. /week**	**Internal (CIA)**	**External (ESE)**	**Total**
Total Credits = Skill Development Components + General Education Components (**18 + 12 = 30**)						
Skill Development Components						
LPM-311	Livestock economics and marketing	4	4	50	50	100
LPM-312	Veterinary Clinical Medicine-II	4	4	50	50	100
LPM-313	Commercial poultry production and hatchery management-II	4	4	50	50	100
LPM-314	Lab- Livestock economics and marketing	3	6	35	40	75
LPM-315	On Field Training / Project Report & Seminar	3	6	35	40	75
General Education Components						
LPM-316	Entrepreneurship-II	4	4	50	50	100
LPM-317	Organizational Behaviour	4	4	50	50	100
LPM-318	Disaster Management	4	4	50	50	100
		30	**36**	**370**	**380**	**750**

11. **Equivalence of previous syllabus along with propose syllabus.**: Nil (This is first time syllabus is prepared for new course)
12. **University Terms:**

As per academic calendar of the university

- Diploma, Advance Diploma and Degree Certificate will be provided by the Savitribai Phule Pune University, Pune
- Format of certificate will be similar to the format of passing certificate.
- First year mark-sheet will be provided by the college.
- First year mark-sheet will be signed by the Principal of college and College Examination Officer in the affiliated colleges.

- Second year and third year mark-sheet will be signed by the COE of Savitribai Phule Pune University, Pune

13. Subject wise Detailed Syllabus:

Semester-I

Skill Development Components

G.M.D. Arts, B.W. Commerce and Science College, Sinnar, Dist. Nashik

B.Voc- (Livestock Production and Management) Degree Course

(Livestock Production and Management) (A.Y.2018-19)

First Year- Semester – I

Skill Development Components

LPM-101: Livestock Production Management-I

Theory **3 Credits**

Unit-I

Livestock in India- association of livestock to Indian society during vedic, medieval and modern era. Demographic distribution of livestock and role in economy. Introductory animal husbandry. Common animal husbandry terms. Body conformation and identification. Dentition and ageing of animals.

Unit-II

Transport of livestock by rail, road, air and on foot. Common farm management practices including disinfection, isolation, quarantine and disposal of carcass. Introduction to methods of drug administration. Common vices of animals, their prevention and care. Livestock production systems of different agro-climatic zones. Livestock resources and resources management Livestock produce and products and their availability and their role in rural/urban hearth/economy. Organic livestock production.

Unit-III

General principles affecting the design and construction of building for housing for various livestock species. Selection of site. Arrangements of the building with special reference to Indian conditions. Utilization of local materials. Building materials used for construction of wall, roof and floor of animal houses, their characteristics, merits and demerits.

Demography of cattle and buffalo population. Breeds and breed descriptors of important breeds. Important traits of cattle and buffaloes. General management and feeding practices of calves, heifers, pregnant, lactating and dry animals in bulls and working animals. Draught ability of cattle and buffaloes. Raising of buffalo mates for meat production.

Housing systems, layout and design of different biddings for dairy animals inducing backyard dairy and mixed farms. Routine dairy farm operations and labor management Methods of milking and precautions. Factors affecting quality and quantity of milk production. Clean max production. Dairy farm accounts and records. Concepts of input and output cost of dairy farming (small and large holdings).

Unit-IV

Demography of sheep and goat population and their rote in economy. Breeds and breed descriptors. Important bans for meat milk and fiber. General management and feeding-practices during different stages of growth, development and production (milk, meat and wool) in small and large holdings. Breeding schedule and management of ram and buck. Weaning and fattening of lambs and kids. Glossaries of terms in wool industry. Shearing of sheep. Physical and chemical properties of wool. Impurities in wool Factors influencing the quality of wool grading. Recovery of wool wax and its use. Housing systems, layout and design of different buildings for small ruminants judging for the quality and confirmation of body parts of cattle, buffalo, sheep and goat culling of animals. Preparation of animals for show.

Unit-V

Problems and prospects of dairy, meat and wool industry in India. Animal and animal products market and marketing. Animal Fairs and Meals. Animal pounds and Goshalas.

Practical

LPM-104: Lab. - Livestock Production Management-I Credits: 3

1. A. Identification of various breeds of
    a. cattle,
    b. buffalo,
    c. sheep
    d. goat

   B. Familiarization with body points of animals. Approaching, handling and restraining
    a. cattle,
    b. buffalo,
    c. sheep

d. goat

C. Clipping, shearing, dipping, spraying and spotting sick animals.

2. A. Detection of vices. Feeding of animals. Methods of identification (marking, tattooing, branding, tagging and electronic chip).

B. Determination of age. Determination of body weight using different measurements. Preparation of animals for show and judging. Layout plans for dairy and sheep/goat farms. Familiarization with routine farm operations.

3. A. Selection and culling of animals. Milking of dairy animals. Training of breeding mates. Detection of heat Identification and care of pregnant animals. Care of neonatal and young stock. Maintenance, cost accounting, economic analysis and preparation of balance sheet of dairy and sheep/goat farm records. Structure of wool and its differentiation from hair fibre.

4. Determination of staple length, crimps, diameter and strength of wool fibre. Sorting, packaging and grading of wool. Recovery of wax from wool. Scouring and carbonization of wool. Visit to different animal farms/ demonstration centres/ individual rural, urban and peri-urban animal units/ wool production centres & industries/ wool, meat and live animal markets.

5. Preparation of project proposals.

Reference Books:

1. Sastry, N.S.R. and Thomas, C.K. (2005) Livestock Production Management 4th Ed.

2. Thomas, C.K. and Sastry, N.S.R (1991)Dairy Bovine Production

3. Cockrill, R.W. (1974)The Husbandry and Health of the Domestic Buffalo

4. Ensminger, M.E. (2002)Sheep and Goat Science, 6th Ed.

5. Clutton Brock, J.(2004)A Natural History of Domesticated Mammals, 2nd Ed.

6. Watson, J.A.S. and Mills, W.J. (2005)Farm Animals and their Management

7. Taylor, R.E. and Field, T.G. (1977) Scientific Farm Animal Production

8. Pagot, J. (1992)Animal Production in the Tropics and Sub-tropics

9. Mason, I.L. (1988)World Dictionary of Livestock Breeds, 3rd Ed.

10. Anderson, R.H. and Edney, A.T.B. (1991)Practical Animal Handling

LPM-102: Animal Nutrition and Feed Technology

Theory **3 Credits**

Unit-I

Importance of nutrients in animal production and health. Composition of animal body and plants. Nutritional terms and their definitions. Importance of minerals (major and trace elements) and vitamins in health and production, their requirements and supplementation in feed.

Unit-II

Common feeds and fodders, their classification, availability and importance for livestock and poultry production. Measures of food energy and their applications - gross energy, digestible energy, metabolisable energy, net energy, total digestible nutrients, starch equivalent, food units, physiological fuel value. Direct and indirect calorimetry, carbon and nitrogen balance studies.

Unit-III

Protein evaluation of feeds - Measures of protein quality in ruminants and non-ruminants, biological value of protein, protein efficiency ratio, protein equivalent, digestible crude protein. Calorie protein ratio. Nutritive ratio. Various physical, chemical and biological methods of feed processing for improving the nutritive value of inferior quality roughages.

Unit-IV

Preparation, storage and conservation of livestock feed through silage and hay and their uses in livestock feeding. Harmful natural constituents and common adulterants of feeds and fodders. Feed additives in the rations of livestock and poultry; Antibiotics and hormonal compounds and other growth stimulants, and their uses.

Unit-V

Importance of scientific feeding. Feeding experiments. Digestion and metabolism trial. Norms adopted in conducting digestion trial. Measurement of digestibility. Factors affecting digestibility of a feed. Feeding standards, their uses and significance, merit and demerits of various feeding standards with reference to ruminants. Nutrient requirements of livestock-energy and protein requirement for maintenance and production.

Unit-VI

Methods adopted for arriving at energy and protein requirements for maintenance and production in terms of growth, reproduction, milk, meat, wool and work. Balanced ration and its characteristics. General principles of computation of rations. Formulation of

rations and feeding of dairy cattle and buffaloes during different phases of growth, development and production (neonate, young, mature, pregnant, lactating and dry animals; breeding bull and working animals). Formulation of ration and feeding of sheep and goat during different phases of growth, development and production (milk, meat and wool). Use of NPN compound for ruminants.

LPM-105: Animal Nutrition and Feed Technology

Practical **3 Credits**

1. Familiarization of various feed stuff, fodders and their selection.
2. Preparation and processing of samples for chemical analysis - herbage, faeces, urine and silages.
3. Weende's System of analysis - Estimation of dry matter, total ash, acid insoluble ash, crude protein, ether extract crude fibre, nitrogen free extract, Calcium and phosphorus in feed samples.
4. Demonstration of detergent methods of forage analysis.
5. Qualitative detection of undesirable constituents and common adulterants of feed.
6. Demonstration of laboratory ensiling of green fodders. Silage pit preparation.
7. Demonstration of conducting digestion trial in ruminants. Calculation of nutritive value of different feed stuffs in terms of digestible crude protein (DCP), total digestible nutrient (TDN), Nitrogen retention (NR) and starch equivalent (SE). Calculation of requirements of nutrients in terms of DCP, TDN and metabolisable energy (ME) for maintenance, growth, and other types of production like meat, milk, wool, reproduction and work.
8. Formulation of rations for different categories of livestock under different conditions.
9. Demonstration of the methods for improving the nutritive quality of straws and other crop residues.
10. Formulation of rations for feeding of livestock during scarcity periods. Visit to feed factories.

Reference Books:

1. Banerjee GC. 1988. Feeds and Principles of Animal Nutrition. Oxford & IBH.
2. Givens DI.2000. Forage Evaluation in runminant Nutrition. Great Britain Publ.
3. Gohl BO. 1985. Tropical Feeds. FAO. Lohan OP,
4. Chahal SM & Kishore N. 1998. Feed Quality Evaluation Techniques. CCS Haryana Agricultural Univ. Press. 30 McEllihnery,
5. Robert R. 1994. Feed Manufacturing Technology. The American Feed Industry Assoc.

6. Perry TW. 2004. Feeds and Feeding. Prentice Hall. Ponds WG, Church DC & Pond KR. 1995.
7. Basic Animal Nutrition and Feeding. John Wiley & Sons. Zaworski F. 1997. Feed Industry Red Book. ZMAG Publ.

LPM-103: Fodder Production and Grassland Management

Theory **3 Credits**

Unit-I

Importance of grasslands and fodders in-livestock production. Agronomical practices for production of leguminous and non-leguminous fodders in different seasons.

Unit-II

Soil and water conservation and irrigation drainage for fodder production. Farm, power and agro-energy. Farm machinery and equipment Harvesting and post-harvest techniques for fodder preservation.

Unit-III

Storage of feeds and fodders. Scarcity fodders. Feed and fodder management for individual animals. Fodder production for small units through inter cropping or back yard cultivation.

Unit-IV

Recycling of animals washings and wastes in fodder production.

LPM-106: Fodder Production and Grassland Management

Practical **3 Credits**

1. Visit to the fodder farm. Familiarization with the various types of fodder crops utilized in the state and the samples of fodder in India.
2. Fodder cropping routines - familiarization. Collection, preservation and storage of feed and fodder; possible damages/loss and methods to prevent them.
3. Cost calculations of fodder production. Familiarizations with the back yard fodder cropping and intercropping of fodder.
4. Livestock waste utilization and recycling.
5. Calculation on the economic aspects of fodder cropping and procurement of feed.

Reference Books

1. Pathak, N.N. and Jakhmola, R.C. Forages and Livestock Production

2. Chatterjee, B.N. and Das, P.K.Forage Crop Production
3. Reddy, D.V.Fodder Production and Grassland Management for Veterinarians
4. I.C.A.R.Handbook of Agriculture
5. Merkel, J.Managing Livestock Wastes
6. Wiseman, Finch and Samuel.Crop Husbandry including Grassland
7. Sastry, N.S.R. Thomas, C.K. and Singh, R. A. Livestock Production Management
8. Humphreys, L.R.Tropical Forages
9. I.C.A.R Grasses and Legumes
10. Ranjan, S.K.Animal Nutrition in the Tropics

Semester-I

General Education Components

Semester-I

General Education Components:

LPM-107: Communicative English

Theory **4 Credits**

Unit I:

a) The Clause Elements: S, V, O, C, A

b) The Basic Sentence Types: Declarative, Interrogative, Imperative, Exclamative

c) The Tenses: Past, Present, and Future Time

d) The Punctuation: Punctuation Marks and Capitalisation

e) Word Power: Forming Nouns, Adjectives, Verbs, Adverbs, Synonyms, and Antonyms

f) Forming Marathi Alternatives and Translation

Reference Books:

1. A Practical English Grammar (4th Ed.) by A. J. Thomson and A. V. Martinet (New Delhi: Oxford University Press, 1997)
2. A Communicative Grammar of English (3rd Ed.) by Geoffrey Leech (London: Routledge Publication, 2013)
3. Professional Communication Skills by A. K. Jain & Others (New Delhi: S. Chand & Company Pvt. Ltd., 2014)

LPM-108: Functional Marathi

Theory **4 Credits**

१. भाषेचे स्वरूप

घटक :- १.१ भाषा म्हणेजे काय ?

१. भाषेच्या व्याख्या

२. भाषेची अवसकेता महत्त्व

३. भाषेची वैशिष्ट्ये

४. भाषेची कार्य

२. संवाद लेखन

घटक २.१ संवादाचे स्वरूप

२.२ संवादाची महत्त्व व गरज

२.३ संवाद कौशल्य आणि विकास

२.४ संवाद: एक कला

३. संभासन कौशल्य:-

घटक ३.१ कौटुंबिक संभासण

३.२ कार्यालयीन संभासण

३.३ सार्वजनिक सभा संमेलनांतील स संभासण

३.४ औपचारिक संभासण

३.5 अनौपचारिक संभासण

४. घटक ४.१ वृत्पत्राची बातमी लेखन

४.२ दूरदर्शन वरील बातमी लेखन आकशवाणी वरील बातमी लेखन

४.३ बातमी लेखनाची वैशिष्ट्ये

४.४ बतमी लेखांचे महत्त्व व गरज

५. मुलाखत लेखन

घटक ५.१ मुलखात स्वरूप व उदिष्टये

५.२ मुलखात प्रकार

५.३ मुलाखत महत्त्व व वैशिष्ट्ये

LPM-109: Introduction to Constitution 2 Credits

UNIT 1: PHILOSOPHY OF THE INDIAN CONSTITUTION

a) Constitutional History of India

b) Role of Dr. B.R. Ambedkar in Constituent Assembly

c) Preamble – Source and Objects

d) Sovereign and Republic

e) Socialist and Secular

f) Democratic – Social and Economic Democracy

g) Justice – Social, Economic and Political

h) Liberty – Thought, Expression, Belief, Faith and Worship

i) Equality – Status and Opportunity

j) Fraternity, Human Dignity, Unity and Integrity of the Nation

UNIT 2: FUNDAMENTAL RIGHTS

a) Right to equality

b) Right to freedoms

c) Right against exploitation

d) Right to freedom of religion

e) Cultural and educational rights

f) Right to property

g) Right to constitutional remedies

UNIT 3: DIRECTIVE PRINCIPLES OF STATE POLICY

a) Equal Justice and free legal aid

b) Right to work and provisions for just and humane conditions of work

c) Provision for early childhood, Right to education and SC,ST, weaker section

d) Uniform Civil Code

e) Standard of Living, nutrition and public health

f) Protection and improvement of environment

g) Separation of Judiciary from executive

h) Promotion of International peace and security

UNIT 4: FUNDAMENTAL DUTIES

a) Duty to abide by the Constitution

b) Duty to cherish and follow the noble ideals

c) Duty to defend the country and render national service

d) Duty to value and preserve the rich heritage of our composite culture

e) Duty to develop scientific temper, humanism, the spirit of inquiry & reform

f) Duty to safeguard public property and abjure violence

g) Duty to strive towards excellence

Reference Books:

a) D. D. Basu, Introduction to the Constitution of India, LexisNexis

b) Granville Austin, The Constitution of India: Cornerstone of a Nation,Oxford University Press

c) Subhash Kashyap, Our Constitution, National Book Trust

d) M.P. Jain, Indian Constitutional Law, LexisNexis

e) V.N.Shukla, Constitution of India, Eastern Book Company

f) P.M. Bakshi, The Constitution of India, Universal Law Publishing

g) M.V.Pylee, Constitutional Government in India, S. Chand

h) V. S. Khare, Dr. B.R.Ambedkar and India's National Security

LPM-110: Democracy, Election and Governance 2 Credits

Chapter 1 Democracy- Foundation and Dimensions

a. Constitution of India

b. Evolution of Democracy- Different Models

c. Dimensions of Democracy- Social, Economic, and Political

Chapter 2 Decentralization

a. Indian tradition of decentralization

b. History of panchayat Raj institution in the lost independence period

c. 73rd and 74th amendments

d. Challenges of caste, gender, class, democracy and ethnicity

Chapter 3 Governance

a. Meaning and concepts

b. Government and governance

c. Inclusion and exclusion

References:

1. Banerjee-Dube, I. (2014). A history of modern India. Cambridge University Press.

2. Basu, D. D. (1982). Introduction to the Constitution of India. Prentice Hall of India.

3. Bhargava, R. (2008). Political theory: An introduction. Pearson Education India. 2

4. Bhargava, R., Vanaik, A. (2010) Understanding Contemporary India: Critical Perspective. New Delhi: Orient Blackswan.

5. Chandra, B. (1999). Essays on contemporary India. Har-Anand Publications.

6. Chaterjee, P. (1997). State and Politics in India.

7. Dasgupta. S., (ed) (2011), 'Political Sociology', Dorling Kindersley (India) Pvt. Ltd., Licensees of Pearson Education in south Asia. ISBN: 978-317-6027- 7.

8. Deshpande, S. (2003). Contemporary India: A Sociological View, New Delhi:Viking Publication. 10.Guha, R. (2007). India After Gandhi: The History of the World's Largest. Democracy, HarperCollins Publishers, New York.

9.Guha, R. (2013). Gandhi before India. Penguin UK.

10.Jayal. N.G. (2001). Democracy in India.New Delhi: Oxford University Press.

11.Kohli, A. (1990). Democracy and discontent: India's growing crisis of governability. Cambridge University Press.

Semester-II

Skill Development

Components

G.M.D. Arts, B.W. Commerce and Science College, Sinnar, Dist. Nashik

B.Voc- (Livestock Production and Management) Degree Course

(Livestock Production and Management) (A.Y.2018-19)

First Year- Semester – II

Skill Development Components

LPM-111: Livestock Production Management-II

Theory **3 Credits**

Unit-I

Introduction and scope of swine farming in the country. Demography of swine population. Breeds and their role in economy. Management of different categories of swine for optimal production: breeding and pregnant sows; sows at farrowing and after farrowing: pig-Ms, growing stock, lactating sows, feed lot stock. Mating technique in swine. Housing of swine. Swine feeds and feeding. Economics of pig fanning.

Unit-II

Equine population of India. Horses, donkeys and mules and their utility. Identification of breeds of horses. Dentition and ageing of horses. Handing, restraining, care and routine management of equines including grooming, saddling and exercise. Stable and Its management Feeding routine for horse, donkeys and mules. Vices of horses. Care of stallion. Mating of Horses broodmare and its care. Foaling and care of newborn. Breeding mules. Care of race horses and preparing horses for show. Visit to races, polo, horse show.

Unit-III

Importance of laboratory animal breeding care and housing standards of mice, rats and guinea pigs. General considerations on feeding and breeding of laboratory animals. Prophylactic measures for commonly occurring laboratory animal diseases. Concept of production of specific pathogen tree (SPF) and germ free laboratory animals.

Unit-IV

Scope of rabbit farming in the country, breeds and their distributions In India and abroad. Limitation of rabbit animal production. Selection, care , and management of breeding stock for commercial purpose. Identification. Care and management of landing animals and kindling. Care of new born, growing stock. Harvesting of products. Breeding and selection techniques for optimal production. Feeds and feeding for rabbit production- Housing of rabbit Shearing/slaughtering and preservation of products. Diseases and parasite control, hygienic care. Disposal, utilization and

recycling of wastes etc. Economic aspects of rabbit production, accounting their expenditure, income, etc. Manpower- requirements and personnel/labour management Preparing projects for micro (backyard) mini, and major rabbit farms.

LPM-114: Livestock Production Management-II

Practical **3 Credits**

1. Identification of Indian and exotic breeds of swine; handling of swine; Routine inspection. Identification of diseases, examination and control of parasites, vaccination, Identification of pregnant animals. Care during pregnancy, isolation and care of farrowing sows, care of pig lings, Castration, culling, tooth cutting.

2. Calculation of profits and preparation of feasibility reports and projects for piggery. Layout plans of swine houses; routine operations of swine farms. Marketing of swine. Feeding of swines. Preparation of swines for show and judging.

3. Identification of body parts and handling of laboratory animals. Housing system and space requirements for laboratory animals. Weighing, sexing and weaning of laboratory animals. Marking for identification of laboratory animals for purpose of their individual recording. Computation and compounding of balanced diet for laboratory animal mainly Mice, Rats, Guinea -pigs and Rabbits.

4. Feeding schedule of laboratory animals for high breeding efficiency. Maintenance of breeding records of laboratory animals. Prophylactic measures against common disease of lab animate. Hygienic care and control of parasites (routines).

5. Visit to Rabbitary. Handing and restraint Body parts. Identification of breeds. Judging. Feeds and feeding. Housing requirement and equipment Farrowing. Care of newly born young ones-tagging, tattooing for identification. Shearing. Dressing of carcass. Horse riding: walking, trotting, cantering and galloping. Preparation of equines for show and judging. Layout plans for stables.

Reference Books:

1. Sastry, N.S.R. and Thomas, C.K. (2005) Livestock Production Management 4th Ed.

2. Thomas, C.K. and Sastry, N.S.R (1991)Dairy Bovine Production

3. Cockrill, R.W. (1974)The Husbandry and Health of the Domestic Buffalo

4. Ensminger, M.E. (2002)Sheep and Goat Science, 6th Ed.

5. Clutton Brock, J.(2004)A Natural History of Domesticated Mammals, 2nd Ed.

6. Watson, J.A.S. and Mills, W.J. (2005)Farm Animals and their Management

7. Taylor, R.E. and Field, T.G. (1977) Scientific Farm Animal Production

8. Pagot, J. (1992)Animal Production in the Tropics and Sub-tropics

9. Mason, I.L. (1988)World Dictionary of Livestock Breeds, 3rd Ed.

10. Anderson, R.H. and Edney, A.T.B. (1991)Practical Animal Handling

LPM-112: Avian Production Management

Theory **3 Credits**

Unit-I

Indian Poultry industry-brief outline of the different segments-poultry statistics. Classification of poultry, common breeds of poultry including duck, quail, turkey & guinea fowl and their descriptions. Description of indigenous fowls.

Unit-II

Reproduction in fowl, male and female reproduction systems, formation of eggs, structure of eggs. Important economic traits of poultry, egg production, egg weight egg quality, growth, feed consumption and feed efficiency, fertility and hatchability, plumage characteristics and comb types. Scavenging system of management raising of chicks, scavenger feed base of village. Low input technology; backyard and semi intensive unit of various sizes; their description, management and economic achievements.

Unit-III

New colored feathered birds developed in public and private sectors for meat and egg production for rural poultry; their acceptability and assimilation in rural eco-system. Mixed farming and poultry raising.

Unit-IV

Concept of self-local market unit Brooding and rearing practices used for chicken, duck, quail, turkey and guinea fowl. Economic production of chicken and other classes of poultry. Hatching and feeding norms for different species of poultry. Marketing of poultry and poultry products. Setting of farms for different classes of poultry. Organic and hill farming.

LPM-115: Avian Production Management

Practical **3 Credits**

1. Morphological description of common exotic poultry breeds like White Leghorn (WLH), Rhode Island Red (RIR), Plymouth Rock, Cornish and New Hampshire.
2. Diagrammatic illustration of body parts of chicken, duck, quail, guinea fowl and turkey. Descriptive specialties of indigenous birds, listing of its advantageous value in rural areas.
3. Diagrammatic representation of scavenging, backyard and semi intensive units; with habitats, feed base and shelter. Conservation of indigenous germ plasm; listing of conservation techniques.
4. Demonstration of newly developed breeds in rural environment Housing, equipments, nesting and brooding requirements. Vaccination, medication and incubation requirements. Preparation of projects for rural people on poultry and other species (duck, quail, guinea fowl and turkey).

Reference Books

1. Scanes, C.G.; Brant, G and Ensminger, M.E. (2004) Poultry Science, 4th Ed.
2. Sreenivasaiah, P.V. (2006)Scientific Poultry Production – a unique encyclopedia, 3rd Ed.
3. Jull, M.A. (2003)Successful Poultry Management
4. Sainsbury, D. (1984)Poultry Health and Management
5. Roberts, V. (2003)British Poultry Standards
6. Leeson, S and Summers, J.D. (1993)Commercial Poultry Production
7. North, M.O and Bell, D.D. (1990)Commercial Chicken Production Manual, 4th Ed.
8. Murd, L.M. (2003)Modern Poultry Farming
9. Leeson, S and Summers, J.D. (1993)Commercial Poultry Nutrition
10. Johari, D.C.and Hussain, K.Q. (1996)Commercial Broiler Production

LPM-113: Applied Nutrition

Theory **3 Credits**

Unit-I

Factors affecting digestibility of a feed. Nutrient requirements in poultry, swine and equine -Energy and protein requirement for maintenance and production. Methods adopted for

arriving at energy and protein requirements for maintenance and production in terms of growth, reproduction and production (egg, meat and work).

Unit-II

Formulation of rations as per Bureau of Indian Standards (BIS), National Research Council (NRC) and Agricultural Research Council (ARC) specifications. Feeding standards, their uses and significance, merit and demerits of various feeding standards with reference to monogastric animals and poultry.

Unit-III

Feeding of swine (Piglets, Growers, Lactating and pregnant sows, Breeding boar, Fattening animals), equine (foal, yeaning, broodmare, stallion and race horses) and poultry (Starter, Growers, Broilers, Layers) with conventional and unconventional feed ingredients. Feeding of ducks.

Unit-IV

Laboratory Animal Nutrition: Nutrient requirements of mice, rat, rabbit and guinea pig. Significance of carbohydrates, lipids, proteins and amino acids, minerals arid vitamins in lab animal nutrition. Diet formulation and preparation and feeding practices. Feed supplements.

LPM-116: Applied Nutrition

Practical **3 Credits**

1. Calculation of requirements of nutrients in terms of DCP, TDN and ME for maintenance, growth, reproduction and other types of production like egg and meat.
2. Formulation of rations for poultry and swine with conventional and unconventional feed ingredients.
3. Principles of compounding and mixing of feeds.
4. Visit to poultry farms.

REFERENCE BOOKS

1. Animal Nutrition by P. Mc Donold, R.A. Edwards, J.F.D. Greenhalgh & C.A. Morgan
2. Animal Nutrition Science by Gordon M.C.L. Dryden
3. Nutrient Requirement of Dairy Cattle - 2001

Semester-II

General Education

Components

First Year Semester-II

General Education Components

LPM-117: Basics of Computer Credits: 3

UNIT-I

Introduction to computers: Characteristics, history and evolution, generation and types of computers. Computer architecture; Input and output devices; primary and secondary storage devices; central processing unit. Operating system: Types, booting, DOS commands, Windows and its applications.

UNIT-I

M.S. Office: Word, Excel and Power Point. Computer virus: Symptoms, detection and protection. Introduction to internet: World Wide Web, database, e-mail and chat. Role and use of computers in aquaculture.

UNIT-III

Creating a database, modifying table creating forms, queries and reports and protecting the database Windows vista, MS-office 2007-2010, Internet explorer, online collaboration tools

FPP-119: Lab. Basics of Computer Credits-03

Practical/Tutorial

- MS-DOS commands.
- Windows and its applications.
- MS Word and its applications.
- MS Excel and its application.
- MS Power Point and its applications.
- Antivirus and its applications.
- Internet – browsing, surfing, e-mail and chat.
- Creating database
- Windows vista, MS-office 2007-2010, Internet explorer
- Uses and applications of computers in sericulture

Reference books for Basics of Computer:

1.Microsoft Office Word 2007 a Beginners Guide: A Training Book of Microsoft Word 2007, By W.R. Mills, United States of America, Bloomington, Indian.

2.Microsoft Office Word 2007: Illustrated Co : Illustrated Complete By Jannifer A. Duffy, Carol M. Cram.

3.Sams Teach You Microsoft Office 2007 All in One By Greg Perry.

4.Microsoft Office Excel 2007: Comprehensive Concepts and Techniques, By Greg B. Shelly, Thomas J. Cashman J. Quasney.

5.Microsoft Office Power Point 2007: Illustrated Introductory : Introductory, By David Beskeen.

6.Microsoft Office Power Point 2007: Top 100 Simplified Tips & Tricks, By Paul McFedries.

7.Microsoft Office Access 2007: Comprehensive Concepts and Techniques, By Thoma J. Cashman, Philip J. Pratt

8.New Perspectives on Microsoft Office Access 2007, Comprehensive, Joseph J. Adamski, Kathleen T. Finnegan.

9.Basic Internet, By O.H.U. Finnegan.

10.Microsoft Office 2007 Power Point: A Training Book for Microsoft Power Point 2007, By W.R. Mills.

LPM-118: Soft Skills Credits-03

Theory

Unit 1.

Introduction to Soft Skills, Aspects of Soft Skills, Effective communication Skills, Classification of Communication, Personality Development

Unit 2:

Positive Thinking, Telephonic Communication Skills, Telephonic Communication Skills: Part II, Communicating Without Words, Paralanguage

Unit 3:

The Language of Touch, Meta-communication, Listening Skills, Types of Listening

Unit 4:

Negotiation Skills I, Negotiation Skills II, Culture as Communication: Part I, Communicating across Cultures: Part II, Organizational Communication

Unit 5:

Communication Breakdown: Part I, Communication Breakdown: Part II, Advanced Writing Skills, Principles of Business Writing, Types of Business Writing: Part I

Unit 6:

Business Writing: Part II, Business Letters, Business Letters: Format and Style, Types of Business Letter: Part I, Business letter: Part II

Unit 7:

Writing Reports, Types of Report, Strategies for Report Writing: Part I, Strategies for Report Writing: Part II, Evaluation and Organization of Data

Unit 8:

Structure of Report: Part I, Structure of Report: Part II, Report Style: Part I, Report Style: Part II, Group Communication Skills

Unit 9:

Leadership Skills, Group Discussion Part I, Group Discussion Part II, Meeting Management, Adaptability & Work Ethics

Unit 10:

Advanced Speaking Skills, Oral Presentation, Speeches & Debates, Combating Nervousness, Patterns & Methods of Presentation, Oral Presentation: Planning & Preparation

Unit 11:

Making Effective Presentations, Speeches for Various Occasions, Interviews, Planning & Preparing (Part I): Effective Résumé, Planning & Preparing (Part II): Effective Résumé

Unit 12:

Drafting an Effective Resume, Facing Job Interviews: Part I, Facing Job Interviews: Part II, Emotional Intelligence & Critical Thinking, Applied Grammar

LPM-120 Lab- Soft Skills

Practical **Credits: 3**

- Seminars
- Paper Presentation
- Group Discussion
- Tutorials
- Measuring the development scale in the students
- Project report writing

Semester-III

Skill Development

Components

Second Year- Semester – III

Skill Development Components

LPM-201: Livestock and Poultry Breeding 3 Credits

Theory

Unit-I

History of Animal Breeding; Classification of breeds; Economic characters of livestock and poultry and their importance; Breeding/Selection techniques for optimal production.

Unit-II

Selection: Response to selection and factors affecting it; Bases of selection individual, pedigree, family, sib, progeny and combined; Indirect selection; Multitrait selection.

Unit-III

Classification of mating systems; Inbreeding and out breeding-genetic and phenotypic consequences viz., inbreeding depression and heterosis: Systems of utilization of heterosis; Selection for combining ability;

Unit-IV

Breeding methods for the improvement of dairy cattle and buffaloes {crossbreeding, sire evaluation, field progeny testing, open nucleus breeding system (ONBS)}, sheep, goat, swine and poultry; Breed development; Conservation of germplasm, Current livestock and poultry breeding programmes in the state and country.

LPM-204: Lab - Livestock and Poultry Breeding

Practical **Credits: 3**

1. Description and measurement of economic traits of Livestock & poultry.
2. Standardization of performance records, Computation of selection differential, generation interval and expected genetic gain; Construction of selection index; Sire indices.
3. Measurement of inbreeding and relationship coefficients; Estimation of heterosis.
4. A visit to breeding Centre

ReferenceS:

1.Scanes, C.G.; Brant, G and Ensminger, M.E. (2004) Poultry Science, 4th Ed.

2.Sreenivasaiah, P.V. (2006) Scientific Poultry Production – a unique encyclopedia, 3rd Ed.

3.Jull, M.A. (2003)Successful Poultry Management

4.Sainsbury, D. (1984)Poultry Health and Management

5.Roberts, V. (2003)British Poultry Standards
6.Leeson, S and Summers, J.D. (1993)Commercial Poultry Production
7.North, M.O and Bell, D.D. (1990) Commercial Chicken Production Manual, 4th Ed.
8.Murd, L.M. (2003)Modern Poultry Farming
9.Leeson, S and Summers, J.D. (1993)Commercial Poultry Nutrition

LPM- 202: Commercial Poultry Production and Hatchery Management-I

Theory **Credits: 3**

Unit-I

Housing - Location of poultry. Types of poultry houses. Different types of rearing-advantages and disadvantages. Space requirement for different age groups under different rearing systems. Environmentally controlled housing. Brooding: Types of brooders; preparation of shed to receive chicks; importance of environment (temperature, humidity and ventilation). Feeding and vaccination in early stage of chicks.

Unit-II

Rearing and management- Care and management of growing, laying/broiler birds of both breeders and commercial categories of poultry. Battery cage management different types and sizes. Poultry judging. Litter materials, litter-borne diseases and control; potential for poultry litter used as fertilizers; recycling for livestock feeding and power generation; Special management care in adverse weather conditions/ stress; summer management modification of housing light reflectors; insulators, sprinklers, loggers and other methods; dietary modification to minimize heat stress; special management during rainy and winter season; other stress management- vices in poultry and its remedial measures.

Unit-III

Water management- Standard for drinking water in terms of total solids. pH, minerals levels, sanitizers and water sanitations, diseases spread through water contamination-prevention. Biosecurity- Proactive measures to minimize entry of infections in farm premises-farm fencing, disinfectant pits, personnel management restriction of movement etc. Poultry welfare and behaviour.

Unit-IV

Feeding- digestive system and digestion in chicken. Classification, selection of common feed ingredients and their nutrient composition. Nutrient requirement for different age groups.

Feed formulations, economics of feed formulation-cost/, unit nutrient Feeding systems and feeding management economization of poultry feeding. Feed restriction, separate male feeding, non-nutrient feed additives including herbal bio-enhancers; anti-nutritional factors and toxins.

LPM- 205: Lab- Commercial Poultry Production and Hatchery Management -I

Practical **Credits: 3**

1. Male and female reproductive system. Artificial insemination. Selection of breeder flock.
2. Working of hatchery Incubation requirement; incubators working, care. Hatchery layout and equipment's. Handing of eggs prior and during incubation. Candling. Fumigation.
3. Project reports of setting up a hatchery. Hatchery records and maintenance. Exposure to commercial broiler and layer farms-different system of housing.
4. Demonstration of litter and cage rearing systems. Feed equipment's and maintenance; hammer mill, mixture, pellet mill-types, principle of working, comparison of different types, premix preparations, quality control of raw materials. Feed mill operation.
5. Demonstration of different types of feeder, waterer, fogger, sprinklers etc. Maintenance of farm records. Medication-demonstration of routinely employed methods of administration.
6. Vaccination practice in general and demonstration of different roots of administration in particular.

Reference Books

1. Scanes, C.G.; Brant, G and Ensminger, M.E. (2004) Poultry Science, 4th Ed.
2. Sreenivasaiah, P.V. (2006) Scientific Poultry Production – a unique encyclopedia, 3rd Ed.
3. Jull, M.A. (2003) Successful Poultry Management
4. Sainsbury, D. (1984)Poultry Health and Management
5. Roberts, V. (2003)British Poultry Standards
6. Leeson, S and Summers, J.D. (1993) Commercial Poultry Production
7. North, M.O and Bell, D.D. (1990) Commercial Chicken Production Manual, 4th Ed.
8. Murd, L.M. (2003)Modern Poultry Farming
9. Leeson, S and Summers, J.D. (1993) Commercial Poultry Nutrition
10. Johari, D.C.and Hussain, K.Q. (1996) Commercial Broiler Production

LPM-203: Milk and Meat Hygiene.

Theory **Credits: 3**

Unit-I

Milk hygiene in relation to public health. Microbial flora of milk and milk products. Sources of milk contamination during collection and transport of milk and processing of dairy products. Control of milk and milk product contamination. Hygienic handling/ management of dairy equipment Quality control of milk and milk products. Milk hygiene practices in India and other countries. Legislation and standards for milk and milk products. Milk as a source of disease transmission.

Unit-II

Pathological conditions associated with the transport of food animals. Elements of meat inspection. Hygiene in abattoirs. Ante-mortem inspection of meat animals. Humane slaughter of animals. Postmortem inspection of meat animals. Methods of inspection of meat. Rigor mortis and examination of lymph nodes. Speciation of meat. Health implications of emergency and causality slaughter. Hygienic disposal of unsound meat.

Unit-III

Inspection of poultry foods for human consumption. Occupational health hazards in meat processing plants. Meat as a source of disease transmission. Food safety, definition, hazard analysis and critical control point (HACCP) system and chemical and microbial toxicities associated with milk, meat.

Unit-IV

Risk analysis: assessment and management and food safety measures. Toxic residues (pesticides, antibiotics, metals and hormones) and microbial toxins in food and their health hazards. Types of bio-hazards. Sanitary and phytosanitary measures in relation to foods of animal origin and aquatic foods. International and national food safety standards {Office International des Epizootics (OIE), World Trade Organisation (WTO), Sanitary and Phytosanitary (SPS) and Codex Alimentarius}.

LPM- 206: Lab- Milk and Meat Hygiene.

Practical **Credits: 3**

1. Sanitary collection of samples for chemical and bacteriological examination. Grading of milk by MBR test for pasteurization and plant sanitation.

2. Microbiological examination of raw and pasteurized milk, milk products and water. Standard plate, coliform, faecal streptococcal, psychrophillc, mesophilic and thermophilic counts.

3. Detection of adulterants and preservatives in milk and milk products. Isolation and identification of organisms of public hearth significance from milk.

4. Visit to abattoirs, meat processing plants, marketing centers and food service establishments. Ante-mortem and post mortem inspection of food animals. Methods of slaughter (demonstration at the slaughter houses).

5. Demonstration of speciation of meat. Physical and bacteriological quality of meat and aquatic foods (fish). Demonstration of toxic chemical and microbiological residues in milk and meat

Reference:

1. A textbook of Preventive Medicine- Chakrabarti. A
2. Meat Hygiene - Gracy, Collins and Huey
3. Meat Hygiene - Joshi.B.P
4. A colour Atlas of Meat Inspection- Durao.G
5. Manual on simple methods of Meat preservation- FAO Manual No. 79
6. Poultry Meat Hygiene and Inspection - Bremner.A and Jhonston M
7. Dairy Microbiology - Anandakrishnan C.P., Singh R.B and Padmanabhan P.N
8. Fundamentals of Dairy Microbiology - Prajapathy, J B

Semester-III

General Education Components

Second Year- Semester – III

General Education Components

LPM-207 Personality Development

Theory **Credits: 3**

Unit-I

Self-Analysis: SWOT Analysis, Who am I, Attributes, Importance of Self Confidence, Self Esteem.

Unit-II

Creativity: Out of box thinking, Lateral Thinking.

Unit-III

Attitude: Factors influencing Attitude, Challenges and lessons from Attitude, Etiquette.

Unit-IV

Motivation: Factors of motivation, Self-talk, Intrinsic & Extrinsic Motivators.

Unit-V

Goal Setting: Wish List, Smart Goals, Blue print for success, Short Term, Long Term, Life Time Goals. Time Management Value of time, Diagnosing Time Management, Weekly Planner to do list, Prioritizing work.

LPM-209 Personality Development

Practical **Credits: 3**

ASSESSMENT

1. A practical and activity oriented course which has continuous assessment for marks based on class room interaction, activities etc.
2. Extempore.
3. Technical Topic Presentation

LPM-208 Human values

Theory **Credits: 3**

Chapter I: Human values: Introduction, Concept, Types of values, Personality development:

Introduction, Meaning, Elements, Nature and Importance

Chapter II: Social work, Concept, Ideals of Social work objectives and nature, Need and importance

Chapter III: Constitutional Values, Democracy, Types, Duties, Responsibilities Fundamental Rights and Power Importance

Chapter IV: Self dependency and Self management Meaning Objectives/ Purpose, Importance Self Strength and weaknesses.

LPM-210 Human values

Practical **Credits: 3**

ASSESSMENT

1. A practical and activity oriented course which has continuous assessment for marks based on class room interaction, activities etc.
2. Seminar
3. Tutorial
4. Presentation

Semester-IV

Skill Development Components

G.M.D. Arts, B.W. Commerce and Science College, Sinnar, Dist. Nashik

B.Voc- (Livestock Production and Management) Degree Course

(Livestock Production and Management) (A.Y.2018-19)

Second Year- Semester – IV

Skill Development Components

LPM-211: Milk and milk Products Technology Credit: 03

Theory

Unit-I

Milk Industry in India. Layout of milk processing plant and its management, Composition and nutritive value of milk and factors affecting composition of milk. Physico-chemical properties of milk.

Unit-II

Microbiological deterioration of milk and milk products. Collection, chilling, standardization, pasteurization, homogenizatJbn, bactofugation. Principles of dehydration.

Unit-III

Preparation of butter, paneer/channa, ghee, khoa, lassi, dahi, ice-cream, Cheddar cheese and dairy byproducts, Good Manufacturing Practices. Implementation of HACCP. Toxic/pesticides residues in milk and milk products.

Unit-IV

Packaging, transportation, storage and distribution of milk and milk products. Organic milk food products. Legal and BIS standards of milk and milk products. Sanitation in milk plant

LPM- 214: Lab- Milk and milk Products Technology Credit: 03

Practical

1. Sampling of milk, estimation of fat, solid not fat (S.N.F.) and total solids. Platform tests.
2. Cream separation.
3. Detection of adulteration of milk.
4. Determination of efficiency of pasteurization.
5. Microbiological quality evaluation of milk and milk products.
6. Preparation of milk products like curd, ghee, paneer/channa, khoa, ice-cream, milk beverages.
7. Visit to Modem milk processing and milk manufacturing plants.

References

1. Outline of Dairy Technology by Sukumar De (1985) – Oxford University Press, Delhi.

2. The Technology of Milk Processing by Anantha Krishnan C.P., Khan AQ., Padmanabhan PN. (1991) – Shri Lakshmi Publication, Chennai.

3. Milk Products Preparation and Quality Control by Anantha Krishnan C.P., Khan AQ., Padmanabhan PN. (1993) – Shri Lakshmi Publication, Chennai.

4. Milk and Dairy Products properties and processing by Rosenthal I (1991), VCH New York.

5. Milk and Milk processing by Herrington BL (2000). Green world Publ., New Delhi.

LPM-212: Abattoir Practices and Animal Products Technology

Theory **Credits: 3**

Unit-I

Layout and management of rural, urban and modem abattoirs. BIS standards on organization and layout of abattoirs, Pre-slaughter care, handling and transport of meat animals including poultry.

Unit-II

Ante-mortem and post-mortem examination. Slaughtering and dressing of carcasses. Evaluation, grading and fabrication of dressed carcasses including poultry.

Unit-III

Abattoir byproducts: meat, bone, fish meal and byproducts of pharmaceutical value. Skin and hides: methods of flaying, defects and preservation Management of organic wastes emanating from animal industries, fallen animals and abattoir effluent. HACCP concepts in abattoir management.

Unit-IV

Introduction to wool, fur, pelt and specialty fibers with respect to processing industry. Glossary of terms of wool processing. Basic structure and development of wool follicle. Post shearing operations of wool, classification and grading of wool, physical and chemical properties of wool. Impurity of wool, factors influencing the quality of wool. Brief outline of processing of wool, tests for Identification of wool.

LPM- 215: Lab- Abattoir Practices and Animal Products Technology

Practical **Credits: 3**

1. Methods of ritual and humane slaughter, flaying and dressing of food animals including poultry. Carcass evaluation.

2. Determination of meat yield, dressing percentage, meat bone ratio and cut up parts.

3. Preparation of different abattoir byproducts.

4. Visit to leather processing unit and slaughterhouses/meat plants.

5. Woof sampling techniques, determination of fleece density, fiber diameter, staple length, crimp and modulation percentage, scouring/clean fleece yield.

6. Visit to wool production/ processing Center.

Reference:

1. Processing and utilization of animal by-products by Mann I (1962) – FAO Rome.

2. Animal Blood Processing & Utilization by Divakaran S (1982) – FAO Rome

3. Principles of Meat Science (3rd Ed) by Hedrick HB, Aberle ED, Forrest JC, Judge MD and Markel RA (1994) – WH Freeman & Co., New York.

4. The Technology of Food Preservation (Fist Edition) Desrosier MW and Desrosier JN – CBS Publ. N.Delhi.

LPM-213: Avian Pathology Credits: 3

Theory

Unit-I

Viral Diseases: Pathogenesis, gross and microscopic pathology of Ranikhet disease, infectious bursal disease, infectious bronchitis, infectious laryngotracheitis, fowl pox, avian influenza, Marek's disease, leukosis/sarcoma group of diseases, avian encephalomyelitis, inclusion body hepatitis, hydro-pericardium syndrome, chicken infectious anaemia Avian nephritis, egg drop" syndrome, infectious stunting syndrome, reovirus infections.

Unit-II

Bacterial Diseases: Pathogenesis, gross and microscopic pathology of Colibacillosis (colisepticaemia, yolk sac infecion, egg peritonitis, coligranuloma). infectious coryza, clostridial diseases (botulism, necrotic enteritis, gangrenous dermatitis, ulcerative enteritis), salmonellosis (Pullorum disease, fowl typhoid, paratyphoid infection), fowl cholera, tuberculosis and spirochaetosis

Unit-III

Mycoplasmal and Chlamydial Diseases: Pathogenesis, gross and microscopic pathology of Mycoplasma gallisepticum infection (chronic respiratory disease), Mycoplasma synoviae infection, Avian chlamydiosis (psittacosis).

Unit-IV

Fungal Diseases: Pathogenesis, gross and microscopic pathology of aspergillosis, thrush and favus. Mycotoxicosis: Pathogenesis, gross and microscopic pathology of Aflatoxicosis, ochratoxicosis and trichothecenes.

Unit-V

Parasitic Diseases: Pathogenesis, gross and microscopic pathology of Helminthic diseases (flukes, cestodes, nematodes), protozoal diseases (coccidiosis, histomoniasis), ectoparasites, Avian malaria Nutritional and metabolic diseases: Pathogenesis, gross and microscopic pathology of major diseases due to deficiency/excess of carbohydrates, proteins, minerals and vitamins in poultry Vices and Miscellaneous Diseases: Pathology of important vices and miscellaneous conditions. Pathology of exotic and emerging poultry diseases.

LPM-216: Lab- Avian Pathology Credits: 3

Practical

1. Post mortem examination and diagnosis of poultry diseases based upon clinical signs and gross lesions
2. Collection, preservation and dispatch of morbid materials in poultry diseases.
3. Clinical examination of blood, faeces and other tissues/fluids for poultry disease diagnosis
4. Submission of feed samples for analysis.
5. Study of gross specimens and histopathological slides of different diseases of poultry

ReferenceS:

1. Scanes, C.G.; Brant, G and Ensminger, M.E. (2004) Poultry Science, 4th Ed.
2. Sreenivasaiah, P.V. (2006)Scientific Poultry Production – a unique encyclopedia, 3rd Ed. 3.
Jull, M.A. (2003)Successful Poultry Management
4. Sainsbury, D. (1984)Poultry Health and Management
5. Roberts, V. (2003)British Poultry Standards
6. Leeson, S and Summers, J.D. (1993)Commercial Poultry Production
7. North, M.O and Bell, D.D. (1990)Commercial Chicken Production Manual, 4th Ed.
8. Murd, L.M. (2003)Modern Poultry Farming
9. Leeson, S and Summers, J.D. (1993)Commercial Poultry Nutrition
10. Johari, D.C.and Hussain, K.Q. (1996)Commercial Broiler Production

Semester-IV

General Education Components

Second Year- Semester – IV

General Education Components

LPM-217: Environmental Science 4 Credits

Theory

UNIT-I

Environment: Environment Science, Scope and importance, Components of environment – i) Atmosphere, Composition of atmosphere, ii) lithosphere – Structure of lithosphere, soil formation, soil composition and properties of soil, iii) Hydrosphere – distribution of water on earth, global water balance and hydrological cycle.

UNIT-II

Environment Problems: A) Air pollution – concept, source of air pollution, major atmospheric pollutants, air quality standards monitoring of major air pollutants. B) Water pollution – sources of water pollution, river pollution, underground water pollution, oil pollution, thermal pollution, water pollution due to sewage, effects of water pollution, waste water treatment. C) Noise pollution – sources of noise, effects of noise pollution, noise pollution, noise pollution control equipment silencers and noise absorbing devices, noise standards and industrial nose control. D) Soil pollution – causes of soil pollution major soil pollutants, industrial waste and their role in soil pollution. E) Radiation pollution – sources of radioactive pollution, effects of radioactive pollution on health.

UNIT-III

Impact of industries on Environment: Water pollution episodes due to industrial pollutants, effects of industrial pollutants on aquatic organisms, industrial and underground water quality. Air pollution episodes due to industries-Bhopal gas tragedy, Photochemical smog, Acid Rivers etc. Industrial noise pollution and workers health problems.

UNIT-IV

Water Conservation: water use pattern-water use in industry, Water conservation-methods of water conservation, rain water harvesting, Reuse and recycle of water.

LPM-218 Applied Psychology 4 Credits

UNIT –I Understanding The Self

Self-esteem and Subjective well being

Positive Thinking and Optimism

Creative Thinking, Problem Solving and Decision Making

Goal setting and Time management

Motivation

Emotional intelligence

UNIT –II Working with others

Communication (Verbal and Non Verbal)

Empathy and Listening skills

Giving and receiving Feedback

Conflict Management

Team Building and Team work

UNIT –III Balancing work and life

Work Life Conflict

Impression Management

Job satisfaction and Employee satisfaction

Stress Management

UNIT –IV Understanding Leadership and its challenges

The Role of power and expectations

Leadership styles

Leadership functions

Pressures and problems of leadership

References:

Schultz.D & Schultz.S., (2010), Psychology and Work Today, Indian Edition, Dorling Kindersley Pvt. Ltd, New Delhi, India.

Feldman.R.,(2016), Understanding Psychology ,Tenth Edition, McGraw Hill Education Pvt. Ltd, India.

Kumar.V., (2008), *General Psychology*, Himalaya Publishing House ,India.

Weiten.W.,Hammer.E. & Dunn. D.,(2009), *Psychology and Contemporary Life: Human Adjustment,* Wadsworth, Cenagage Learning,USA.

Feldman.R.,(2016), *Understanding Psychology* ,Tenth Edition, McGraw Hill Education Pvt.Ltd, India.

LPM-219 Marketing Strategies 4 Credits

Marketing as strategy: Understanding new era organizations and the marketing environment today, the role of market orientation, technological advances, global marketing imperative, marketing ethics & social responsibility.

Market opportunity recognition and evaluation: Internal analysis, External analysis, The marketing information system, Buyer behavior, Segmentation & targeting.

Broader Concerns today: Stake holder Concerns & issues Sustainable & Green marketing New paradigms for Organizations & Consumers

Products, Services & Innovation: Marketing's role in new product/new service development managing across the life cycle Marketing channels and the marketing ecosystems

Marketing Planning and Execution: Different approaches to planning for Marketing. Forecasting & Scenario planning Marketing mix & Resource allocation Marketing communication – Multi channel integration Pricing, Branding, Value driven Relationship **New Challenges:** Marketing & the creative industries Marketing & the new media Marketing to the bottom of the pyramid Frugal & grass root Marketing.

References:

1 Marketing Strategies, A contemporary approach by Ranchod & Gurau, Pearson India, 2012.

2 Strategic Marketing by Xavier, Response Books, 2010.

3 Marketing: Planning, Implementation, Control by Pride and Ferrell, Cengage, 2010.

4 Strategic marketing problems: Cases & Comments by Kerin & Peterson,Pearson 2012.

Semester-V

Skill Development Components

G.M.D. Arts, B.W. Commerce and Science College, Sinnar, Dist. Nashik

B.Voc- (Livestock Production and Management) Degree Course

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Third Year Semester V

Skill Development Components

LPM-301: Epidemiology and Zoonoses Credits- 4

Unit-I

Definitions and aims of epidemiology. Factors influencing occurrence of livestock diseases and production. Ecological basis and natural history of diseases. Sources, Storage, retrieval and representation of disease information/data. Epidemiological hypothesis.

Unit-II

Epidemiological methods: descriptive, analytical (observational), experimental, theoretical (modeling), serological and molecular.

Unit-III

Survey of animal diseases. Surveillance and monitoring of livestock diseases. Animal disease forecasting. Strategies of disease management: prevention, control and eradication. Economics of animal diseases. National and International regulations on livestock diseases. Role of OIE and laws on international trade on animals and animal products.

Unit-IV

Definition, history and socio-economic impact of zoonotic diseases. Classification of zoonoses and approaches to their management. New, emerging, re-emerging and occupational zoonoses. . Role of domestic, wild, pet and laboratory animals and birds in transmission of zoonoses.

Unit-V

Zoonotic pathogens as agents of bio-terrorism. Reservoirs, clinical manifestations in animals and humans, and the management of the following zoonoses: rabies, Japanese encephalitis, Kyasanur forest disease, influenza, anthrax, brucellosis, tuberculosis, leptospirosis, listeriosis, plague, rickettsiosis, chlamydiosis and dermatophytosis. Food borne zoonoses: salmonellosis, staphylococcosis, clostridial food poisoning, campylobacteriosis, helmintrrosis toxoplasmosis and sarcocystosis.

LPM-304: Lab- Epidemiology and Zoonoses

Practical **3 Credits**

1. Collection of epidemiological samples. Measurement of disease: determination of morbidity and mortality rates/ratios.

2. Generation of epidemiological protocols and reports. Demonstration of selected software programmes/models e.g. EPIZOO, HandiSTATUS and India-Admas-EPITRAK. Evaluation of vaccines and diagnostic tests.

3. Determination of Associations and risks: relative risk, Odd's ratio and attributable risk. Survey of an animal disease on a farm.

4. Field survey of zoonotic diseases. Concurrent isolation and identification of important pathogens of zoonotic importance from animal and human sources including foods of animal origin and their interpretation.

5. Study of rural environment and health status of rural community.

6. Visit to primary health center/human hospital and study of the common diseases affecting rural/urban population, and probable relationships of these human disease conditions with animal diseases present in the area.

Reference Books:

1. Diseases of Animals Transmissible to Man- Thapliyal D.C.

2. Zoonoses - Mahendra Pal

3. Fundamentals of Parasitic Zoonoses- Pathak K.M.L

4. Zoonoses: Recognition Control and Prevention- Martin.E., Jones.E.H., Hubbart,W.T and Hagstard H.V

5. Zoonoses: Infectious diseases Transmitted from Animals to Human Being Krauss H

6. Dogs Zoonoses and Public Health- Calum N.L., Macpharson, Fracois,X., Moslin and Wandeler,A.

7. CRC handbook series in Zoonoses- Steele J.L.

8. Zoonoses - Palmer, Soulsby and Simpson

9. Communicable disease Epidemiology and Control- Webber,R.

10. Veterinary Epidemiology- Thrushfield. M.

11. Fundamentals of Animal Hygiene and Epidemiology- Thapliyal D.C.

12. Communicable disease Epidemiology and Control- Webber,R.

13. Veterinary Epidemiology-Principles and Methods- Willeberg,M.

LPM-302. Pet Animal Breeding and Management

Theory **4 Credits**

Unit-I

Breeds of dogs- international pedigree breeds and those commonly seen in India. Pedigree sheet and major breed traits. Detection of oestrus and Breeding of dogs. Selecting a breed to keep, selection of a pup.

Unit-II

Feeding of dogs- nutritional requirements of important breeds and different age groups. Management of dogs-kennels, care of pups and pregnant bitch. Dog shows- preparation for the shows, kennel clubs, important characters for judgment. Whelping.

Unit-III

Utility of dogs-guarding, defense, patrolling, riot control, scouting, espionage, mine detection, tracking, guiding, hunting, races, retrieving, rescue, and other uses. Principles of training of dogs.

Unit-IV

Common diseases affecting dogs (bacterial, viral, parasitic, fungal, nutritional etc.) their clinical manifestations, diagnosis, treatment and control. Vaccination/ deworming schedules. Common surgical interventions in dogs- docking, ear cropping, nail cutting, sterilization. Common anaesthetics and anaesthesia in dogs.

Unit-V

Common breeds of cats, their habits, feeding, breeding and management. Common diseases of cats-their diagnosis, treatment and control. Common surgical interventions in cat. Common pet birds seen in India. Introduction to their caging, breeding, feeding, management, disease control and prevention.

Reference Books:

1. Radostitis, O.M., Gay, C.C., Blood, D.C. and Hinchcliff, K.W. 2000. Veterinary Medicine. A textbook of the disease of Cattle, Sheep, Pigs, Goats and Horses.IX edn. Book Power, WB Saunders, London, U.K.

2. Geo. F. Boddie. 2000. Diagnostic Methods in Veterinary Medicine.5 th edn.Greenworld Publishers, Lucknow.

3. Craig. E. Greene. 1998. Infectious Diseases of the Dog and Cat.2 nd edn. W.B. Saunders Company, London, U.K.

4. Ettinger, S. J and Feldman E.C .2000. Textboob of Veterinary Internal Medicine.5 th Edn. Vol1. W.B. Saunders, London,U.K.

5. Amalendu chakrabarti. 1988. A textbook of Preventive Veterinary Medicine. Kalyani Publishers,New Delhi.

LPM – 303: Veterinary Clinical Medicine-I 4Credits

UNIT-I

History and scope of Veterinary Medicine, Concept of animal diseases. Concepts of diagnosis, differential diagnosis and prognosis. General systemic, states, hyperthermia, hypothermia, fever, septicemia, toxemia, shook and dehydration. Aetiology, clinical 76 manifestations, diagnosis, differential diagnosis, treatment prevention and control of the following diseases of cattle,- buffalo sheep/goat equine, pig and pet animals.

UNIT-II

Diseases of digestive system with special reference to rumen dysfunction and diseases of stomach In nonruminants. Affections of peritoneum, liver and pancreas. Diseases of respiratory and cardiovascular systems including blood and blood forming organs. Diseases of uro-genital system & lymphatic system. Emergency medtelne and critical care

UNIT-III

Clinical manifestation, diagnosis, prevention and control of infectious diseases, namely mastitis, haemorrhagic septicaemia, brucellosis, tuberculosis, Jobne's disease. black quarter, tetanus, listeriosis, leptospirosis, campylobacteriosis, actinomycosis, actinobacillosis, enterotoxaemia, glanders, strangles, ulcerative lymphangitis, colibacillosis, fowl typhoid, putiorum disease, fowl cholera, avian mycoplasmosis, sppirochaetosis, salmonellosis, swine erysipelas.

UNIT-IV

Other important bacterial diseases of regional importance (e.g. contagious caprine pleuropneumonia, contagious bovine pleuropneuonia etc.). Bacterial diseases of bio terrorism Instance - anthrax, botulism etc Chlamydosis, Q fever, anaplasmosis, Dermatphillosis, aspergillosis (brooders pneumonia), candidiasis, histoplasmosis, sporotrichosis, coccidiodomycosis, mycotoxicosis, etc

Reference Books:

1. Radostitis, O.M., Gay, C.C., Blood, D.C. and Hinchcliff, K.W. 2000. Veterinary Medicine. A textbook of the disease of Cattle, Sheep, Pigs, Goats and Horses.IX edn. Book Power – WB Saunders, London, U.K.

2. Geo. F. Boddie. 2000. Diagnostic Methods in Veterinary Medicine.5th edn.Greenworld Publishers, Lucknow.

3. Craig. E. Greene. 1998. Infectious Diseases of the Dog and Cat.2nd edn. W.B. Saunders Company, London, U.K

4. Ettinger, S. J and Feldman E.C .2000. Textboob of Veterinary Internal Medicine.5th Edn. Vol1. W.B. Saunders, London,U.K

5. Amalendu chakrabarti. 1988. A textbook of Preventive Veterinary Medicine. Kalyani Publishers,New Delhi.

LPM – 305: Project / On field Training 3 Credits

Semester-V

General Education

Components

Third Year Semester V

General Education Components:

LPM – 306 Entrepreneurship-I 4 Credits

UNIT –I The Entrepreneurial Evolution

Nature & Development of Entrepreneurship.

The Entrepreneurial Decision Process.

Role of Entrepreneurship.

Entrepreneurial background & characteristics.

UNIT –II Starting an Enterprise

New Venture Formation.

Resource requirement to set-up & start-up & operate Enterprise.

Licenses/Permissions/Approvals/etc.

Government schemes for Enterprises.

UNIT –III Creativity in Enterprise

Idea Generation.

Creative Problem Solving.

Product Identification & Development.

The Plans.

UNIT –IV Managing the Enterprise

Organization structure.

Functions/Activities/Processes/Systems.

Growth/Development of the Enterprise.

Exiting the Enterprise

REFERENCES:

Entrepreneurship – 6th Edition. Robert D Hisrich, Michael P Peters, Dean A Shepherd. McGraw-Hill.

Entrepreneurship – David Stokes, Nick Wilson, Martha Mador.South-Western Cencage Learning.

The Oxford Handbook of Entrepreneurship – Mark Casson, Bernard Yeung, AnuradhaBasu, Nigel Wadeson. Oxford University Press.

Entrepreneurship in India. Dr Sanjay Tiwari, DrAnshuja Tiwari. Sarup & Sons.

Patterns of Entrepreneurship Management. 3rd Edition. Jack M Kaplan, Anthony C Warren. John Willey & Sons Inc

LPM – 307 Human Resource Management 4 Credits

1. INTRODUCTION OF HRM

HRM: definition, scope, functions and objectives

Policies and principles of human resource management

HRM model

Application: challenges of HRM

2. EMPLOYEE SELECTION AND EVALUATION

Employee selection – selection process

Employee selection methods – job analysis, biographical information, interviews, references, letters of recommendation

Evaluation – job evaluation and performance appraisal; definition, process, challenges and methods

Application: uses of psychological testing in employee selection Process

3. TRAINING AND DEVELOPMENT

Training and Development – nature, scope, process and goals of training programs

Training need analysis, training methods

Employee welfare – Definition and types

Application: Assessment centre

4. WAGES AND INCENTIVES

Employee remuneration: components, theories, factors

Incentive payments: definition, importance, types

Employee benefits and services: definition, types

Application: token economy

References:

1. Aswathappa, K. (2005). *Human Resource Management and Personnel Management: Text and Cases*. 4th ed. New Delhi: McGraw Hill.

2. Dessler, G. &Varkkey,B.(2009).Human Resource Management. New Delhi : Pearson

3. Rao, V.S.P. (2005). Human Resource Management: Text and Cases. New Delhi: Excell

LPM – 308 Projects / Survey / Seminar / Model 4 Credits

Topics

1. Market Survey, Product Planning, Innovativeness & Creativity, and Presentation of project concept note / product plan.

2. Organization of resources and utilities, Regularity in production & adhering to Plan, Positioning of product in market.

3. Skill Development, Product Quality Control and Evaluation.

4. Marketing Strategy (type of consumer, product costing, etc), Preparation of Marketing Material (Brochure containing product information, etc), Sales volumes, Profit generated including C/B ratio and Payback period, etc.

5. Record keeping (for Raw material), Financial records related to product, Preparation of product manual.

6. Project Report should be prepared based on ELP experience of students for micro/small/medium scale industry level, presentation of report, oral performance.

7. Preparation of Livestock Production & Management report.

Semester-VI

Skill Development Components

G.M.D. Arts, B.W. Commerce and Science College, Sinnar, Dist. Nashik

B.Voc- (Livestock Production and Management) Degree Course

(Livestock Production and Management) (A.Y.2018-19)

Third Year- Semester – VI

Skill Development Components

LPM-401: Livestock Economics and Marketing **Credits- 4**

Theory

Unit-I

Economics: Introduction, definition and scope (production, consumption, exchange and distribution) of economic principles as applied to livestock. Common terms - wants, goods, wealth, utility, price, value, real and money income. Important features of land, labour, capital and organization.

Unit-II

Livestock produce and products. Livestock contributions to national economy. Demand projections of livestock produce. Theory of consumer behaviour law of diminishing marginal utility and indifference curve analysis. Theory of demand; meaning, types of demand, demand curve and law of demand, individual and market demand, elasticities of demand and factors affecting demand. Laws and types of supply. Elasticity of supply. Cost concepts and principle of fixed and variable costs. Theory of production, law of diminishing returns, laws of returns to scale and concept of short and long run periods. Economics of animal disease and disease losses.

Unit-III

Marketing: Livestock business-concepts, nature and scope. Components, characteristic of small business. Marketable livestock commodities. Concept of market; meaning and classification of markets. Market price and normal price, price determination under perfect competition in short and long run. Marketing of livestock, and perishable and non-perishable livestock products. Merchandising-product planning and development Marketing functions; exchange functions-buying, selling and demand creation. Physical functions- grading, transportation, storage and warehousing. Facilitative functions -standardization, risk bearing, market information and market intelligence.

Unit-IV

Market opportunities - marketing channels of livestock and livestock products, organized/unorganized markets and cattle fairs. Import and export of animal and animal products. International Agreements/Regulations (WTO and General Agreement on Trade and Tariff-GATT)

for marketing/trade of live animals and products. Management: Resource Management-Organizational aspects of livestock farms, sources and procurement of inputs and financial resources. Break- even - analysis. Personnel (Labour) Management-Identification of work and work (job) analysis/division of labour.

Unit-V

Accounting: Definition, objectives, common terms. Different systems of book keeping- single and double entry system. Various types of account books including books of original entry. Classification of accounts and rules of debit and credit Recording of business transactions. Analysis of financial accounts- income and expenditure accounts, trading account, profit and loss accounts.

LPM-404: Lab. Livestock Economics and Marketing Credits- 3

Practical

1. Book keeping; general entry, writing of journal and ledger, cash book (two and three column), purchase-safe and purchase-sale return registers, trading account, profit and loss accounts, income and expenditure accounts, balance sheet bills of exchange (bill of receivable and bill of payable), bank reconciliation statement,.
2. Economics of a dairy unit poultry, piggery, sheep and goat units.
3. Visit to" farms, markets and cattle fairs, backyard units and preparation of report.

Reference Books:

1. Acharya, S. S & Agarwal N.L (1994) Agriculture marketing in India, Oxford.
2. Johl, S. S.& Kapur, T.R. (2005) Fundamentals of farm business management
3. Indian Society (1989) Livestock Economy of India Agricultural Economics: Oxford and IBH Publications
4. Sadhu & Singh (1989) Fundamentals of Agricultural Economics: Himalaya Publishing House.
5. Singh, G.N. Singh .D.S & Ram Iqbal Singh (1987) Agricultural Marketing in India: Chugh Publications
6. Maheswari & Maheswari (1993) Advanced Accountancy 5th ed. Volume –I
7. Seth. M.L. (1994) Micro Economics 12th Ed.
8. Dewitt, K.K. (1984) Modern Economic Theory 21st Edition.
9. James, A.F.Stoner & Charles Wankel (1988) Management 3rd Edition

LPM-402: Veterinary Clinical Medicine –II 4 Credits

Theory

UNIT-I

Aetiology, clinical manifestations, diagnosis, differential diagnosis, treatment prevention and control of metabolic disorders/ production diseases. Milk fever, acute parturient hypocalcaemia in goats, sows and bitches, osteodystrophy fibrosa, lactation tetany in mares, downer cow syndrome, ketosis, hypomagnesaemia in cattle and buffalo, azoturia in equines, hypothyroidism and diabetes in dogs.

UNIT-II

Diagnosis and management of diseases caused by deficiency of iron, copper, cobalt zinc, manganese, selenium, calcium, phosphorus, magnesium, vitamin A, D, E, B. complex, K and C in domestic animals and poultry. Nutritional haemoglobinuria. Diseases of neonates. Diseases of skin, musculo-skeletal system, nervous system and sense organs of domestic animals. Management of common clinical poisonings. Rote of alternative/integrated/ethno veterinary medicine in animal disease management.

Clinical manifestation, diagnosis, prevention and control of infectious diseases, namely foot and mouth disease, rinderpest bovine viral diarrhoea, malignant catarrhal fever, Infectious bovine rhinotracheitis, enzootic bovine leucosis, ephemeral fever, blue tongue, sheep and goat pox, PPR, classical swine fever.

UNIT-III

Important exotic diseases for differential diagnosis - African swine fever, swine vesicular disease, vesicular stomatitis, Rift valley fever, Aujeezky's disease. Rabies, African horse sickness, equine influenza, equine infectious anaemia, equine rhinopneumonitis, canine distemper, Infectious canine hepatitis, canine parvoviral disease.

UNIT-IV

Highly pathogenic avian influenza, Newcastle (Ranikhet) disease, Merek's disease. avian leucosis, Infectious bronchitis, infectious larynotracheitis, avian encaphalomyelitis, fowl pox, infectious bursal disease, Inclusion body hepatitis-hydropericardlum sypdrome. Other emerging and exotic viral diseases of global importance. Amphistomosis, fascioliosis, {Gastrointestinal nematodiasis, schistosomosis, echinococcosis, tapeworm infestations (cysticercosis), verminous broochitis, coeneurosis, trichomonosis, blood protozoan infections (trypanosomosis. theileriosis. babesiosis etc.). canine eperythrozoon infection, coccidiosis.

Reference Books:

1. Radostitis, O.M., Gay, C.C., Blood, D.C. and Hinchcliff, K.W. 2000. Veterinary Medicine. A textbook of the disease of Cattle, Sheep, Pigs, Goats and Horses.IX edn. Book Power – WB Saunders, London, U.K.

2. Geo. F. Boddie. 2000. Diagnostic Methods in Veterinary Medicine.5th edn.Greenworld Publishers, Lucknow.

3. Craig. E. Greene. 1998. Infectious Diseases of the Dog and Cat.2nd edn. W.B. Saunders Company, London, U.K

4. Ettinger, S. J and Feldman E.C .2000. Textboob of Veterinary Internal Medicine.5th Edn. Vol1. W.B. Saunders, London,U.K

5. Amalendu chakrabarti. 1988. A textbook of Preventive Veterinary Medicine. Kalyani Publishers,New Delhi.

LPM- 403: Commercial poultry production and hatchery management -II

Theory **Credits: 4**

Unit-I

Health care- Common poultry diseases: bacterial, viral, fungal, parasitic and nutritional deficiencies. Vaccination schedule for commercial layers and broilers: factors that govern vaccination schedule; vaccination principles type, methods, pre and post vaccination care. Medication: Types of administration-general principles and precautions with emphasis on administering medication through water and feed; commonly used drugs in poultry diseases. Disinfection: Types of disinfectants; mode of action; recommended procedure; precaution and handling.

Economics- Economics of layer and broiler production; Projects reports layer in different systems of rearing. Projects reports for broilers.-Feasibility studies on poultry rearing- in context of small units and their profitability. Designer meat and egg production. Export/import of poultry and poultry products.

Unit-II

Breeder flock management- Layer and broiler breeder flock management housing

& space requirements. Different stage of management during life cycle; Light management during growing and laying period, Artificial insemination.

Feeding: Feed restriction, separate male feeding. Nutrient requirement of layer and broiler breeders of different age groups. Healthcare: vaccination of breeder flock; difference between vaccination schedule of broilers and commercial birds. Common diseases of breeders (Infectious and metabolic disorders)-prevention. Fertility disorder- etiology, diagnosis and corrective measures. Selection and culling of breeder flocks. Economic parameters on returns from breeders- for example saleable chick/hen/production cycle etc.

Unit-III

Hatchery practices - Management principles of incubation. Factors affecting fertility and hatchability. Selection, care and incubation of hatching eggs. Fumigation; sanitation and hatchery hygiene. Disposal of hatchery waste; Sexing, grading, packing and dispatch of day old chicks. Economics of hatchery business; Trouble shooting hatch failure: importance of hatchery records, break even analysis of unhatched eggs. Biosecurity in the hatchery. Computer applications for hatchery management

Reference Books

1. Scanes, C.G.; Brant, G and Ensminger, M.E. (2004) Poultry Science, 4th Ed.
2. Sreenivasaiah, P.V. (2006) Scientific Poultry Production – a unique encyclopedia, 3rd Ed.
3. Jull, M.A. (2003) Successful Poultry Management
4. Sainsbury, D. (1984)Poultry Health and Management
5. Roberts, V. (2003)British Poultry Standards
6. Leeson, S and Summers, J.D. (1993) Commercial Poultry Production
7. North, M.O and Bell, D.D. (1990) Commercial Chicken Production Manual, 4th Ed.
8. Murd, L.M. (2003)Modern Poultry Farming
9. Leeson, S and Summers, J.D. (1993) Commercial Poultry Nutrition
10. Johari, D.C.and Hussain, K.Q. (1996) Commercial Broiler Production

LPM – 405: On Field Training / Project Report & Seminar Credit-3

Project Report

Project Report The structure of the project report shall be in the format is as follows:

1. The Cover Page - It should have : Title of the project : Name and address of Group Leader and team members : Name and address of Supervisor/Guide teacher
2. Abstract - 500 words
3. Contents
4. Introduction- Description on background of the study
5. Aims and Objectives
6. Relevance of the project work
7. Methodology

i. Observations: This shall include the observations during the experiment. Observation can be both qualitative as well as quantitative.

ii. Data analysis and interpretation: The data generated/ obtained from the experiments/observations should be processed for better understanding in a more structured

manner. Tools and methods (e.g. statistical methods) may be used for analysing data to understand the patterns that emerges from it to form results and conclusions.

iii. Results: Results are the output of compilation of the data into meaningful outcomes/ interpretations and sometimes, there is a need to redo the experiments to get consistent results. In case it is not possible to "repeat the experiments", there should be adequate replicates so that adequate data is available for interpretation, and arriving at results.

iv. Conclusions: This is the logical end of the project to arrive at specific conclusions from the observed phenomena. In a way, the whole objective of the project is to arrive at some conclusion, either positive or negative which would lead to a better understanding of the problem.

v. Acknowledgement

vi. References

Seminar

Seminar on Technical Topic of Livestock production and management shall be delivered by individual student. The Seminar topic shall be decided by respective Guide/Advisor. Students will be responsible for collection of necessary information, preparation of synopsis and Power Point Presentation and discussion by each student allotted topic. The evaluation of Seminar shall be done by Team of Academic members (at least 3) nominated by Associate Dean & Principal/University.

Semester-VI

General Education

Components

G.M.D. Arts, B.W. Commerce and Science College, Sinnar, Dist. Nashik

B.Voc- (Livestock Production and Management) Degree Course

(Livestock Production and Management) (A.Y.2018-19)

Third Year- Semester – VI

General Education Components

LPM – 406: Entrepreneurship-II Credit-4

UNIT –I Enterprise and Entrepreneurship

Functional areas of Management (Contexts of Finance- HR- Marketing- Manufacturing- etc.)

Personality- Attitudes- Work Behaviour- Ability- Values- Job Performance

Localization/Globalization

Value-based Leadership

UNIT –II Principles of Management

Management Ideas

Developing Mission- Vision- Values

P-O-L-C (Planning-Organizing-Leading-Control)

Stakeholders interests

UNIT –III Strategizing

Strategic Management Process- Corporate Strategy.

SWOT - Porter's Generic Strategy.

Value-Chain- VRIO Blocks (Value-Rarity-Inimitability-Organizational).

5-Forces. STEPLE. Strategy Diamond

UNIT –IV Principles of Organisation

Goals- Objectives- MBO- Balanced Score-Card.

Organization Structures & Change.

Organization Culture.

Social Networks.

References:

Management Fundamentals - Management & Entrepreneurship: Concepts, Application, Skill-Development. Robert N Lussier. South-Western Cengage Learning.4th Edition.

The Oxford Handbook of Entrepreneurship – Mark Casson, Bernard Yeung, Anuradha Basu, Nigel Wadeson. Oxford University Press.

Entrepreneurship Development in India. Sami Uddin. Mittal Publications.

Dynamics of Entrepreneurial Development & Management - Vasant Desai. Himalaya Publishing House.

LPM – 407: Organizational Behavior Credit-4

INTRODUCTION

1.1 Organizational Behaviour: concept, scope, challenges and opportunities

1.2 Foundations of individual behaviour: ability, biographical characteristics, learning, attitudes and job satisfaction, personality and values

1.3 Innovations in organization planning: flexi time, flexi plan and job enrichment

1.4 Application: time management

2. MOTIVATION PROCESS

2.1 Motivation: concept, nature & process of motivation

2.2 Theories of motivation

2.3 Intrinsic and extrinsic motivation and incentive systems

2.4 Application: Emotional Intelligence in organizational setting

3. JOB SATISFACTION AND STRESS AND CONFLICT

3.1 Factors affecting on job satisfaction

3.2 Work stress: sources, consequences, managing stress-individual and organizational approach

3.3 Concept, causes, consequences of conflicts and methods of conflict resolution

3.4 Application: group dynamics

4. LEADERSHIP

4.1 Nature and characteristics of successful leaders' types

4.2 Functions and approaches; trait, behavioral and contingency models

4.3 Role of power in leadership

4.4 Application: management grid

Recommended Books:

1. Aamodt, M. G. (2001). *Industrial/organizational psychology*. New Delhi: Cengage.

2. Luthans, F. (2005). *Organizational behavior (12th Ed.)*. New York: McGraw Hill.

3. McShane, S. L. & Von Glinow, M. A. (2007). *OrganisationalBehaviour*. New Delhi: McGraw Hill.

4. Moorhead, G. & Griffin, R. W. (2005). *OrganisationalBehaviour*.New Delhi: Biztantra.

5. Muchincky. (2009). *Psychology applied to work*. New Delhi: Cengage.

6. Riggio, R. E. (2003) Introduction to Industrial/Organizational Psychology (4th d.). New Jersey: Prentice-Hall.

7. Robbins , S., Judge, T.A., &Sanghi, S. (2009). *Organizational behavior (13th Ed.)*. New Delhi: Pearson Education.

LPM – 408: Disaster Management Credit-4

Unit: I Definition and types of disaster Hazards and Disasters, Risk and Vulnerability in Disasters, Natural and Man-made disasters, earthquakes, floods drought, landside, land subsidence, cyclones, volcanoes, tsunami, avalanches, global climate extremes. Man-made disasters: Terrorism, gas and radiations leaks, toxic waste disposal, oil spills, forest fires.

Unit: II Study of Important disasters Earthquakes and its types, magnitude and intensity, seismic zones of India, major fault systems of India plate, flood types and its management, drought types and its management, landside and its managements case studies of disasters in Sikkim (e.g) Earthquakes, Landside). Social Economics and Environmental impact of disasters.

Unit: III Mitigation and Management techniques of Disaster Basic principles of disasters management, Disaster Management cycle, Disaster management policy, National and State Bodies for Disaster Management, Early Warming Systems, Building design and construction in highly seismic zones, retrofitting of buildings.

Unit IV Training, awareness program and project on disaster management Training and drills for disaster preparedness, Awareness generation program, Usages of GIS and Remote sensing techniques in disaster management, Mini project on disaster risk assessment and preparedness for disasters with reference to disasters in Sikkim and its surrounding areas.

References:

1. Disaster Management Guidelines, GOI-UND Disaster Risk Program (2009-2012)

2. Damon, P. Copola, (2006) Introduction to International Disaster Management, Butterworth Heineman.

3. Gupta A.K., Niar S.S and Chatterjee S. (2013) Disaster management and Risk Reduction, Role of Environmental Knowledge, Narosa Publishing House, Delhi.

4. Murthy D.B.N. (2012) Disaster Management, Deep and Deep Publication PVT. Ltd. New Delhi.

5. Modh S. (2010) Managing Natural Disasters, Mac Millan publishers India LTD.

14. **Recommended Books:** Provided under each Semester Detailed Syllabus

15. **Qualification of Teacher:**

Master's Degree with 55% marks (or an equivalent grade in a point scale wherever grading system is followed) in the relevant subject or an equivalent degree from an Indian/foreign University.

16. **Detailed Syllabus CD :** Soft copy of syllabus Provided with proposal

Dr. P. V. Rasal

Principal