

Lokbharati University for Rural Innovation, Sanosara



School of Skills and Entrepreneurship

Department of Animal Husbandry & Dairy science

4 Year Undergraduate Programme as per NEP-2020

Implemented from the Academic Year 2025-26

Index

Components	Page
1. Preamble	
2. Institutional Vision & Mission	
3. Departmental Vision & Mission	
4. NEP Guidelines for the 3/4 Year Undergraduate Program	
5. Programme Description	
6. Curriculum Framework	
7. Program Outcomes (POs)	
8. Program Specific Outcomes (PSOs)	
9. Learning Outcomes (LOs)	
10. Detailed Syllabus and Course Contents	
11. Teaching & Evaluation Scheme	

1. Preamble:

Lokbharati University for Rural Innovation, Sanosara is the country's first-ever university that focuses exclusively on rural innovation! It has been accorded the Private University Status under GUJARAT PRIVATE UNIVERSITIES (AMENDMENT) ACT, 2022. It is a part of a great legacy of imparting rural higher education based on Gandhian principles of education and Sarvodaya. Padmashree Nanabhai Bhatt, Padmabhushan Manubhai Pancholi, Shree Natvarlal Buch, Shree Moolshankar Bhatt, Shree Ratibhai Andhariya were the freedom fighters and founding pillar of Lokbharati.

Lokbharati University for Rural Innovation, Sanosara is a unique educational institution dedicated to empowering rural communities and fostering innovation for sustainable rural development. Located in the picturesque rural setting of Sanosara, our university serves as a beacon of educational opportunity, social progress, and inclusive growth. At Lokbharati University, we believe that education is the key to unlocking the potential of rural areas and empowering individuals to become catalysts for positive change. Our institution is deeply rooted in the ethos of rural India, embracing its rich cultural heritage, indigenous knowledge systems, and traditional practices. We recognize the inherent wisdom and innovation that exist within rural communities and seek to harness and amplify these resources for the betterment of society.

Our vision is to create a thriving innovation ecosystem that nurtures local talent, preserves indigenous knowledge, and fosters social and economic progress. We envision a future where rural communities are empowered to address their own challenges, create sustainable livelihoods, and contribute meaningfully to the nation's development. Lokbharati University serves as a catalyst for rural transformation, bridging the gap between traditional wisdom and modern knowledge, and integrating them to create innovative solutions.

At the heart of Lokbharati University is a commitment to quality education that is accessible, inclusive, and relevant to the needs of rural communities. We offer a range of academic programs tailored to address the unique challenges and opportunities present in rural areas. Our curriculum combines academic rigor with practical learning experiences, encouraging students to think critically, solve problems, and embrace social entrepreneurship.

In addition to academic excellence, Lokbharati University places a strong emphasis on community engagement and collaboration. We actively involve local communities in the design and delivery of our programs, ensuring that their voices are heard and their aspirations are addressed. Through partnerships with government agencies, NGOs, industry stakeholders, and research institutions, we build networks that facilitate knowledge exchange, resource sharing, and collaborative projects for the benefit of rural development.

Lokbharati University also recognizes the importance of sustainability and environmental stewardship. We promote environmentally conscious practices, renewable energy solutions, and resource-efficient technologies to contribute to a greener and more sustainable future for rural communities.

As a student at Lokbharati University, you will be part of a vibrant community that celebrates diversity, fosters creativity, and nurtures holistic development. Through a combination of academic learning, skill development, co-curricular activities, and community engagement, we aim to shape well-rounded individuals who are equipped to make a positive impact in their communities.

2. Institutional Vision and Mission:

Vision:

To solve real-life problems of the rural areas through holistic education and sustainable innovation.

Mission:

- Upskilling rural youth through start-up and grassroots entrepreneurship programs
- Aligning academic programmes and activities with SDGs for global wellbeing
- Increasing girl child education in rural areas
- Empowering rural women through vocational training
- Extending affordable technologies to rural areas
- Contributing towards sustainability of nature
- Expanding our community service activities to the whole country
- Reducing educational & overall migration from rural areas

3. Departmental Vision and Mission:

Vision

Our vision is to empower students in Rural studies, promoting sustainable Livestock management and Dairy Practices to Solve the problems of Livestock management.

Mission

- Provide Comprehensive and interdisciplinary education
- Foster hands on learning and practical skills.
- Conduct cutting edge Research and Innovation.
- Collaborate with stakeholders and industry partner.
- Drive Outreach and Extension activities.

4. NEP Curricular Guidelines for the 4 Year Undergraduate Program:

The curriculum consists of major stream courses, minor stream courses and courses from other disciplines, language courses, skill courses, and a set of courses on Environmental education, understanding India, Digital and technological solutions, Health & Wellness, Yoga education, and sports and fitness. At the end of the second semester, students can decide either to continue with the chosen major or request a change of major. The minor stream courses include vocational courses which will help the students to equip with job-oriented skills.

4.1 Disciplinary/interdisciplinary major:

The major would provide the opportunity for a student to pursue in-depth study of a particular subject or discipline. Students may be allowed to change major within the broad discipline at the end of the second semester by giving her/him sufficient time to explore interdisciplinary courses during the first year. Advanced-level disciplinary/interdisciplinary courses, a course in research methodology, and a project/dissertation will be conducted in the seventh semester. The final semester will be devoted to seminar presentation, preparation, and submission of project report/dissertation. The project work/dissertation will be on a topic in the disciplinary programme of study or an interdisciplinary topic.

4.2 Disciplinary/interdisciplinary minors:

Students will have the option to choose courses from disciplinary/interdisciplinary minors and skill-based courses relating to a chosen vocational education programme. Students who take a sufficient number of courses in a discipline or an interdisciplinary area of study other than the chosen major will qualify for a minor in that discipline or in the chosen interdisciplinary area of study. A student may declare the choice of the minor and vocational stream at the end of the second semester, after exploring various courses.

Vocational Education and Training: Vocational Education and Training will form an integral part of the undergraduate programme to impart skills along with theory and practical. A minimum of 12 credits will be allotted to the 'Minor' stream relating to Vocational Education and Training and these can be related to the major or minor discipline or choice of the student. These courses will be useful to find a job for those students who exit before completing the programme.

4.3 Courses from Other Disciplines (Multidisciplinary) (9 credits):

All UG students are required to undergo 3 introductory-level courses relating to any of the broad disciplines given below. These courses are intended to broaden the intellectual experience and form part of liberal arts and science education. Students are not allowed to choose or repeat courses already undergone at the higher secondary level (12th class) in the proposed major and minor stream under this category.

4.3.1 Natural and Physical Sciences: Students can choose basic courses from disciplines such as Natural Science, for example, Biology, Botany, Zoology, Biotechnology, Biochemistry, Chemistry, Physics, Biophysics, Astronomy and Astrophysics, Earth and Environmental Sciences, etc.

4.3.2 Mathematics, Statistics, and Computer Applications: Courses under this category will facilitate the students to use and apply tools and techniques in their major and minor disciplines. The course may include training in programming software like Python among others and applications software like STATA, SPSS, Tally, etc. Basic courses under this category will be helpful for science and social science in data analysis and the application of quantitative tools.

4.3.3 Library, Information, and Media Sciences: Courses from this category will help the students to understand the recent developments in information and media science (journalism, mass media, and communication)

4.3.4 Commerce and Management: Courses include business management, accountancy, finance, financial institutions, fintech, etc.,

4.3.5 Humanities and Social Sciences: The courses relating to Social Sciences, for example, Anthropology, Communication and Media, Economics, History, Linguistics, Political Science, Psychology, Social Work, Sociology, etc. will enable students to understand the individuals and their social behaviour, society, and nation. Students be introduced to survey methodology and available large-scale databases for India. The courses under humanities include, for example, Archaeology, History, Comparative Literature, Arts & Creative expressions, Creative Writing and Literature, language(s), Philosophy, etc., and interdisciplinary courses relating to humanities. The list of Courses that can include interdisciplinary subjects such as Cognitive Science, Environmental Science, Gender Studies, Global Environment & Health, International Relations, Political Economy and Development, Sustainable Development, Women's and Gender Studies, etc. will be useful to understand society.

4.4 Ability Enhancement Courses (AEC) (08 credits): Modern Indian Language (MIL) & English language focused on language and communication skills.

Students are required to achieve competency in a Modern Indian Language (MIL) and in the English language with special emphasis on language and communication skills. The courses aim at enabling the students to acquire and demonstrate the core linguistic skills, including critical reading and expository and academic writing skills, that help students articulate their arguments and present their thinking clearly and coherently and recognize the importance of language as a mediator of knowledge and identity. They would also enable students to acquaint themselves with the cultural and intellectual heritage of the chosen MIL and English

language, as well as to provide a reflective understanding of the structure and complexity of the language/literature related to both the MIL and English language. The courses will also emphasize the development and enhancement of skills such as communication, and the ability to participate/conduct discussion and debate.

4.5 Skills Enhancement Courses (SEC – 09 Credits):

These courses are aimed at imparting practical skills, hands-on training, soft skills, etc., to enhance the employability of students. The institution may design courses as per the students' needs and available institutional resources.

4.6 Value-Added Courses (VAC) Common to All UG Students (6-8 credits)

4.6.1 Understanding India: The course aims at enabling the students to acquire and demonstrate the knowledge and understanding of contemporary India with its historical perspective, the basic framework of the goals and policies of national development, and the constitutional obligations with special emphasis on constitutional values and fundamental rights and duties. The course would also focus on developing an understanding among student-teachers of the Indian knowledge systems, the Indian education system, and the roles and obligations of teachers to the nation in general and to the school/community/society. The course will attempt to deepen knowledge about and understanding of India's freedom struggle and of the values and ideals that it represented to develop an appreciation of the contributions made by people of all sections and regions of the country, and help learners understand and cherish the values enshrined in the Indian Constitution and to prepare them for their roles and responsibilities as effective citizens of a democratic society.

4.6.2 Environmental science/education: The course seeks to equip students with the ability to apply the acquired knowledge, skills, attitudes, and values required to take appropriate actions for mitigating the effects of environmental degradation, climate change, and pollution, effective waste management, conservation of biological diversity, management of biological resources, forest and wildlife conservation, and sustainable development and living. The course will also deepen the knowledge and understanding of India's environment in its totality, its interactive processes, and its effects on the future quality of people's lives.

4.6.3 Digital and technological solutions: Courses in cutting-edge areas that are fast gaining prominences, such as Artificial Intelligence (AI), 3-D machining, big data analysis, machine learning, drone technologies, and Deep learning with important applications to health, environment, and sustainable living that will be woven into undergraduate education for enhancing the employability of the youth.

4.6.4 Health & Wellness, Yoga education, sports, and fitness: Course components relating to health and wellness seek to promote an optimal state of physical, emotional, intellectual, social, spiritual, and environmental well-being of a person. Sports and fitness activities will be organized outside the regular institutional working hours. Yoga education would focus on preparing the students physically and mentally for the integration of their physical, mental, and spiritual faculties, and equipping them with basic knowledge about one's personality, maintaining self-discipline and self-control, to learn to handle oneself well in all life situations. The focus of sports and fitness components of the courses will be on the improvement of physical fitness including the improvement of various components of physical and skills-related fitness like strength, speed, coordination, endurance, and

flexibility; acquisition of sports skills including motor skills as well as basic movement skills relevant to a particular sport; improvement of tactical abilities; and improvement of mental abilities.

The HEIs may introduce other innovative value-added courses relevant to the discipline or common to all UG programmes.

4.7 Summer Internship /Apprenticeship (2 – 4 credits)

A key aspect of the new UG programme is induction into actual work situations. All students will also undergo internships / Apprenticeships in a firm, industry, or organization or Training in labs with faculty and researchers in their own or other HEIs/research institutions during the summer term. Students will be provided with opportunities for internships with local industry, business organizations, health and allied areas, local governments (such as panchayats, municipalities), Parliament or elected representatives, media organizations, artists, crafts persons, and a wide variety of organizations so that students may actively engage with the practical side of their learning and, as a by-product, further improve their employability. Students who wish to exit after the first two semesters will undergo a 4-credit work-based learning/internship during the summer term in order to get a UG Certificate.

Community engagement and service: The curricular component of ‘community engagement and service’ seeks to expose students to the socio-economic issues in society so that the theoretical learnings can be supplemented by actual life experiences to generate solutions to real-life problems. This can be part of summer term activity or part of a major or minor course depending upon the major discipline.

Field-based learning/minor project: The field-based learning/minor project will attempt to provide opportunities for students to understand the different socioeconomic contexts. It will aim at giving students exposure to development-related issues in rural and urban settings. It will provide opportunities for students to observe situations in rural and urban contexts, and to observe and study actual field situations regarding issues related to socioeconomic development. Students will be given opportunities to gain a first-hand understanding of the policies, regulations, organizational structures, processes, and programmes that guide the development process. They would have the opportunity to gain an understanding of the complex socio-economic problems in the community, and innovative practices required to generate solutions to the identified problems. This may be a summer term project or part of a major or minor course depending on the subject of study.

4.8 Research Project / Dissertation

Students choosing a 4-Year Bachelor’s degree (Honours with Research) are required to take up research projects under the guidance of a faculty member. The students are expected to complete the Research Project in the eighth semester. The research outcomes of their project work may be published in peer-reviewed journals or may be presented in conferences /seminars or may be patented.

4.9 Other Activities:

This component will include participation in activities related to National Service Scheme (NCC), National Cadet Corps (NCC), adult education/literacy initiatives, mentoring school students, and other similar activities.

5 Programme Description:

School:	Skills and Entrepreneurship	
Programme:	Bachelor of Rural Studies	
Duration & Credits:	3/4 Years (120-120)	3/4 Years (120-160)
Departments		ANIMAL HUSBANDRY AND DAIRY SCIENCE

Bachelor of Rural Studies i.e., B.R.S. is a 3/4-year undergraduate degree programme. To seek admission in B.R.S. Animal Husbandry and Dairy scienc (Honours) students **should have cleared class 12th board exams from a recognised board**. The students who have completed their diploma (10+2) may also get admission to a degree programme.

B.R.S. Animal Husbandry is undergraduate degree programmes of either 3-year duration, with multiple entry and exit points and re-entry options within this period, with appropriate certifications such as:

- a certificate after completing 1 year (2 semesters) of study in the chosen fields of study,
- a diploma after 2 years (4 semesters) of study,
- a bachelor's degree after a 3-year (6 semesters) programme of study,
- a bachelor's degree with honours after a 4-year (eight semesters) programme of study or a bachelor's degree with research after a 4-year (eight semesters) programme of study if the student completes a rigorous research project in their major area(s) of study.
- The 4-year multidisciplinary bachelor's degree programme is considered a preferred option since it would allow the opportunity to experience the full range of holistic and multidisciplinary education in addition to a focus on the chosen major and minors as per the choices of the student.

(Reference: https://www.ugc.ac.in/pdfnews/8625263_LOCF-English-report_Final.pdf)

Bachelor of Rural Studies in Animal Husbandry

Knowledge is the currency of the 21st century, and the English language is the gateway to that knowledge. While making rural life sustainable, one needs a global perspective in which the knowledge of contemporary global trends for sustainability becomes inevitable. Nonetheless, while building a globally sustainable rural community, literacy in the English language becomes crucial. Thus, considering the day's demand, it might be appropriate to offer B.R.S. Animal Husbandry and Dairy scienc at Lokbharati University for Rural Innovation with the reasons listed below:

- **Advancing agricultural knowledge:** The department aims to be at the forefront of agronomic research, exploring new technologies and practices to enhance crop production, soil health and resource management.
- **Sustainable farming practices:** The department emphasizes the importance of sustainable agriculture, focusing on practices that minimize environmental impact,

conserve natural resources, and promote ecological balance. It promotes the adoption of precision agriculture, integrated pest management, organic farming, and other sustainable farming approaches to achieve long-term agricultural viability.

- **Education and outreach:** The department is dedicated to providing quality education and training programs to students, equipping them with the skills, knowledge, and practical experience needed to excel in Animal Husbandry. It also engages in community outreach and extension activities, sharing research findings, best practices, and innovative solutions with farmers, policymakers, and the wider public to promote sustainable agriculture and foster informed decision-making.
- **Technological innovation:** The department embraces technological advancements and seeks to integrate them into Animal Husbandry practices. It promotes the use of digital tools, remote sensing, data analytics, and precision farming technologies to optimize resource use, monitor crop health, and enhance decision-making in agriculture.

Programme Outcomes (POs):

After successfully completing the graduation, the learner will be able to:

PO1: Acquired basic knowledge about Animal farming and its allied sectors like Animal Husbandry and dairy science

PO2: Understand the fundamental challenges and opportunities of rural areas

PO3: Develop working models and strategies to address specific rural concerns

PO4: Implement sustainable solutions to rural problems in order to improve of the quality of life in rural communities

PO5: Analyze rural policies and understand their implications

7. Programme Specific Outcomes (PSOs):

After successfully completing this programme, learner will be able to:

PSO1: Acquire the knowledge about modern agriculture and its allied sectors like Animal Husbandry and Dairy Science, Agro processing etc...

PSO2: Learn about different kind animal husbandry and Dairy scienc at animal nutrition , animal breeding, animal management.

PSO3: Develop skills to implement effective animal husbandry strategies and maximize yields

PSO4: Learn about environmentally friendly practices such as natural farming, organic farming, conservation agriculture .

PSO5: Serve rural agricultural population

8. Learning Outcomes (LOs):

After successfully completing this programme, learner will be able to:

LO1: Understand modernizationa animal husbandry their impacts

LO2: Acquire knowledge about scope and importance of animal husbandry practices

LO3: Understand the principles animal husbandry in animal nutrition, animal breeding, animal management.

LO4: Develop the capacity to write and speak clearly, read perceptively, and think critically

LO5: Understanding of plant growth and development and their physiological responses

LO6: Acquire knowledge about fundamentals of Animal Husbandry and Dairy Science and its clinical practices

LO7: Acquire knowledge in experimental designs, sampling techniques and data analysis

LO8: Understand the Rural problems and learn to solve them

9. Detailed Syllabus and Course Contents

School of Skills&Entrepreneurship

Department of Animal Husbandry & Dairy Science

	Lokbharati University for Rural Innovation, Sanosara, Bhavnagar School of Skills and Entrepreneurship Department of Animal Husbandry & Dairy Science Bachelor of Rural Studies (B.R.S.) Specialization: Animal Husbandry & Dairy Science	Academic year 2025/26
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A. Course Profile:

Course Type	Core Compulsory	Year	2025/26
Course Code	04BRSMJ01	Semester	1
Course Title	Introduction of Animal Husbandry (Part - 1)	Credit	2 (LC)+1 (TC) +1 (PC)
Certification	Certificate. Course in Livestock Attendant	Hours Per Week	5

B. Outcomes:

Program Outcomes (PO)	<ol style="list-style-type: none">1. Acquired basic knowledge about animal farming and its allied sectors like animal husbandry and dairy science.2. Understand the fundamental challenges and opportunities of Rural areas.3. Develop working models and strategies to address specific rural concerns.
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Program Specific Outcomes (PSO)	<ol style="list-style-type: none"> 1. Acquire the knowledge about modern agriculture and its allied sectors like animal husbandry and dairy science etc.... 2. Learn about different kind animal husbandry and dairy science at animal nutrition , animal breeding , animal management. 3. Develop skills to implement effective animal husbandry strategies and maximize yields.
Course Level Outcomes (LO)	<ol style="list-style-type: none"> 1. Develop the basic understanding of Animal Husbandry. 2. Knowledge about major breeds of India. 3. To have hands on experience of the basic clinical practice. 4. Acquire basic knowledge about animal breeding.

C. LURI Pedagogy: Approx. 20% Lectures, 30% Multimedia and 50% Practical (Reference: https://www.ugc.ac.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf)

D. Course Contents:

Unit	Content	Study Resource	Methods	Specific Tasks/Activities	Evaluation
1.	Introduction of AH 1.1 Role of AH in Rural Economy 1.2 Important Breeds of Cattle in India 1.3 Important breeds of Buffaloes in India 1.4 Important exotic breed of cattle	વ્યવહારુગોપાલન પ્રકરણ - 1,2 N D P પ્રકરણ - 2	Discussion Self study	Visit of the cow shed Writing Activities	Viva voce - 10 Assignment - 05
2.	Animal Nutrition 2.1 Study of Digestive system of ruminant 2.2 Nutrient and its requirement for different categories of cattle & buffalo 2.3 Classification of feed stuffs 2.4 Different feeding systems & precaution while feeding	પશુઆહાર પ્રકરણ - 1,3,5,9 ઘાસચારા ખેતી પ્રકરણ - 1 થી 5	Group discussion Field visit Self study	Demonstration of Animal Nutrition Visit of fodder plant Writing Activities	Presentation - 20 Viva voce - 10 Assignment - 05
3.	Animal Management 1.1 Common terminology of Cattle & Buffalo 1.2 System of Animal Housing 1.3 Important structures required on Dairy farm 1.4 Common ailments of livestock - Its symptoms and remedies	Hand book of dairy farming પ્રકરણ - 1 થી 4 વ્યવહારુ ગોપાલન પ્રકરણ - 3 થી 5	Demonstration Self study	Field visit / map mapping Writing Activities	Journal - 10 Assignment - 05
4.	Animal Breeding 1.1 Systems of animal breeding 1.2 Advantage and disadvantage of inbreeding & outbreeding 1.3 Cross Breeding of Cattel in India 1.4 Merits & Demerits of Artificial Insemination	પશુસંવર્ધન પ્રકરણ - 1 થી 3	Tutorial Self study Practical 13	Writing Activities Writing Activities Experiment on AI and PD	Written test - 20 Assignment - 05

E. List of Practical:

No	Name	Outcomes	From Unit No.
1.	Visit to the Cattle dairy farm	Understanding farm layout and infrastructure through mapping exercise.	03
2.	Different body parts of Cattel, buffalo and bull	Ability to identify and distinguish various body parts of these animals.	01
3.	Study of Records and Registers on dairy farm and their importance	Understanding the significance of maintaining records in a dairy farm, and practice in recording data in the farm's records.	02
4.	Methods Dehorning, Identification, Castration	Familiarity with different techniques for dehorning, identification, and castration of cattle breeds.	04
5.	Common restrain and restraining methods	Knowledge and proficiency in using general methods to control and restrain animals safely.	04
6.	Measurement of Body weight of cattle	Ability to accurately measure the body weight and height of cattle for monitoring and management purposes.	03
7.	Identification of different feeds and fodders	Recognition and understanding of various types of animal feed and fodder commonly used in dairy farming.	02

F. Minimum Requirements:

No	Type	Yes/No
8.	Journal	Yes
9.	Assignment	Yes
10.	Presentation	Yes

11.	Written Test	Yes
12.	Viva Voce	Yes

G. Suggested Knowledge Resources:

Print	<p>વ્યવહારુ ગોપાલન – કૃષ્ણલાલ શુક્લ પશુ સંવર્ધન – ડૉ. આર. કે. શુક્લ આદર્શ પશુપાલન – ડૉ અરુણાદેવે The cow and Buffalo Breed in India – L.B.kulkarni Manual of Farm Animals – M.E.Herper</p>
Digital	<p>https://youtu.be/H SVUIT3GTK - પશુસંવર્ધન https://youtu.be/lpPfo-Xk7qQ - Animal Nutrition https://youtu.be/aj5b-Luo-y - Introduction of Animal Husbandry https://youtu.be/CGXf4912Uoc - Introduction of Animal Husbandry</p>



Lokbharati University for Rural Innovation, Sanosara, Bhavnagar
School of Skills and Entrepreneurship
Department of Animal Husbandry & Dairy Science
Bachelor of Rural Studies (B.R.S.)
Specialization: Animal Husbandry & Dairy Science

Academic year
2024-25

H. Course Profile:

Course Type	Core Compulsory	Year	2025/26
Course Code	04BRSMJ02	Semester	2
Course Title	Introduction of Animal Husbandry & Dairy Science Part(2)	Credit	2 (LC)+1 (TC) +1 (PC)
Certification	Certificate Course in Livestock Attendant	Hours Per Week	5

I. Outcomes:

Program Outcomes (PO)	<ol style="list-style-type: none"> 1. Implement sustainable solutions to Rural problems in order to Improve of the quality of life in Rural Communities. 2. Analyse Rural policies and understand their Implications.
Program Specific Outcomes (PSO)	<ol style="list-style-type: none"> 1. Learn about environmentally Friendly practices Such as Natural Farming, Organic farming, conservation Agriculture. 2. Serve Rural Animal Husbandry population.
Course Level Outcomes (LO)	<ol style="list-style-type: none"> 1. Understand the principles Animal Husbandry in Animal Nutrition, Animal breeding, Animal management.

	<ol style="list-style-type: none">2. Acquire knowledge about Fundamentals of Animal Husbandry and dairy science.3. Understand the Rural problems and learn to Solve them.
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J. LURI Pedagogy: Approx. 20% Lectures, 30% Multimedia and 50% Practical (Reference: https://www.ugc.ac.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf)

K. Course Contents:

Unit	Content	Study Resource	Methods	Specific Tasks/Activities	Evaluation
1.	Animal Health & Hygiene 1.1 Importance of Hygiene and sanitation at Dairy Farm 1.2 Important Animal Disease 1.3 Sign and symptom of Healthy and Disease Animal 1.4 Vaccination schedule and First Aid at Dairy Farm	પશુચિકિત્સા વિજ્ઞાનના મૂળ તત્વો ભાગ -1,2	Discussion Self study Field visit in the Cattle Farm	Writing Activities First Aid and Vaccination	Writing test - 10 Assignment - 05 Viva voce - 10
2.	Dairy Industry in India 2.1 History & present scenario of dairy industry in India 2.2 Dairy Industry in Gujarat-White Revolution 2.3 Structure and Function of Village Co-operative Society	દૂધ અને દૂધની બનાવટો પ્રકરણ - 1, 22,23	Guided video Self study Field visit	Group discussion Writing Activities Visit to village Co – Operative	Writing test – 05 Assignment -05 Riport Rating - 10
3.	Importance of Milk, Milk Product and its Composition 1.1 Importance of Milk in Human diet 1.2 Physical & Chemical Composition of Milk 1.3 Factors affecting Milk Production and its Composition	દૂધ અને દૂધની બનાવટો પ્રકરણ - 4,8,14	Discussion Laboratory Self study	Milk Analysis in laboratory Writing Activities	Viva voce – 10 Assignment - 05
4.	Milk and Milk Product 4.1 Clean milk Production 4.2 Study of indigenous milk Products	દૂધ અને દૂધની બનાવટો પ્રકરણ - 4,8,14	Discussion Self study 18 Field visit	Writing Activities Data collection of milk production	Writing test -05 Assignment - 05 Presentation – 10 Riport Rating - 10

L. List of Practical:

No	Name	Outcomes	From Unit No.
1	Visit to Village Milk Co-operative Society	Understanding the functioning and significance of village milk co-operative societies in the community.	02
2	Introduction of Different Dairy Equipment (Fat testing, Cream separator etc.)	Familiarity with various dairy equipment excluding fat testing, such as cream separators, and their functions.	03
3	Animal Health Camp	Participation in health camps for cattle, gaining practical knowledge and skills related to animal health management.	01
4	Participation in Vaccination Camp	Acquiring the ability to administer vaccinations to cattle and buffalo as part of community vaccination programs.	01
5	First Aid for Common Disease of Cattle & buffalo	Proficiency in providing first aid treatment to cattle and buffalo for common diseases and health issues.	01

M. Minimum Requirements:

No	Type	Yes/No
13.	Journal	Yes
14.	Assignment	Yes
15.	Presentation	Yes
16.	Written Test	Yes
17.	Viva Voce	Yes

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N. Suggested Knowledge Resources:

Print	<p>પશુ ચિકિત્સા વિજ્ઞાન વિષયના મૂળ તત્વો ભાગ 1,2 – દૂધ અને દૂધની બનાવટો – પશુપાલન – કૃષિ યુનિવર્સિટી જૂનાગઢ Hand book of Animal Husbandry – Dr . Prem Nath A Text book of Animal Husbandry – G.C.Banerjee</p>
Digital	<p>https://yoube/-6U400uy06 Animalmanagement https://you.be/Fps-MbdMSVg</p>

	<p>Lokbharati University for Rural Innovation, Sanosara, Bhavnagar School of Skills and Entrepreneurship Department of Animal Husbandry & Dairy Science Bachelor of Rural Studies (B.R.S.) Specialization: Animal Husbandry & Dairy Science</p>	<p>Academic year 2025-26</p>
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O. Course Profile:

Course Type	Major Compulsory	Year	2025-26
Course Code	04BRSMJ03	Semester	3
Course Title	Principal of Animal Nutrition (Part-1)	Credit	2 (LC)+1 (TC) +1 (PC)

Certification	B.R.S. Diploma	Hours Per Week	5
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P. Outcomes:

Program Outcomes (PO)	<ol style="list-style-type: none"> 4. Acquired basic knowledge about animal farming and its allied sectors like animal husbandry and dairy science. 5. Understand the fundamental challenges and opportunities of Rural areas. 6. Develop working models and strategies to address specific rural concerns.
Program Specific Outcomes (PSO)	<ol style="list-style-type: none"> 4. Acquire the knowledge about modern agriculture and its allied sectors like animal husbandry and dairy science etc.... 5. Learn about different kind animal husbandry and dairy science at animal nutrition, animal breeding, animal management. 6. Develop skills to implement effective animal husbandry strategies and maximize yields.
Course Level Outcomes (LO)	<ol style="list-style-type: none"> 1 Understand the basic scientific principles of Animal Nutrition. 2 Understand the feed Standard of different breeds of Cattle and Buffalo 3 Study the Animal Nutrition Science and Apply it in Practice.

Q. LURI Pedagogy: Approx. 20% Lectures, 30% Multimedia and 50% Practical (Reference: https://www.ugc.ac.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf)

R. Course Contents:

Unit	Content	Study Resource	Methods	Specific Tasks/Activities	Evaluation
2.	Importance & Principals of Animal Nutrition 1.1 Importance of Animal Nutrition 1.2 Feeding & Nutrition of Different Categories of Cattle & Buffalo 1.3 Digestion of Nutrients in ruminants	પશુ આહાર પ્રકરણ -૧,૨ Hand book of dairy Farming પ્રકરણ-૧થી ૫	Self-study Group discussion	Writing Activities Writing Activities Discussion	Written test – 10 Assignment – 10 Presentation - 10
2.	Livestock Feeds and Fodder 2.1 Cropping Scheme for dairy farm with 10 Gir cows with their followers 2.2 Feeding during scarcity 2.3 Toxic principles of feed and fodders	ઘાસચારા ખેતી પ્રકરણ ૧થી ૫ વ્યવહારુ ગોપાલન પ્રકરણ ૩થી ૫	Field visit Field visit Self-study	Visit of Cowshed Visit of Cowshed / Mapping Writing Activities	Viva voce – 10 Journal - 10 Assignment - 10
3.	Advances in Animal Nutrition and feeding 1.5 TMR, Bypass Nutrient (Fat, Protein) and feed additives 1.6 Importance & requirement of mineral mixture 1.7 Ration Balancing technique	પશુ આહાર પ્રકરણ ૪થી ૭ ગૌધુલી સામયિક	Practical Discussion Tutorial	Experiment Of TMR Demonstration Writing Activities	Viva voce – 10 Presentation – 10 Writing test - 10

S. List of Practical:

No	Name	Outcomes	From Unit No.

18.	Study of fodder production in Dairy farm	Understanding the process and methods involved in fodder production within a dairy farm setting.	2
19.	Preparation of fodder album	Creation of an album documenting various types of fodder, their characteristics, and their suitability for livestock feeding.	2
20.	Measurement of plot area and fixing sign board	Practical experience in measuring forage plots and installing signboards for identification and management purposes.	3
21.	To learn estimate production of different fodder crops	Developing skills to estimate the production yield of various fodder crops grown on the farm.	1
22.	Visit to fodder research station	Gaining insights into advanced research and techniques related to fodder production and management at a dedicated research facility.	3
23.	Visit of Gaucher (common grazing land)	Observing and learning about common grazing lands (Gaucher) and their role in providing fodder for livestock.	2
24.	Plantation of root ship/tusks on bund	Hands-on experience in planting root crops or tusks along bunds to enhance fodder availability and soil conservation efforts.	1
25.	Collection of different feed ingredients of Livestock	Understanding the methods and techniques involved in collecting various feed ingredients for livestock nutrition, contributing to fodder management practices.	3

T. Minimum Requirements:

No	Type	Yes/No
26.	Journal	Yes
27.	Assignment	Yes
28.	Presentation	Yes
29.	Written Test	Yes

30.	Viva Voce	Yes

U. Suggested Knowledge Resources:

Print	Animal feed Experiment – Dr . M. Dave The Cow and Buffalo Nutrition in India – L. B.Kulkarni. Manual of Farm Animals – M.E.Herper. આદર્શ પશુપાલન – ડૉ અરુણ દવે વ્યવહારુ ગોપાલન – કૃષ્ણલાલ શુક્લ
Digital	https://YouTube /lpPfo-Xk7qQ https://youtu.be/aj5b-Luo-y

	<p>Lokbharati University for Rural Innovation, Sanosara, Bhavnagar School of Skills and Entrepreneurship Department of Animal Husbandry & Dairy Science Bachelor of Rural Studies (B.R.S.) Specialization: Animal Husbandry & Dairy Science</p>	<p>Academic year 2025-26</p>
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Course Type	Major Compulsory	Year	2025- 26
Course Code	04BRSMJ04	Semester	3
Course Title	Animal Breeding & Reproduction (Part-1)	Credit	2 (LC)+1 (TC) +1 (PC)
Certification	B.R.S Diploma	Hours Per Week	5

A. Outcomes:

Program Outcomes (PO)	1.Implement sustainable solutions to Rural problems in order to Improve of the quality of life in Rural Communities. 2. Analyse Rural policies and understand their Implications.
Program Specific Outcomes (PSO)	1.Learn about environmentally Friendly practices Such as Natural Farming, Organic farming, conservation Agriculture. 2. Serve Rural Animal Husbandry population.
Course Level Outcomes (LO)	1 To get an understanding of the Science of Animal breeding and Animal ReproductiveSystem. 2 Familiar with modern Technology for Animal Husbandry. 3 Understand the importance of Animal breeding in Animal Husbandry business.

B. LURI Pedagogy: Approx. 20% Lectures, 30% Multimedia and 50% Practical (Reference: https://www.ugc.ac.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf)

C. Course Contents:

Unit	Content	Study Resource	Methods	Specific Tasks/Activities	Evaluation
1.	Cell Structure and Inheritance 1.1 Animal cell and its division 1.2 Significance of chromosome and genes in inherited traits 1.3 Mendal and its Experimentation on inherited characters in pea	ପଞ୍ଚୁ ସଂବର୍ଧନ ପ୍ରକରଣ -୧୩୩୩	Discussion Group discussion	Writing Activities Demonstration of Animal breeding	Writing test -10 Presentation -10
2.	Animal Breeding 2.1 History and importance of animal breeding 2.2 Systems of animal breeding and its merits and dements 2.3 Conservation and propagation of local breed of cattle and buffalo 2.4 Advantages of using progeny tested and proven bull in breeding	ବ୍ୟବହାର ଗୋପାଳନ ପ୍ରକରଣ-୮୩୩୩୦ The Cow and Buffalo Breed in India ପ୍ରକରଣ -୧୩୩୩	Tutorial Self-study Demonstration	Writing Activities Writing Activities Field visit Practical	Writing test -10 Assignment -10 Viva voce -10
3.	Reproductive System 1.4 Study of Male & Female Reproductive System 1.5 Estrous, Estrous Cycle, Conception, Pregnancy diagnosis etc. 1.6 Problems of infertility in village animals and its possible solutionsto managementApproach	ପଞ୍ଚୁ ସଂବର୍ଧନ।। ସିଧ୍ୟାନ୍ତୋ ପ୍ରକରଣ -୧୩୩୩	Demonstration Practical Field visit	Field visit / map mapping Visit of Cowshed Visit of village	Journal -10 Viva voce -10
4.	Artificial Insemination and Embryo transfer 4.1 History and importance of Artificial Insemination 4.2 Storage and Preservation of frozen semen 4.3 Merits & demerits of	A Text book of Animal Husbandry ପ୍ରକରଣ -୧୩୩୩	Self-study 27 Practical Practical	Writing Activities Visit of Cowshed	Assignment -10 Presentation -10

No	Name	Outcomes	From Unit No.
1	Visit to cattle breeding farm.	Farm Visit.	1
2	Study of pedigree information of cows/buffaloes from different farms	Introduction Cow and Buffalo will be Studied.	2
3	Heat deflation	Familiar with Animal Heat	3
4	Semen collection, preservation and utilization	Visit to semen station.	4
5	Preparation of animal for livestock show, judging and milk yield competition	Familiar with judging and compare.	2

D. Minimum Requirements:

No	Type	Yes/No
31.	Journal	Yes
32.	Assignment	Yes
33.	Presentation	Yes
34.	Written Test	Yes
35.	Viva Voce	Yes

E. Suggested Knowledge Resources:

Print	Hand book of Animal Husbandry – Dr. Prem Nath A Text book of Animal Husbandry - G. C. Banerjee પશુપાલન - કૃષિ યુનિવર્સિટી જૂનાગઢ Animal Resources Breeding part -1,2 Experiment – Dr. M. Dave
Digital	https://yoube /-6U400uv06 https://you .be/Fps -MbdMSVg https://youtu.be/CGXf4912Uoc



Lokbharati University for Rural Innovation, Sanosara, Bhavnagar
School of Skills and Entrepreneurship
Department of Animal Husbandry & Dairy Science
Bachelor of Rural Studies (B.R.S.)
Specialization: Animal Husbandry & Dairy Science

Academic year
2025-26

A. Course Profile:

Course Type	Major Compulsory	Year	2025 - 26
Course Code	04BRSMJO5	Semester	4
Course Title	Principal of Animal Nutrition part -2	Credit	2 (LC)+1 (TC) +1 (PC)
Certification	B.R.S. Diploma	Hours Per Week	5

B. Outcomes:

Program Outcomes (PO)	<ol style="list-style-type: none"> 7. Acquired basic knowledge about animal farming and its allied sectors like animal husbandry and dairy science. 8. Understand the fundamental challenges and opportunities of Rural areas. 9. Develop working models and strategies to address specific rural concerns.
Program Specific Outcomes (PSO)	<ol style="list-style-type: none"> 7. Acquire the knowledge about modern agriculture and its allied sectors like animal husbandry and dairy science etc.... 8. Learn about different kind animal husbandry and dairy science at animal nutrition, animal breeding, animal management. 9. Develop skills to implement effective animal husbandry strategies and maximize yields.
Course Level Outcomes (LO)	<ol style="list-style-type: none"> 1. Understand the basic scientific principles of Animal Nutrition 2. Understand the feed Standard of different fodder Crops. 3. Study Animal Nutrition science and apply it in Practice.

C. LURI Pedagogy: Approx. 20% Lectures, 30% Multimedia and 50% Practical (Reference: https://www.ugc.ac.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf)

D. Course Contents:

Unit	Content	Study Resource	Methods	Specific Tasks/Activities	Evaluation
1.	Feed and Fodder Crops Management 1.4 Agronomical practice of different fodder Crops 1.5 Planning and Requirement of green and dry fodder Round the year 1.3 Water Requirement for different categories of cattle and Buffalo. 1.4 planning and preparation of concentrate mixture with different ingredients at dairy farm.	પશુ આહાર પ્રકરણ -૧થી૩ Hand book of dairy Farming પ્રકરણ -૧થી૫	Self-study Map mapping Group discussion	Writing Activities Mind mapping Writing Activities and discussion	Assignment -10 Journal -10 Writing test 10 Writing test -10
2.	Storage of fodder 2.4 Silage preparation 2.5 Hay preparation 2.3 Concept of fodder bank	ઘાસચારાના પાકો પ્રકરણ -૧થી૫ વ્યવહાર ગોપાલન પ્રકરણ ૩થી૫	Practical Discussion Album	Experiment Of Silage Tutorial Demonstration	Journal – 10 Presentation -10 Viva voce -10
3.	Gaucher Development 1.8 Gaucher management 3.2 Silvipasture 1.9 Agroforestry	વ્યવહાર ગોપાલન ગૌધુલી સામયિક	Feld visit Guest lechers and Practical	Visit of Gaucher Sanosara	Report writing -10 Viva voce -10

E. List of Practical:

No	Name	Outcomes	From Unit No.
1	Preparation and evaluation of concentrate mixture with different feed ingredients.	Proficiency in formulating and assessing	1

		concentrate mixtures using various feed ingredients for livestock nutrition.	
2	Preparation of mineral block and its importances	Acquisition of skills in creating mineral blocks and understanding their significance in meeting the mineral needs of livestock.	1
3	Utilisation of unconventional feed and fodder in livestock feeding.	Identification and utilization of alternative or unconventional feed sources to supplement traditional livestock diets, enhancing feed options and nutrition.	1,3
4	Preparation of Silage and Hay.	Ability to produce silage and hay for livestock feed storage and preservation, ensuring availability of nutritious forage year-round.	2
5	Demonstration of U M B(Urea Molasses Block)	Understanding the process and benefits of producing Urea Molasses Blocks for improving the nutritional content of livestock feed.	2
6	Harvesting of different fodder crops and its advantages in livestock feeding	Proficiency in harvesting various fodder crops and recognition of the advantages they offer in meeting the dietary needs of livestock.	1,3
7	Calculation of dairy feed and fodder requirement for different categories of livestock.	Ability to calculate the daily feed and fodder requirements for different types of livestock based on their nutritional needs, facilitating effective feeding management.	1,3

F. Minimum Requirements:

No	Type	Yes/No
36.	Journal	Yes
37.	Assignment	Yes

38.	Presentation	Yes
39.	Written Test	Yes
40.	Viva Voce	Yes

G. Suggested Knowledge Resources:

Print	Animal feed Experiment -Dr.M.Dave The Cow and Buffalo Nutrition in India – L.B.kulkarni. Manual of Farm Animal – M.E.Horper. વ્યવહારુ ગોપાલન – કૃષ્ણલાલ શુક્લ.
Digital	https://YouTube/IpPfo-Xk7 https://youtube/aj5b-Luo-y

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A. Course Profile:

Course Type	Major Compulsory	Year	2025 - 26
Course Code	04BRSMJO6	Semester	4
Course Title	Dairy Farm Management	Credit	2 (LC)+1 (TC) +1 (PC)
Certification	B.R.S. Diploma	Hours Per Week	5

B. Outcomes:

Program Outcomes (PO)	<ol style="list-style-type: none"> 1. Implement sustainable solutions for Rural problems in order to Improve of the quality of life in Rural Communities. 2. Analyse Rural policies and understand their Implications.
Program Specific Outcomes (PSO)	<ol style="list-style-type: none"> 1. Learn about environmentally Friendly practices Such as Natural Farming, Organic farming, conservation Agriculture. 2. To Serve Rural Animal Husbandry population.
Course Level Outcomes (LO)	<ol style="list-style-type: none"> 1. Understand the principals of Modern Management. 2. Study ideal Construction of Cowshed Building. 3. Learn About plan a modern Animal Shelter.

C. LURI Pedagogy: Approx. 20% Lectures, 30% Multimedia and 50% Practical (Reference: https://www.ugc.ac.in/pdfnews/8126011_Draft--curriculum-framework-credit-struture-FYUGP.pdf)

D. Course Contents:

Unit	Content	Study Resource	Methods	Specific Tasks/Activities	Evaluation
1.	Judging and Selectin of Dairy Animal 1.4 Selection methods 1.5 Selection and culling criteria for dairy Animals 1.6 Score card for judging and selection of dairy animal	Hand book of dairy Farming. 4 to 10 ଘ୍ୟଦୂର ଗୋପାଳନ ପ୍ରକରଣ ୬,୭,୮	Group discussion Field visit Practical	Writing Activities discussion Visit of Cowshed Visit of Cowshed	Writing test -10 Viva voce -10 Viva voce -10
2.	Care and Management to Daily Animal 2.5 Calf management 2.6 Heifer management 2.7 Management of pregnant and lactating Animals 2.8 Management of Bull and bullock.	A Text book of Animal Husbandry by	Discussion Tutorial Self-study	Writing Activities Writing Activities Writing Activities	Writing test -10 Presentation -10 Assignment -10
3.	Housing to Dairy Animal 1.1 Site Selection for dairy farm 3.2 Layout and design of differentlivestock buildings. 1.2 Arrangement of buildings with special Reference to Indians Condition.	Hand book of dairy Farming A Text book of Animal Husbandry by ଗୌଧୁଣୀ ସାମୟିକ	Self-study Map mapping Map mapping 36	Writing Activities Maid map Maid map	Assignment -10 Journal -10 Journal -10

No	Name	Outcomes	From Unit No.
1	Routine on dairy farm.	Establishing a consistent schedule for regular visits to the dairy farm to monitor operations and animal health.	1
2	Preparation of History sheet of Individual animal	Acquiring the skill to compile and maintain individual animal history sheets, documenting important information for management and health monitoring purposes.	1
3	Handling of Animals and milking of Animals	Developing proficiency in safely handling animals and performing milking procedures in a dairy farm setting.	2
4	Housing of dairy Animals in village.	Studying the housing arrangements and conditions of dairy animals in village settings to understand their habitat and welfare needs.	3
5	Pattern of labour utilisation in farm.	Understanding and implementing effective labour utilization patterns in farm operations, prioritizing labour welfare activities to ensure a conducive work environment.	3,2

E. Minimum Requirements:

No	Type	Yes/No
41.	Journal	Yes
42.	Assignment	Yes
43.	Presentation	Yes
44.	Written Test	Yes
45.	Viva Voce	Yes

F. Suggested Knowledge Resources:

Print	Hand book of dairy Farming Manual of Farm Animals – M.E.Herper વ્યવહારુ ગોપાલન – કૃષ્ણલાલ શુક્લ ગૌધુલી સામયિક A Text book of Animal Husbandry by – G.C.Banerjee
Digital	https://YouTube/IpPfo-Xk7 https://youtube/aj5b-Luo-y