



UG- LIFE SKILL COURSE

**ENVIRONMENTAL EDUCATION (EE) (Mandatory)**

(w.e.f. 2020-2021 A.Y.)

Semester	Course Code (LS)	Course Title	Hrs/Sem	Hrs/wk	Credits	Sem End Exam (2 Hrs)
III	Life skill course	Environmental Education(EE)	30	2	2	50 Marks

**Course objective:** A Generic Course intended to create awareness that the life of human beings is an integral part of environment and to inculcate the skills required to protect environment from all sides.

**Learning outcomes:** On completion of this course the students will be able to .....

- Understand the nature, components of an ecosystem and that humans are an integral part of nature.
- Realize the importance of environment, the goods and services of a healthy biodiversity, dependence of humans on environment.
- Evaluate the ways and ill effects of destruction of environment, population explosion on ecosystems and global problems consequent to anthropogenic activities.
- Discuss the laws/ acts made by government to prevent pollution, to protect biodiversity and environment as a whole.
- Acquaint with international agreements and national movements, and realize citizen's role in protecting environment and nature.

**Unit 1: Environment and Natural Resources:**

**(06hrs)**

1. Multidisciplinary nature of environmental education; scope and importance.
2. Man as an integral product and part of the Nature.
3. A brief account of land, forest and water resources in India and their importance.
4. Biodiversity: Definition; importance of Biodiversity - ecological, consumptive, productive, social, ethical and moral, aesthetic, and option value.
5. Levels of Biodiversity: genetic, species and ecosystem diversity.

**Unit-2: Environmental degradation and impacts:**

**(10hrs)**

1. Human population growth and its impacts on environment; land use change, land degradation, soil erosion and desertification.
2. Use and over-exploitation of surface and ground water, construction of dams, floods, conflicts over water (within India).
3. Deforestation: Causes and effects due to expansion of agriculture, firewood, mining, forest fires and building of new habitats.
4. Non-renewable energy resources, their utilization and influences.
5. A brief account of air, water, soil and noise pollutions; Biological, industrial and solid wastes in urban areas. Human health and economic risks.
6. Green house effect - global warming; ocean acidification, ozone layer depletion, acid rains and impacts on human communities and agriculture.
7. Threats to biodiversity: Natural calamities, habitat destruction and fragmentation, over exploitation, hunting and poaching, introduction of exotic species, pollution, predator and pest control.

**Unit 3: Conservation of Environment:**

**(10hrs)**

Concept of sustainability and sustainable development with judicious use of land, water and forest resources; a forestation.

1. Control measures for various types of pollution; use of renewable and alternate sources of energy.
2. Solid waste management: Control measures of urban and industrial waste.
3. Conservation of biodiversity: In-situ and ex-situ conservation of biodiversity.
4. Environment Laws: Environment Protection Act; Act; Wildlife Protection Act; Forest Conservation Act.
5. International agreements: Montreal and Kyoto protocols; Environmental movements: Bishnois of Rajasthan, Chipko, Silent valley.



**Suggested activities to learner: (4 hours)**

1. Visit to an area to document environmental assets: river/ forest/ flora/fauna, etc
2. Visit to a local polluted site-Urban/Rural/Industrial/Agricultural site.
3. Study of common plants, insects, birds and basic principles of identification.
4. Study of simple ecosystems -forest, tank, pond, lake, mangroves etc.
5. Case study of a Forest ecosystem or a pond ecosystem.

**Suggested text book:**

1. Erach Barucha (2004) *Text book of Environmental Studies for Undergraduate courses* (Prepared for University Grants Commission) Universities Press.
2. Purnima Smarath (2018) *Environmental studies* Kalyani Publishers, Ludhiana

**Reference books:**

1. Odum, E.P., Odum, H.T. & Andrews, J. (1971) *Fundamentals of Ecology*. Philadelphia: Saunders.
2. Pepper, I.L., Gerba, C.P. & Brusseau, M.L. (2011). *Environmental and Pollution Science*. Academic Press.
3. Raven, P.H., Hassenzahl, D.M. & Berg, L.R. (2012) *Environment. 8th edition*. John Wiley & Sons.
4. Singh, J.S., Singh, S.P. and Gupta, S.R. (2014) *Ecology, Environmental Science and Conservation*. S. Chand Publishing, New Delhi.
5. Sengupta, R. (2003) *Ecology and economics: An approach to sustainable development*. OUP.
6. Wilson, E. O. (2006) *The Creation: An appeal to save life on earth*. New York: Norton.
7. Groom, Martha J., Gary K. Meffe, and Carl Ronald Carroll (2006) *Principles of Conservation Biology*. Sunderland: Sinauer Associates.



**MODEL QUESTION PAPERS**

Life Skill courses

Semester: III

ENVIRONMENTAL EDUCATION(Mandatory)

Time: 2Hrs

Max Marks: 50

**SECTION – A**

Answer any **FOUR** questions. Each question carries 5 marks .

4X5 = 20Marks

1. Write short notes on Ecosystem diversity
2. Write a brief account on Water resources in India
3. Describe about Green house effect
4. Soil erosion
5. Write about any two kinds of pollutions
6. Wildlife protection Act
7. Chipko & Silent valley movement
8. A forestation

**SECTION – B**

Answer any **THREE** questions. Each question carries 10 marks

3 x 10 = 30Marks

9. Write an essay on Scope & Importance of environmental education.  
(or)
10. Give a detailed explanation on Biodiversity and its importance .
11. Explain about Non renewable energy resources, their utilization and influences.  
(or)
12. Describe threats to biodiversity.
13. Write an detailed account and differences on In situ & Ex situ conservation.  
(or)
14. Define sustainability? Explain sustainable development of Water and Forest resources.



UG- SKILL DEVELOPMENT COURSE

**DAIRY TECHNOLOGY**

(w.e.f. 2020-2021 A.Y.)

Semester	Course Code (SD)	Group 'B'	Course Title	Hrs/Sem	Hrs/wk	Credits	Sem End Exam (2 Hrs)
II	Skill Development Course		Dairy Technology	30	2	2	50 Marks

**Learning Outcomes:**

After successful completion of the course, students will be able to;

- Understand the pre-requisites for starting a Dairy farm
- Recognize different breeds of Cows & buffaloes following safety precautions.
- Prepare and give recommended feed and water for livestock
- Maintain health of livestock along with productivity
- Vaccination of cattle, nutrients requirements
- Entrepreneurship i.e., Effectively market dairy products
- Ensure safe and clean dairy farm and Standard safety measures to be taken Efficiently start and manage to establish or develop a Dairy Industry

**Unit- I (Introduction and Establishment of a Dairy Farm): (05 Hrs)**

- 1.1 Dairy development in India – Dairy Cooperatives (NDRI, NDDB, TCMPF) (1hr)
- 1.2 Constraints of Present Dairy Farming and Future Scope of Dairy Farmer. (1 hr)
- 1.3 Selection of site for dairy farm; Systems of housing – Loose housing system, Conventional Dairy Farm; Records to be maintained in a dairy farm. (2 hrs)

**Unit - II (Livestock Identification and Management): (13 Hrs)**

- 2.1 Breeds of Dairy Cattle and Buffaloes – Identification of Indian cattle and buffalo breeds and Exotic breeds; Methods of selection of Dairy animals. (5 hrs)
- 2.2 Systems of inbreeding and crossbreeding. (2 hrs)
- 2.3 Weaning of calf, Castration, Dehorning, Deworming and Vaccination programme (3 hrs)
- 2.4 Care and management of calf, heifer, milk animal, dry and pregnant animal, bulls and bullocks.(3 hrs)

**Unit- III (Feed Management, Dairy Management, Cleaning and Sanitation): (8 Hrs)**

- 3.1 Basic Principles of Feed, Important Feed Ingredients, Feed formulation and Feed Mixing (2 hrs)
- 3.2 Operation Flood –Definition of Milk and Nutritive value of milk and ICMR recommendation of nutrients –Per Capita Milk production and availability in India and Andhra Pradesh – Methods of Collection and Storage of Milk–Labelling and Storage of milk products (4 hrs)
- 3.3 Cleaning and sanitation of dairy farm – Safety precautions to prevent accidents in an industry. (2 hrs)

**Co-curricular Activities Suggested: (4 hrs)**

1. Group discussion & SWOT analysis
2. Visit to a Dairy Farm
3. Visit to Milk Cooperative Societies
4. Visit to Feed Milling Plants
5. Market Study and Identification of Government Schemes, Insurance and Bank Loans in relation

**Reference books:**

1. Dairy Science: Petersen (W.E.) Publisher – Lippincott & Company
2. Principles and practices of Dairy Farm –Jagdish Prasad
3. Text book of Animal Husbandry - G C Benarjee
4. Hand book of Animal Husbandry - ICAR Edition
5. Outlines of Dairy Technology – Sukumar (De) – Oxford University press
6. Indian Dairy Products – Rangappa (K.S.) & Acharya (KT) – Asia Publishing House.
7. The technology of milk Processing – Ananthakrishnan, C.P., Khan, A.Q. and Padmanabhan, P.N. – Shri Lakshmi Publications.
8. Dairy India 2007, Sixth edition
9. Economics of Milk Production – Bharati Pratima Acharya Publishers.
10. <http://www.asci-india.com/BooksPDF/Dairy%20Farmer%20or%20Entrepreneur.pdf>
11. <https://labour.gov.in/industrial-safety-health>



**MODEL QUESTION PAPER**

**SKILL DEVELOPMENT COURSE  
SEMESTER-II(Group B)  
DAIRY TECHNOLOGY**

Time: 2Hrs.

Max. Marks: 50

**SECTION –A**

Answer any **FOUR** questions. Each question carries 5 Marks.

4 x 5 =20Marks

1. Write about conventional dairy farming
2. Write about role of NDRI in dairy development in India
3. Write in detail about Heifer
4. Write a note on Exotic breeders in India
5. Enumerate about important feed ingredients
6. Write short notes on methods of collection and storage of milk
7. Write short notes on records to be maintain in a Dairy farm
8. Write in detail about vaccination programme in dairy farm

**SECTION –B**

Answer **all** the questions. Each Question carries 10 Marks.

3x10=30Marks

9. Write an essay on constraints of present dairy farming and future scope of dairy Farmer.

**OR**

10. Write an essay on selection of site for dairy farming
11. Write in detailed about systems of inbreeding and cross breeding

**OR**

12. Enumerate about care and management of bulls and bullocks
13. Write an essay on cleaning and sanitation of dairy farm .

**OR**

14. Write an essay on feed formulation and feed mixing



## UG- SKILL DEVELOPMENT COURSE

### POULTRY FARMING

(w.e.f. 2020-2021 A.Y.)

Semester	Course Code (SD)	Course Title	Hrs/Sem	Hrs/wk	Credits	Sem End Exam (2 Hrs)
III	Skill Development Course	Poultry Farming	30	2	2	50 Marks

**Learning Outcomes:** By successful completion of the course, students will be able to;

- Understand the field level structure and functioning of insurance sector and it's role in protecting the risks
- Comprehend pertaining skills and their application for promoting insurance coverage
- Prepare better for the Insurance Agent examination conducted by IRDA
- Plan 'promoting insurance coverage practice' as one of the career options.

#### Unit I (Introduction to Poultry Farming): (10Hrs)

- 1.1 General introduction to poultry farming -Definition of Poultry; Past and present scenario of poultry industry in India.
- 1.2 Principles of poultry housing. Poultry houses. Systems of poultry farming.
- 1.3 Management of chicks, growers and layers. Management of Broilers.
- 1.4 Preparation of project report for banking and insurance

#### Unit II (Feed and Livestock Health Management): (10 Hrs):

- 2.1 Poultry feed management – Principles of feeding, Nutrient requirements for different stages of layers and broilers. Feed formulation and Methods of feeding.
- 2.2 Poultry diseases – viral, bacterial, fungal and parasitic(two each); symptoms, control and management; Vaccination programme.

#### Unit III (Harvesting of Eggs and Sanitation): (10 Hrs)

- 3.1 Selection, care and handling of hatching eggs. Egg testing. Methods of hatching.
- 3.2 Brooding and rearing. Sexing of chicks.
- 3.3 Farm and Water Hygiene, Recycling of poultry waste.

#### Co-curricular Activities Suggested: (4 hrs)

1. Group discussion& SWOT analysis
2. Visit to a poultry farm
3. Invited Lectures by Concerned officers of government or private farms
4. Cheap and Healthy Feed preparation by students based on government standards
5. Market study and Survey (Monitoring of daily price hike in poultry market and analysis)
6. Online Swayam Moocs course on poultry farming (see reference 9 below)

#### Reference books:

1. Sreenivasaiah., P. V., 2015. Textbook of Poultry Science. 1st Edition. Write & Print Publications, New Delhi
2. Jull A. Morley, 2007. Successful Poultry Management. 2nd Edition. Biotech Books, New Delhi"
3. Hurd M. Louis, 2003. Modern Poultry Farming. 1st Edition. International Book Distributing Company, Lucknow.
4. Life and General Insurance Management
5. Financial services, Tata McGraw hill
6. <http://www.asci-india.com/BooksPDF/Small%20Poultry%20Farmer.pdf>
7. [https://nsdcindia.org/sites/default/files/MC\\_AGR-Q4306\\_Small-poultry-farmer-.pdf](https://nsdcindia.org/sites/default/files/MC_AGR-Q4306_Small-poultry-farmer-.pdf)
8. <http://ecoursesonline.iasri.res.in/course/view.php?id=335>
9. [https://swayam.gov.in/nd2\\_nou19\\_ag09/preview](https://swayam.gov.in/nd2_nou19_ag09/preview)



**MODEL QUESTION PAPERS**

**SKILL DEVELOPMENT COURSES**

Semester: III

**POULTRY FARMING**

Time: 2Hrs.

Max Marks: 50

**SECTION – A**

Answer any **FOUR** questions. Each question carries 5 marks.

4 x 5 = 20Marks

1. Management of Broilers
2. Debeaking
3. Culling
4. Vaccination
5. Methods of feeding
6. Parasitic diseases in Poultry
7. Egg testing
8. Recycling of Poultry wastes

**SECTION – B**

Answer **all** the questions. Each question carries 10 marks.

3 x 10 = 30Marks

9. Define Poultry. Discuss the past and present scenario of Poultry industry in India  
(OR)
10. Write in detail about the Principles involved in Poultry housing.
11. Give an account on Principles of feeding in poultry. Add a note on nutrient requirements for different stages of layers and broilers.  
(OR)
12. Describe the commonly encountered viral, bacterial and fungal diseases in poultry.
13. Write an essay on methods of hatching.  
(OR)
14. Explain the management practices involved in brooding and rearing.