



પરિપત્ર:

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીની લાઈફ સાયન્સ વિદ્યાશાખાનાં અભ્યાસક્રમ ચલાવતા સેન્ટર ઓફ એક્સેલેન્સ ફોર વાઇલ્ડ-લાઈફ એન્ડ કન્ઝર્વેશન સ્ટડીઝનાં ડાયરેક્ટર તેમજ લાઈફ સાયન્સ ડીપાર્ટમેન્ટનાં હેડને જણાવવાનું કે લાઈફ સાયન્સ વિદ્યાશાખા અંતર્ગતનો વાઈલ્ડ-લાઈફ સાયન્સીસ વિષયનો પી.જી ડીપલોમાં ઇન વાઈલ્ડ-લાઈફ હેલ્થ સર્ટીફિકેટ કોર્સનો અભ્યાસક્રમ આ સાથે સામેલ છે.

માનનીય કુલપતિશ્રીની મંજૂરી અનુસાર સદર અભ્યાસક્રમ શૈક્ષણિક વર્ષ જુન, ૨૦૨૫ થી અમલવારી કરવાની રહે છે. લાઈફ સાયન્સ વિદ્યાશાખા માં સેન્ટર ઓફ એક્સેલેન્સ ફોર વાઇલ્ડ-લાઈફ એન્ડ કન્ઝર્વેશન સ્ટડીઝનાં ડાયરેક્ટરશ્રીને અમલવારી કરવા જણાવવામાં આવે છે.



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૧૧/૪/૨૦૨૫

ખાસ ફરજ પરના અધિકારી
(એકેડેમિક)

ક્રમાંક/બીકેએનએમયુ/ એકેડેમિક/૩૪૩/૨૦૨૫

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી,

સરકારી પોલીટેકનિક કેમ્પસ,

ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી રોડ,

ખડીયા, જૂનાગઢ-૩૬૨૨૬૩

તા.૦૮/૦૭/૨૦૨૫

પ્રતિ,

- ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટીનાં સેન્ટર ઓફ એક્સેલેન્સ ફોર વાઇલ્ડ-લાઈફ એન્ડ કન્ઝર્વેશન સ્ટડીઝનાં ડાયરેક્ટરશ્રી અને લાઈફ સાયન્સ ડીપાર્ટમેન્ટનાં હેડશ્રી તરફ....

નકલ સાદર રવાના:-

- માન.કુલપતિશ્રી/કુલસચિવશ્રીનાં અંગત સચિવશ્રી.
- પરીક્ષા નિયામકશ્રી, ભક્તકવિ નરસિંહ મહેતા યુનિવર્સિટી, જૂનાગઢ

નકલ રવાના જાણ તથા યોગ્ય કાર્યવાહી અર્થે:

- સીસ્ટમ મેનેજરશ્રી, આઇ.ટી.સેલ વિભાગ (વેબસાઇટ ઉપર પ્રસિદ્ધ થવા અર્થે.)



BHAKTA KAVI NARSINH MEHTA UNIVERSITY

Major

Syllabus of PG Diploma as per NEP-2020

Faculty of Life Sciences

Effective from June 2025

Subject: Wildlife Sciences

SEMESTER- I & II

Bhakta Kavi Narsinh Mehta University Junagadh



**Faculty of Life Sciences
Subject: Wildlife Science**

Programme: PG Diploma in Wildlife Health

**Detailed curriculum
(wef June 2025)**

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SUMMARY OF THE SYLLABUS

Sem No.	Sr. No.	Category of Course	Course Title	Course Level	Credit	Teaching Hrs.	SEE Marks	CCE Marks	Total Marks	Exam Duration
Sem-1	1	Major-1	Fundamentals of wildlife and conservation biology		4	60	50	50	100	2 hours
	2	Major-2	Wildlife disease dynamics		4	60	50	50	100	2 hours
	3	Major-3	Practical		4	120	25	25	50	2 hours
	4	Major-4	Project progress		8	240	100	100	200	
				Total	20	480			450	

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Sem No.	Sr. No.	Category of Course	Course Title	Course Level	Credit	Teaching Hrs.	SEE Marks	CCE Marks	Total Marks	Exam Duration
Sem-2	1	Major-5	Wildlife disease preventions and management		4	60	50	50	100	2 hours
	2	Major-6	Project		16	480	200	200	400	
				Total	20	540			500	

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Course Level	5	Internal Marks	50
Programme	PG Diploma	External Marks	50
Semester	1	Practical Internal	25
Category of Course		Practical External	25
Course Credit	6 (4 theory, 2 practical)	Prac. External Exam Duration	2 hours
Teaching Hours	120	Total	150
Course Code	PGDWH01	Exam Duration	2 hours
Course Title	Fundamentals of wildlife and conservation biology		

Course Level	5	Internal Marks	50
Programme	PG Diploma	External Marks	50
Semester	1	Practical Internal	25
Category of Course		Practical External	25
Course Credit	6 (4 theory, 2 practical)	Prac. External Exam Duration	2 hours
Teaching Hours	120	Total	150
Course Code	PGDWH02	Exam Duration	2 hours
Course Title	Wildlife disease dynamics		

Course Level	5	Internal Marks	50
Programme	PG Diploma	External Marks	50
Semester	1	Viva voce Internal	25
Category of Course		Viva voce External	25
Course Credit	8	Prac. External Exam Duration	
Teaching Hours	240	Total	200
Course Code	PGDWH03	Exam Duration	
Course Title	Project progress report		

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Course Level	5	Internal Marks	50
Programme	PG Diploma	External Marks	50
Semester	2	Practical Internal	25
Category of Course		Practical External	25
Course Credit	4	Prac. External Exam Duration	2 hours
Teaching Hours	60	Total	150
Course Code	PGDWH04	Exam Duration	2 hours
Course Title	Wildlife disease prevention and management		

Course Level	5	Internal Marks	100
Programme	PG Diploma	External Marks	100
Semester	2	Viva voce Internal	50
Category of Course		Viva voce External	50
Course Credit	16	Project report evaluation	100
Teaching Hours	480	Total	400
Course Code	PGDWH05	Exam Duration	
Course Title	Project		

BHAKTA KAVI NARSINH MEHTA UNIVERSITY**Major****Syllabus of PG Diploma as per NEP-2020****Faculty of Life Sciences****Effective from June 2025****Subject: Wildlife Sciences****SEMESTER- I & II****Course Objectives:**

Wildlife Science especially health management of captive and free ranging wildlife focuses on the health and management of wild animals, plants and microorganisms. As a wildlife health manager, one will study the disease dynamics, ecology of disease-causing organisms and veterinary medicines. The program will also focus on different health management programs for captive and free-ranging wildlife.

Course Learning Outcomes: After completion of the course:

1. Knowledge of wildlife conservation, and a critical understanding of concepts such as sustainability and sustainable development
2. An understanding of diseases in wildlife, zoonosis and interaction of parasites and hosts
3. Practical skills in disease diagnosis, medicines and health management of captive and free ranging wildlife
4. An understanding of ecological networks and ecosystem services.
5. An understanding of environmental changes and the consequences.
6. Confidence in use of universally available techniques in wildlife healthcare and management
7. Transferable skills necessary for employment.

Course Contents

Sem	Paper	Unit No.	Syllabi	Teaching Hours
1	PGDWH 01	1	Biogeography and Biological diversity	30
		2	Introduction to Indian wildlife and habitats	30
		3	Conservation biology	30
		4	Wildlife conservation in practice	30
1	PGDWH 02	1	Introduction to Wildlife Health	30
		2	Wildlife Disease Ecology	30
		3	Parasitology in Wildlife Health	30
		4	Wildlife Veterinary Medicine	30

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Suggested Reading:

1. Conservation Biology for All by N S Sodhi and P R Ehrlich (2010), Oxford University Press
2. Wildlife medicine and health management by M G Jayathangara and Gunjan Das (2022), NIPA Genx.
3. Wildlife Ecology, Conservation and Management by John M Fryxell et al., (2014), Wiley Blackwell
4. Evolution by Mark Ridley (2004), Blackwell Publishers
5. Principles of Environmental Sciences by Joeri Bertels and Henk Bezemer (2009), Springer Science
6. Field manual of Wildlife Disease (2001) USGS, USA

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Course Contents

Sem	Paper	Unit No.	Syllabi	Teaching Hours
2	PGDWH 04	1	Wildlife Health Management and Policy	30
		2	Wildlife Immunology and Vaccination	30
		3	Wildlife Rehabilitation and Rescue	30
		4	Wildlife Health Education and Outreach	30
2	PGDW H05	1	Project	480

Suggested Reading:

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INTERNAL EVALUATION SCHEME		
NO	Particulars	Marks
1	Mid Semester Exam (Mandatory)	25
2	Class Test	05
3	Open book exam/test	05
4	Open note exam/test	05
5	Self-test/ Online test	05
6	Essay/Article writing	05
7	Quizzes/Objective test	05
8	Class assignment	05
9	Home assignment	05
10	Reports Writing	05
11	Research/Dissertation	05
12	Case Studies	05
13	Viva/Oral exam	05
14	Group Discussion	05
15	Role Play	05
16	Paper presentation/Seminar	05
17	Language Lab work	05
18	Interview	05
19	Craft work	05
20	Co-curricular work	05
21	Field Assignment	05
22	Poster Presentation	05
23	Attendance	05
24	Project Work	05
Total		50

Note: Sr.No.1 is mandatory. Select any five from Sr.No.2 to 24. Each Contains five marks. Student should secure 18 Marks for passing in internal Exam.

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Ques. No.	Particulars	From which Unit	Marks
1	Descriptive question/ short notes from unit 1	1	10
2	Descriptive question/ short notes from unit 2	2	10
3	Descriptive question/ short notes from unit 3	3	10
4	Descriptive question/ short notes from unit 4	4	10
5	Short questions of one/two marks	From Each Unit	10
		Total Marks	50

Paper Style: Practical

Ques. No.	Particulars	Marks
1	Perform as per the instructions Major Exercise	20
2	Perform and explain to the examiner Minor Exercise	10
3	Do as directed	10
4	Field report and Viva voce	10
		50

POST GRADUATION DIPLOMA IN WILDLIFE HEALTH (SEM-I)

PGDWH 01: Fundamentals of Wildlife and Conservation Biology

Unit 1: Biogeography and Biological diversity

Classical biogeography: Continental drift, dispersal, bio-geographical realms and provinces

Applied biogeography, biogeographical process, endemism, refugia. The differences between plant and animal geography. Biogeographic classification of India.

Concept of Biodiversity, types and levels of biodiversity, Biodiversity hotspots and types of species

Outline of Diversity of plant, animals and microorganisms

Unit 2: Introduction to Indian wildlife and habitats

Concept and scope of wildlife, wildlife as a natural resource, threatened wildlife in India

Wildlife management history and current practices

Wildlife population estimation

Concept of habitat, habitat and niches, Important habitats of Indian subcontinent and India

Habitat suitability and evaluation techniques

Unit 3: Conservation biology

Introduction to conservation biology, types of conservation, conservation ethics

Biological consequences of habitat fragmentation, covering barriers and isolation, edge effects, ecological corridors

Human-wildlife interactions and human dimension in management

Community based conservation, role of different organizations in conservation

Ecological restoration and its significance in conservation

Unit 4: Research in wildlife sciences

Concept of scientific research, Basic descriptive statistics and non-parametric statistics

Basics of scientific writing, referencing and literature review

Formation of scientific article and presentations

General introduction of Remote sensing, GIS and their applications in wildlife research

PGDWH 02: Wildlife disease dynamics

Unit 1: Introduction to Wildlife Health

Definition and scope of wildlife health: Concept of wildlife health, including the physical, mental, and social well-being of wildlife and captive populations.

Importance of wildlife health in conservation: Crucial role of wildlife health in maintaining ecosystem stability and ecosystem services.

Historical perspective of wildlife health studies: Brief history of wildlife health in India.

Development of wildlife health research and contemporary approaches.

Unit 2: Wildlife Disease Ecology

Introduction to wildlife diseases: Concept of wildlife diseases, common infectious, parasitic, and non-infectious diseases, and their effects on wildlife populations.

Host-pathogen interactions: Mechanisms by which pathogens interact with their host organisms, transmission routes, immune responses, and disease outcomes.

Transmission dynamics and disease spread in wildlife populations: Factors influencing the transmission and spread of diseases within and among wildlife populations, including population density, behavior, and environmental factors, case studies.

Unit 3: Parasitology in Wildlife Health

Parasitic infections in wildlife populations: Diversity of parasites, including protozoa, helminths, arthropods, and ectoparasites.

Parasite-host interactions and impact on wildlife health: Co-evolutionary dynamics between parasites and their hosts, immune responses, pathology, and ecological consequences.

Parasite control measures in wildlife management: Methods for controlling parasitic infections in wildlife populations, vaccination and bio-security management.

Unit 4: Wildlife Veterinary Medicine

Basics of veterinary medicine in wildlife: veterinary medicine principles as they apply to wildlife.

Wildlife capture and immobilization techniques: Techniques used to safely capture, handle, and immobilize wild animals for medical examination, research, and

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management purposes. Common drugs used in immobilization. Percent proportions and lethal dose quantity for animals.

Wildlife anesthesia and surgery: Anesthesia protocols and surgical procedures commonly performed on wildlife species, including sterilization, wound treatment, and implantation of tracking devices.

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PGDWH03: Practical and Exposure visits

At least one visit to a Wildlife health organization/ veterinary hospital/ Wildlife rescue center and a report should be prepared by student.

Tentative List of possible practical to be conducted during the semester

1. Non-invasive sample collection from wildlife
2. Identification of important wildlife parasites
3. Identification of pathogens from non-invasive samples
4. Hematological tests in consultation with zoo
5. Antibiotic susceptibility tests
6. Study of different rescue techniques and tools for rescue
7. Study of wildlife disease identification (in consultation with Zoo)

Semester II

PGDWH 04: Wildlife disease preventions and management

Unit 1: Wildlife Health Management and Policy

Integrated approaches to wildlife health management: Ecological, epidemiological, socio-economic, and ethical dimensions, including ecosystem-based management, adaptive management, and multi-disciplinary collaboration.

Wildlife health policy frameworks: Existing policy frameworks for wildlife health management at local, national, and international levels, including legislation, regulations, guidelines, and management plans.

Case studies of successful wildlife health management programs.

Unit 2: Wildlife Immunology and Vaccination

Immunological responses in wildlife: Immune system, including innate and adaptive immune responses, and factors influencing immune function.

Vaccination strategies for wildlife populations: Development and implementation of vaccination programs for wildlife species, oral baiting, darting, and captive immunization approaches.

Challenges and limitations of wildlife vaccination programs

Unit 3: Wildlife Rehabilitation and Rescue

Principles of wildlife rehabilitation: Principles and ethics of wildlife rehabilitation, including assessment, treatment, and release protocols with Case studies.

Rehabilitation facilities and protocols: Design and operation of wildlife rehabilitation centers, including housing, nutrition, medical care, enrichment, and rehabilitation techniques.

Release strategies and post-release monitoring: Strategies for releasing rehabilitated wildlife back into their natural habitats, soft release, hard release, and post-release monitoring

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Unit 4: Wildlife Health Education and Outreach

Role of public awareness and education in promoting wildlife health, fostering empathy for wildlife, and empowering communities to participate in conservation efforts. Case studies.

Effective communication strategies for engaging diverse audiences in wildlife health topics, media outreach, social media campaigns, educational programs, and community-based initiatives.

Strategies for building partnerships and collaboration among stakeholders, government agencies, NGOs, industry, and communities. Animal Welfare Board of India, Association of Zoos and Aquariums (AZA), USA

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PGDWH 05: Research project

Students will be engaged in the research project/ internship at different wildlife health organizations and submit the internship report followed by their presentation and Viva voce.