अध्ययन मंडल बैठक दिनांक 18/07/2025

विषय – वानिकी वन्यजीव

राष्ट्रीय शिक्षा नीति 2020 के अनुरूप विश्वविद्यालय अन्तर्गत संचालित एम.एस.सी वानिकी एवं वन्यजीव प्रोग्राम में अध्ययन मंडल द्वारा तैयार किये गये तृतीय एवं चतुर्थ सेमेस्टर के पाठ्यक्रम को निम्नानुसार लागू करने की अनुशंसा की जाती है:–

Program : Forestry & Wildlife									
Course Type	Course Code	Course Title	Paper	Semester	Credits	Max Marks	Min Marks	CIA	ESE
Third Semester									
	FOSC-09	Agroforestry and Climate Change	T	III	03	100	40	30	70
	FOSE-13	Forest Biotechnology & Tree Breeding	T	III	03	100	40	30	70
	FOSE-14	Ecotourism Concept and Approaches	T	III	03	100	40	30	70
	FOSE-15	Forest based Entrepreneurship Development	T	III	03	100	40	30	70
	FOSE-16	Climatology & Disaster Management	T	III	04	100	40	30	70
		Lab Course – I (Based on Paper FOSC-09 And FOSC-13)	P	III	02	50	20	15	35
		Lab Course – II (Based on Paper FOSE-14 And FOSE-15)	P	III	02	50	20	15	35
				Total	20	600			
Fourth Semester									
	FORD-01	**Research work & Dissertation**							
		A. Synopsis Preparation & Plan of Work		IV	02	50	20		
		B. Research Work		IV	08	200	80		
		C. Research Writing		IV	04	100	40		
		D. Research Presentation through Viva-Voce		IV	02	50	20		
	FOITP-01	Internship/Training/Project and Report Submission		IV	04	100	40		
				Total	20	500			
Total (III & IV)				G. Total	40	1100			

टीप :– परीक्षा योजना एवं प्रश्न पत्र के प्रारूप को भी यथावत् लागू करने की अनुशंसा की जाती है।

आज दिनांक 18/07/2025 को वानिकी वन्यजीव अध्ययन मंडल की बैठक में निम्नलिखित अध्यक्ष/सदस्य उपस्थित हुये।

क्र.	नाम	पदनाम	अध्यक्ष/सदस्य	हस्ताक्षर
01.	डॉ शरद नेमा	प्राध्यापक	अध्यक्ष	18/7/2025
02.	डॉ विनोद कुमार सोनी	सह प्राध्यापक	सदस्य	
03.	डॉ सजीवन कुमार	सह प्राध्यापक	सदस्य	18/07/2025
04.	श्री विमल कुमार रात्रे	सहायक प्राध्यापक	सदस्य	18/7/2025

TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM
Post Graduate in Forestry & Wildlife Programme Structure as per NEP- 2020
M.Sc. (Forestry & Wildlife)

Semester	Course Type-Course Name	Course Code	Credit	Total Credit
I	DSC - Principles of Agroforestry and Management	FOSC-07	3	4
	DSC- Lab Course		1	
	DSE- Medicinal & Aromatic Plant	FOSE-05	3	4
	DSE- Lab Course		1	
	DSE- NTFPs and Forest based Industries	FOSE-06	3	4
	DSE- Lab Course		1	
	DSE- Forest Management	FOSE-07	4	4
	DSE- Plantation Forestry	FOSE-08	3	4
	DSE- Lab Course		1	
			Subtotal	**20**
II	DSC-Wasteland and Watershed Management	FOSC-08	3	4
	DSC- Lab Course		1	
	DSE - Forest Protection	FOSE-09	3	4
	DSE- Lab Course		1	
	DSE - Remote Sensing & GIS	FOSE-10	4	4
	DSE – Wildlife Management	FOSE-11	3	4
	DSE- Lab Course		1	
	DSE– Forest Statistics & Research Methodology	FOSE-12	3	4
	DSE- Lab Course		1	
			Subtotal	**20**
III	DSC- Advances in Agroforestry and Climate Change	FOSC-09	3	4
	DSE- Lab Course		1	
	DSE- Forest Biotechnology & Tree Breeding	FOSE-13	3	4
	DSE- Lab Course		1	
	DSE- Ecotourism Concept and Approaches	FOSE-14	3	4
	DSE- Lab Course		1	
	DSE-Forest based Entrepreneurship Development	FOSE-15	3	4
	DSE- Lab Course		1	
	DSE- Climatology & Disaster management	FOSE-16	4	4
			Subtotal	**20**
IV	**Research work & Dissertation**	FORD-01		
	A. Synopsis Preparation & Plan of Work		2	2
	B. Research Work		8	8
	C. Research Writing		4	4
	D. Research Presentation through Viva-Voce		2	2
	Internship/Training/Project & report Submission	FOITP-01	4	4
			Subtotal	**20**
			Grand Total	**80**

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Semester	Course Type-Course Name	Course Code	Paper	Semester	Credit	Max. Marks	Min. Marks	CIA	ESE
III	DSC- Advances in Agroforestry and Climate Change	FOSC-09	T	III	3	100	40	30	70
	DSE- Forest Biotechnology & Tree Breeding	FOSE-13	T	III	3	100	40	30	70
	DSE- Ecotourism Concept and Approaches	FOSE-14	T	III	3	100	40	30	70
	DSE-Forest based Entrepreneurship Development	FOSE-15	T	III	3	100	40	30	70
	DSE- Climatology & Disaster management	FOSE-16	T	III	4	100	40	30	70
	Lab Course-I (Based on Paper FOSC-9 and FOSE-13)		P	III	2	50	20	15	35
	Lab Course-I (Based on Paper FOSE- 14 and FOSE-15)		P	III	2	50	20	15	35
				Total	20	600			
IV	**Research work & Dissertation**	FORD-01							
	A. Synopsis Preparation & Plan of Work				2	50	20		
	B. Research Work				8	200	80		
	C. Research Writing				4	100	40		
	D. Research Presentation through Viva-Voce				2	50	20		
	Internship/Training/Project & report Submission	FOITP-01			4	100	40		
				Total	20	500			
	Grand Total				40	1100			

18/7/2025 18/07/2025 18/7/2025

Program Outcomes (POs):

- Students understand advance level knowledge about forest genetics, vegetative propagation and tree Improvement and develop skill & ability.
- Learn the standard tree measurement techniques and develop skill for implementation in field measurement accurately.
- Provides comprehensive knowledge and practical skills related to nursery techniques and management
- To develop the deep understanding of concept and importance of biodiversity, wildlife and their management in support of conservation.
- Understand advancement in agroforestry for sustainable land use system.
- Provide knowledge of Forest products /Non Wood Forest Products (NWFPs) and its sustainable management and cultivation techniques.
- Knowledge specific on afforestation techniques of raising plants and restocking of degraded forest lands.
- Acquire knowledge on the applications of remote sensing in the Forestry sector and conservation of Forest & Wildlife and equipped forestry students.
- Provide a comprehensive understanding of wildlife and their conservation strategies with ecosystem development.

Program Specific Outcomes (PSOs):

- Learn about forest regeneration methods and nursery technology
- Understand the impact of locality factors on vegetation.
- Students understand basic and advance level knowledge on propagation and tree Improvement.
- Develop ability and skill in vegetative propagation techniques
- Learn the standard tree measurement techniques for forest biomass, yield and increment and growing stock assessment.
- Comprehensive knowledge and practical skills for the production of quality seedlings and planting material.
- Develop understanding on biodiversity, wildlife and their management in support of conservation.
- Students will be able to understand about forest laws, policies and legal rights.
- Understand agroforestry and applications for sustainable land use system.
- Knowledge on Forest products /Non Wood Forest Products (NWFPs) and its sustainable management of natural resources.
- Gain knowledge on forestry and Afforestation techniques of raising plants.
- Restocking of Degraded, denuded, wasteland and other problematic lands.
- Understood forest disturbance and their control methods.
- Equipped with satellite technology & tools and requirements of forestry.

TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM

PART-A: Introduction				
Program: Master in Forestry & Wildlife		Semester: **III**	Year: **2024**	Session:**2024-2026**
1	Course Code	**FOSC-09**		
2	Course Title	**Agroforestry and Climate Change**		
3	Course Type	Discipline Specific Core (Theory)		
4	Pre-requisite (if any)	As per norms		
5	Course Learning Outcomes (CLO)	The graduates should be able to demonstrate the acquisition of: • Agroforestry model establishment. • Understanding in soil nutrient cycling • Understanding in significance of agroforestry in climate change mitigation.		
6	Credit Value	3+1= 4C	(Credit=15 hours-learning & observation and 30 hrs for practices/Field work)	
7	Total Marks	Max. Marks: 100	Min Passing Marks : 40	

Part B: Content of the Course		
Course Code -		**Credit - 3+1**
Module/Unit	**Topics (Course Contents)**	**No. of Period**
I	Agroforestry systems: Classification of agroforestry, promising agroforestry systems in different agroclimatic zones of India, Different forest tree-crop-pasture based agroforestry systems. Tree-crop interaction & types, management practices to minimize interaction under agroforestry.	10
II	Influence of agroforestry on climate change. Nutrient cycling, soil conservation and climate change mitigation. Economics of agroforestry systems. Climate change and Kyoto Protocol- Role of Agroforestry in mitigating climate change,carbon trading- REDD, C sequestration potential of common trees.	10
III	Introduction- World and India Scenario on climate change, Climate change during 21st Century, Climate change consequences, Global warming effects on Forest. Impact of deforestation on global scenario, impact of climate change.	15
IV	Climate change on biodiversity and forest degradation, indication and evidence of forest disturbance due to climate change, Carbon conservation, Carbon sequestration with forest and land use change.	10
Keywords: Agroforestry, Tree-crop interactions, Nutrient cycling, Promising agroforestry, Climate change,		

Laboratory/Practical work
Maximum Marks: 50 Minimum Marks: 20 Total Lectures: 30 Credit: 1
1. Study of characteristics of trees/shrubs/grasses for agroforestry. 2. Estimation of tree Volume, biomass and assessment of carbon sequestration in the field. 3. Monitoring of microclimate in the area and agroforestry fields. 4. Identification of key characteristics of species by measurement of tree such as growth rate and carbon sequestration potential. 5. Crown measurement, light interception and moisture measurement in agroforestry systems. 6. Analysis of soil and plant samples for organic carbon N,P and K. 7. Visits to learn about indigenous and exotic tree species suitable for agroforestry.

Part - C
Learning Resource: Text Books, Reference Books, Others
Books Recommended- 1. Nair PKR. 1993. An Introduction to Agroforestry. Kluwer Academic Pub. 2. Ong CK and Huxley PK. 1996. Tree Crop Interactions – A Physiological Approach. ICRAF. 3. Young A. 1997. Agroforestry for Soil Management. CABI. 4. Huxley, P.A. 1983 (eds). Plant Research and Agroforestry, ICRAF, Nairobi, Kenya. 5. Kumar, B.M. and Nair, P.K.R (eds). 2011. Carbon Sequestration Potential of Agroforestry Systems: Opportunities and challenges. Advances in Agroforestry 8. Springer Science, The Netherlands: 307p **Online Resources-**

PART -D: Assessment and Evaluation -Theory		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Internal Assessment (CIA): 30 Marks End Semester Exam (ESE): 70 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 +20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against **30** Marks
End Semester Exam (ESE):	**Two section – A & B** Section A: **Q1**. Objective – **10 x1= 10** Mark; **Q2**. Short answer type- **5x4 =20 Marks** Section B: Descriptive answer type qts.,**1 out of 2** from each unit-**4x10=40 Marks**	

Name and Signature of Committee Members:

Dr. Sharad Nema-Head & Chairmen

Dr. Vinod Kumar Soni- Member

Dr. Sajiwan Kumar- Member

TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM

PART-A: Introduction				
Program: Master in Forestry & Wildlife		Semester: **III**	Year: **2024**	Session:**2024-2026**
1	Course Code	**FOSE-13**		
2	Course Title	Forest Biotechnology & Tree Breeding		
3	Course Type	Discipline Specific Elective (Theory)		
4	Pre-requisite (if any)	As per norms		
5	Course Learning Outcomes (CLO)	The post graduates should be able to demonstrate the acquisition of: • Understanding in basic and advance level knowledge about forest biotechnology genetics, breeding and tree Improvement. • Able to know about genotype & phenotype of forest tree species. • Develop ability and skill to propagate the forest tree species through somatic cell. • Students know to conserve forest genetic resources for future generation and their improvement.		
6	Credit Value	3+1= 4C	(Credit=15 hours-learning & observation and 30 hrs for practices/Field work)	
7	Total Marks	Max. Marks: 100	Min Passing Marks : 40	

Part B: Content of the Course		
Course Code -		**Credit - 3+1**
Module/Unit	**Topics (Course Contents)**	**No. of Period**
I	**Concepts and history of Plant Biotechnology:** Totipotency and Morphogenesis. Techniques of in-vitro cultures, Micro propagation, Factors affecting of above in-vitro culture and its Applications. Somatic embryogenesis and synthetic seed production technology; Protoplast isolation, Culture, Manipulation and Fusion; Applications of somatic hybrids in tree improvement.	10
II	**Vegetative propagation and clonal forestry**: Conservation of forest tree germplasm. Recent techniques in tree improvement. Mutation breeding; Ploidy breeding. Breeding objectives and concepts of breeding in self pollinated, cross pollinated and vegetatively propagated crops.	10
III	**Introduction, history and development of tree improvement:** its relation to other disciplines of forestry. Reproduction in forest trees. Anthesis and pollination – their importance in tree breeding. Incompatibility and sterility. Genetic, environmental and interaction	15

	components of variation - heritability and genetic advance. Genetic basis of tree breeding. Natural variability in trees – types and importance.	
IV	**Provenance testing & selection:** seed production areas–seed orchards. Progeny trial and improvement of seed orchards. Combining ability and genetic gain. Hybridization in trees, Future of hybrid in applied tree improvement, heterosis breeding. Breeding for wood properties, for resistance to insect pest's diseases and air pollution etc..	10

Keywords: Totipotency, in-vitro culture, embryogenesis, germplasm, clonal forestry, heritability, Provenance testing, progeny trial, hybridization, heterosis etc..

Laboratory/Practical work

Maximum Marks: 50

Minimum Marks: 20

Total Lectures: 30

Credit: 1

1. Requirements for Plant Tissue Culture Laboratory; Techniques in Plant Tissue Culture
2. Media components and preparations; Sterilization techniques and Inoculation of various explants.
3. Aseptic manipulation of various explants; Callus induction and Plant Regeneration;
4. Micro propagation of important plants; Anther, Embryo and Endosperm culture
5. Hardening /Acclimatization of regenerated plants.
6. Isolation of protoplast; Demonstration of Culturing of protoplast.
7. Floral biology and phonological observations in some important species. Pollen morphology.
8. Estimation of phenotypic and genotypic coefficient of variation. Estimation of genetic advance, heritability and GCA.
9. Exercise in plus tree selection – recording data – design and observation in teak, eucalyptus seed orchard.

Part - C

Learning Resource: Text Books, Reference Books, Others

Books Recommended-

1. Bajaj, Y.P.S. (Ed) 1988. Biotechnology in Agriculture and Forestry 2. Crops 1. Springer- Verlag, Berlin.
2. Dhawan, V. 2012. Applications of Biotechnology in Forestry and Horticulture. Springer US.
3. Neumann, K.H., Kumar, A., and Sopory, S.K. 2008. Recent Advances in Plant Biotechnology and Its Applications. I. K. International Pvt Ltd
4. Punia, M.S. 1998. Plant Biotechnology and Molecular Biology. A laboratory manual. Scientific Publishers, Jodhpur.
5. Thieman, W.J. and Palladino, M.A. 2009. Introduction to Biotechnology, Second Edition. Pearson Benjamin Cummings, San Fransis.
6. Allied T.L. White and Adams (2010). Forest Genetics. Bedell P. E. (2007). Tree Breeding for Genetic Improvement of Tropical Tree Species (1st Ed).
7. Surendran, C., Sehgal, R.N. and Parmathma, M. (Eds.) (2003). A text book of Forest Tree Breeding. ICAR, New Delhi.

8. Wright, J. (2012). Introduction to Forest Genetics. Elsevier.
9. Zobel, B. and Talbert, J. (2003). Applied Forest Tree Improvement. Blackburn Press.

Online Resources-

PART -D: Assessment and Evaluation -Theory		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Internal Assessment (CIA): 30 Marks End Semester Exam (ESE): 70 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 +20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against **30** Marks
End Semester Exam (ESE):	**Two section – A & B** Section A: **Q1**. Objective – **10 x1= 10** Mark; **Q2**. Short answer type- **5x4 =20 Marks** Section B: Descriptive answer type qts.,**1out of 2** from each unit-**4x10=40 Marks**	

Name and Signature of Committee Members:

Dr. Sharad Nema-Head & Chairmen

Dr. Vinod Kumar Soni- Member

Dr. Sajiwan Kumar- Member

TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM

PART-A: Introduction				
Program: Master in Forestry & Wildlife		Semester: **III**	Year: **2024**	Session:**2024-2026**
1	Course Code	**FOSE-14**		
2	Course Title	**Ecotourism - Concept and Approaches**		
3	Course Type	Discipline Specific Elective (DSE) Theory		
4	Pre-requisite (if any)	As per norms		
5	Course Learning Outcomes (CLO)	The graduates should be able to demonstrate the acquisition of: • Learning about the aspects related with the preparation of the Ecotourism Plans at the Wildlife Sanctuaries/National Parks/Tiger Reserves. • Study on environmental and social impacts of ecotourism and mitigation strategies • Potential of ecotourism as a business.		
6	Credit Value	3+1= 4C	(Credit=15 hours-learning & observation and 30 hrs for practices/Field work)	
7	Total Marks	Max. Marks: 100	Min Passing Marks : 40	

Part B: Content of the Course		
Course Code -		**Credit - 3+1**
Module/Unit	**Topics (Course Contents)**	**No. of Period**
I	Eco tourism - study history of tourism, identify various forms of tourism and evolution of ecotourism. Dimensions of tourism and essential conditions for tourism to occur. The preparation of the Ecotourism Plans and their potential and impact. To undertaken pilot studies on Tribal Ecotourism - challenges & opportunity and other issues in the forest Conservations.	10
II	Understand dimensions of ecotourism and the criteria to qualify for ecotourism. Different forms of ecotourism like hard and soft ecotourism. Ecotourism indicators and conceptual differences between developing and developed countries.	10
III	Organized tours and Free Independent Travelers. World Tourism Organization. Problems with definition of ecotourism and criticisms. International organizations and NGOs promoting ecotourism. Sociological implications of eco-tourism.	15

IV	Socio- economic feasibility analysis for initiating ecotourism projects. Tour planning and site development. Social engineering and natural resource management. Study of environmental and social impacts of ecotourism and mitigation strategies. Potential of ecotourism as a business.	10

Keywords: Eco tourism, Mass tourism, criteria, organizations , implications , Social, management, etc.

Laboratory/Practical work
Maximum Marks: 50
Minimum Marks: 20
Total Lectures: 30
Credit: 01

1. Students should make detailed reference on the various forms of Ecotourism in the World.
2. Visit to various ecotourism areas and identify the tourism components- suggest modifications.
3. Evaluation and monitoring of the various ecotourism activities of the region such as Nature Walk - The guided day trek, The Tiger Trail, Border Hiking, Bamboo Rafting, Jungle Patrol, Tribal Heritage, Jungle Inn,
4. Study of environmental and social impacts of ecotourism and mitigation strategies
5. The students are expected to learn about the aspects related with the preparation of the Ecotourism Plans at the Wildlife Sanctuaries/National Parks/Tiger Reserves

Part - C

Learning Resource: Text Books, Reference Books, Others

Books Recommended-

1. Baker CP. 1996. *World Travel: A Guide to Intenational Eco Journeys*.Warner Books.
2. Honey M. 1998. *Ecotourism and Sustainable Development*. Iceland Press.
3. Luck M & Kirstges T. 2002. *Global Ecotourism Policies and Case Studies*.Channel View Publ.
4. Neale G. 1999. *Green Travel Guide*. Earth Scan.

Online Resources-

PART -D: Assessment and Evaluation -Theory

Suggested Continuous Evaluation Methods:
Maximum Marks: 100 Marks
Continuous Internal Assessment (CIA): 30 Marks
End Semester Exam (ESE): 70 Marks

Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 +20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against **30** Marks

End Semester Exam (ESE):	**Two section – A & B** Section A: **Q1**. Objective – **10 x1= 10** Mark; **Q2**. Short answer type- **5x4 =20 Marks** Section B: Descriptive answer type qts.,**1 out of 2** from each unit- **4x10=40 Marks**

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TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM

PART-A: Introduction				
Program: Master in Forestry & Wildlife		Semester: **III**	Year: **2024**	Session:**2024-2026**
1	Course Code	**FOSE-15**		
2	Course Title	Forest based Entrepreneurship Development		
3	Course Type	Discipline Specific Elective (Theory)		
4	Pre-requisite (if any)	As per norms		
5	Course Learning Outcomes (CLO)	The post graduates should be able to demonstrate the acquisition of: • Understanding of concept, planning and management of entrepreneurship development. • Scope and importance of forest based Entrepreneurship development. • Ability to know to develop Forest based Entrepreneurship.		
6	Credit Value	3+1= 4C	(Credit=15 hours-learning & observation and 30 hrs for practices/Field work)	
7	Total Marks	Max. Marks: 100	Min Passing Marks : 40	

Part B: Content of the Course		
Course Code -		**Credit - 3+1**
Module/Unit	**Topics (Course Contents)**	**No. of Period**
I	**Globalization and the emerging business / entrepreneurial environment**: Concept of entrepreneurship; entrepreneurial and managerial characteristics; managing an enterprise; motivation and entrepreneurship development; importance of planning, monitoring, evaluation and follow up; managing competition.	10
II	**Entrepreneurship Development:** Assessing overall business environment in the Indian economy. Overview of Indian social, political and economic systems and their implications for decision making by individual entrepreneurs. SWOT analysis,	15
III	**Incubation and Startup:** Generation, incubation and commercialization of ideas and innovations. Government schemes and incentives for promotion of entrepreneurship. Government policy on Small and Medium Enterprises (SMEs) / SSIs).	10

IV	**Economics of timber and non-timber forest products:** Production-Meaning, factors of production-land, labour, capital, organization. Export and Import Policies relevant to forestry sector. Venture capital. Contract farming and joint ventures, public-private partnerships. Overview of forestry inputs industry. Characteristics of Indian forestry processing and export industry. Social Responsibility of Business.	10

Keywords: SWOT analysis, Entrepreneurship, finance, taxation, income, capital, expenditure etc.

Laboratory/Practical work

Maximum Marks: 50

Minimum Marks: 20

Total Lectures: 30

Credit: 1

1. SWOT analysis.
2. Developing leadership skills, developing managerial skills and problem solving skill.
3. Supply chain management and quality management.
4. Project planning formulation and report preparation.
5. Techno-economic parameters for preparation of projects.
6. Preparation of Bankable projects for various forest products and its value added products.
7. Identification of marketing channel.
8. Identification of Market Structure.
9. Visit to Forest based Industries.

Part - C

Learning Resource: Text Books, Reference Books, Others

Books Recommended-

1. Jhingan, M. L. 2012. Macro Economic Theory. Vrinda publishers,NewDelhi.
2. Reddy, S.S., Raghu Ram, P., Neelakanta Sastry, T.V., Bhavani, D.I 2004. Agricultural Economics. Oxford and IBH Publishers, New Delhi.
3. Maslow, A.H 1970. Motivation and personality. Harper and Row publishers. New York.
4. Perelson, B and Steiner, G 1964. Human behaviour. Harcourt Brace Jovanovich, New York.
5. Kula, E. 1996. The economics of forestry: Modern theory and practice. Timber press, Portland, Oregon. 182p.
6. Muraleedharan, P. K. Subramanian, K. K., and Pillai, P. P. 1998. Basic readings in forest economics. Kerala Forest Research Institute and Ford Foundation, Thrissur, Kerala.177p
7. Tewari, D. N. 1995. Marketing and trade of forest produce; International Book Distributors (Book Sellers & Publishers), Dehradun, India. 140p.

Online Resources-

PART -D: Assessment and Evaluation -Theory		
Suggested Continuous Evaluation Methods: Maximum Marks: 100 Marks Continuous Internal Assessment (CIA): 30 Marks End Semester Exam (ESE): 70 Marks		
Continuous Internal Assessment (CIA): (By Course Teacher)	Internal Test / Quiz-(2): 20 +20 Assignment / Seminar - 10 Total Marks - 30	Better marks out of the two Test / Quiz + obtained marks in Assignment shall be considered against **30** Marks
End Semester Exam (ESE):	**Two section – A & B** Section A: **Q1**. Objective – **10 x1= 10** Mark; **Q2**. Short answer type- **5x4 =20 Marks** Section B: Descriptive answer type qts.,**1 out of 2** from each unit- **4x10=40 Marks**	

Name and Signature of Committee Members:

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TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM

PART-A: Introduction				
Program: Master in Forestry & Wildlife		Semester: **III**	Year: **2024**	Session:**2024-2026**
1	Course Code	**FOSE-16**		
2	Course Title	Climatology & Disaster management		
3	Course Type	Discipline Specific Elective (Theory)		
4	Pre-requisite (if any)	As per norms		
5	Course Learning Outcomes (CLO)	The post graduates should be able to demonstrate the acquisition of: • Understanding in basic and advance knowledge about forest, environment and climate change. • Able to know about factors responsible to climate change and their losses. • Buildup skill professionals in Disaster management and climate change issues.		
6	Credit Value	4C	(Credit=15 hours-learning & observation and 30 hrs for practices/Field work)	
7	Total Marks	Max. Marks: 100	Min Passing Marks : 40	

Part B: Content of the Course		
Course Code -		**Credit - 4**
Module/Unit	**Topics (Course Contents)**	**No. of Period**
I	**Agrometeorology:** definition, aim and scope. Factors and elements of weather and climate. Composition and structure of atmosphere. Air and soil temperature regime, atmospheric humidity, precipitation, hails and frost. Solar radiations components and effect on plant growth. Agro climatic zones of India.	15
II	**Understanding climate change and its Consequences**: Global warming and its effects on Forest & forestry. Forest and climate change, Vulnerability and adaptability, Evidence of forest disturbance due to climate change, Climate resilient forestry. Economics of carbon storage in forest.	15

III	**UN Convention on climate change:** NATCOM initiatives. Decision making in emission of Green House Gases (GHG). Policies and initiatives related to global climate change. National action plan for climate change and its objectives – Green India mission- Indian Network for Climate Change Assessment (INCCA) and action Plans on Climate Change, CDM & Carbon Trading. International Convention on climate change.	15
IV	**Environment Protection Act & Issues**: enforcement of environmental legislation. Developmental impact on environment, impact of coal and mining on environment and forest. Global climatic problems- Acid rain, earthquake, flood and drought, fire, ozone depletion etc. Public awareness, Environment and human health, Natural Disasters, Man Made Disasters, Disaster Management and protection.	15

Keywords: Agrometeorology, climate change, Global warming, Vulnerability, Disaster management, Kyoto protocol, carbon trading etc.

Part - C

Learning Resource: Text Books, Reference Books, Others

Books Recommended-

1. Ghadekar, S.R. 2003. Meteorology. Agromet Publishers, Nagpur.
2. Gupta HK. 2003. Disaster Management. Indian National Science Academy. Orient Blackswan.
3. Hodgkinson PE & Stewart M. 1991. Coping with catastrophe. Handbook of Disaster Management. Routledge.
4. Lenka,D. 1997. Climate, weather and crop in India. Kalyani Publishers, New Delhi.
5. Mavi, H.S. 1994. Agrometerology . Oxford &IBH, New Delhi.
6. Rao, GSLHVP 2003. Agrometeorology, KAU, Thrissur, Kerala,
7. Seemann, J., Chirkov, Y.I., Lomas, J., and Primault, B. 2012. Agrometeorology. Springer Berlin Heidelberg.
8. Sharma VK. 2001. Disaster Management. National Centre for Disaster Management, India.
9. Singh, M. P. Day Soma and Singh B. S. (2004). Conservation of Biodiversity and Natural Resources. *Daya publishing house Delhi.*
10. Varshney, M.C. and Pillai, P.B. 2003. Textbook of Agrometeorology. ICAR , New Delhi.

Online Resources-

PART -D: Assessment and Evaluation -Theory

Suggested Continuous Evaluation Methods:

Maximum Marks: 100 Marks
Continuous Internal Assessment (CIA): 30 Marks
End Semester Exam (ESE): 70 Marks

Continuous Internal	Internal Test / Quiz-(2): 20 +20	Better marks out of the two Test /

End Semester Exam (ESE):	**Two section – A & B** Section A: **Q1**. Objective – **10 x1= 10** Mark; **Q2**. Short answer type- **5x4 =20 Marks** Section B: Descriptive answer type qts.,**1out of 2** from each unit-**4x10=40 Marks**

Name and Signature of Committee Members:

Dr. Sharad Nema-Head & Chairmen

Dr. Vinod Kumar Soni- Member

Dr. Sajiwan Kumar- Member

TWO YEAR POST GRADUATE PROGRAM (2024-26)
DEPARTMENT OF FORESTRY & WILDLIFE
COURSE CURRICULUM

PART-A: Introduction				
Program: Master in Forestry & Wildlife		Semester: **IV**	Year: **2024**	Session:**2024-2026**
1	Course Code	**FORD-01**		
2	Course Title	Research work & Dissertation		
3	Course Type	Discipline specific research		
4	Pre-requisite (if any)	As per norms		
5	Course Learning Outcomes (CLO)	The post graduates should be able to demonstrate the acquisition of: • To learn experimental investigation • Skill of experimental/investigation layout and statistical analysis of data. • Reporting of findings and their interpretation • Knowledge and skill of research writing.		
6	Credit Value	**Research work & Dissertation**	Credit	
		A. Synopsis Preparation & Plan of Work	2	
		B. Research Work	8	
		C. Research Writing	4	
		D. Research Presentation through Viva-Voce	2	
		Subtotal Credit	16	
		Internship/Tanning/Project & report Submission	4	
		Total	**20**	

Research Work & Dissertation (16 Credits)

This course shall provide the students in the final year (IVth Semester) to conduct the research work & dissertation of 16 Credit related to the discipline specific research topic and synopsis will be finalized and the assigned research work will be conducted on the issues of forest and forestry related area such as forests regeneration, ecology, ecosystem, biodiversity, wildlife, NTFPs, medicinal & aromatic plants and tourism etc. This is an important content of curriculum in which student has to undertake the experimental studies, analysis and interpretation of data and research writing of dissertation work.

- Students has to proposed plan of work (PPW) specifying the title, objectives, methodology and expected outcomes in consultation with the supervisor. After approved by the faculty and committee, the students is eligible to conduct the approved research work as specified in the synopsis.

18/7/2025 18/7/2025 18/7/2025 18/7/25

- Evaluation will be done based on the performance of work, dissertation report and its presentation followed byresearch presentation through viva- voce. A committee of faculty will evaluate the research work dissertation.

Internship/Training/Project – FOIP-01 (4 Credits)

Opportunities

Students are exposed to the recent trends in forestry, analysis, personality development, soft skills, and more to prepare them for professional roles as forestry officials. They will learn about creating and sustaining management plans and conservation plans. The following fields where the internship opportunities will be available and arranged in the IVth semester of M. Sc. (Forestry & Wildlife)-

- Forest Regeneration and Sustainable Forest Management.
- Collaboration with Forestry-related Organizations and Industries for internship.
- Work in Protected Areas such as Wildlife Sanctuaries, National Parks, and Tiger Reserves: This includes conducting wildlife population censuses, biodiversity assessments, pilot studies on human-wildlife conflict, and addressing other forest-related issues.
- Modern Forest Nurseries, Herbal Gardens, and Watershed Development.
- Forest Range Survey and Training Programs.
- Research on Cropping Patterns, Homegarden, Agroforestry, Biodiversity, and yield /biomass in forest-related contexts.
- Evaluation of the Impact of Joint Forest Management (JFM), Forest Protection Committees (FPC), Village Forest Committees (VFC), and Other Development Programs with a focus on forestry and forest development.
- Industrial Attachments: Experience with forest-based industries such as pulp and paper mills, plywood workshops, commercial sawmills, wood preservation plants, aromatic and medicinal plant processing units, bamboo and other wood-based industries, rubber industries, and major NWFP (Non-Wood Forest Products) collection, processing, and marketing. This also covers understanding market demands, government support, and management practices.

Name and Signature of Committee Members:

Dr. Sharad Nema-Head & Chairmen 18/7/2025

Dr. Vinod Kumar Soni- Member 18/07/2025

Dr. Sajiwan Kumar- Member 18/7/25

Shri Vimal Kumar Ratre

अध्ययनमंडल की बैठक दिनांक 18.06.2025

विषय – वानिकी वन्यजीव

विश्वविद्यालय में वानिकी वन्यजीव अध्ययनशाला अंतर्गत संचालित एम एस सी वानिकी एवं वन्यजीव पाठ्यक्रम में केंद्रीय अध्ययनमंडल द्वारा तैयार किए गए 4 वर्षीय स्नातक पाठ्यक्रम के चतुर्थ वर्ष (VII एवं VIII सेमेस्टर) के पाठ्यक्रम को राष्ट्रीय शिक्षा नीति 2020 के अनुरूप स्नातकोत्तर पाठ्यक्रम के प्रथम एवं द्वितीय सेमेस्टर लागू किये जाने के पश्चात इस तारतम्य में एम.एस. सी. वानिकी एवं वन्यजीव के तृतीय एवं चतुर्थ सेमेस्टर के पाठ्यक्रम को तैयार कर सत्र 2025–26 से लागू किए जाने हेतु अध्ययन मंडल अनुशंसा करती है।

टीप:– परीक्षा योजना एवं प्रश्न पत्र के प्रारूप को भी यथावत लागू करने की अनुशंसा की जाती है। दिनांक 18.06.2025 को वानिकी एवं वन्यजीव अध्ययन मंडल की बैठक में निम्नलिखित अध्यक्ष/सदस्य उपस्थित हुये ।

क्रमांक	नाम	पदनाम	अध्यक्ष/ सदस्य	हस्ताक्षर
1	डॉ शरद नेमा	प्राध्यापक	अध्यक्ष	
2	डॉ विनोद कुमार सोनी	सह प्राध्यापक	सदस्य	
3	डॉ सजीवन कुमार	सह प्राध्यापक	सदस्य	
4	श्री विमल कुमार रात्रे	सहायक प्राध्यापक	सदस्य	