



List of Courses Focus on Ethics, Gender, Human Values, Environment & sustainability and other value framework enshrined in Sustainable Development goals and National Education Policy-2020

Department : Department of Forestry, Wildlife and Environmental Sciences

Programme Name : B. Sc. (Forestry)

Academic Year : 2021-22

List of Courses Focus on Ethics, Gender, Human Values, Environment & sustainability and other value framework enshrined in Sustainable Development goals and National Education Policy-2020

Sr. No.	Course Code	Name of the Course
1.	FOUATT1	Principles and Practices of Silviculture
2.	FOUATT2	Fundamentals of Soil Science
3.	FOUATS1	ECA-Extracurricular activity Field visit/ NSS/ Swachhta/ Physical Education/ Plantation Activities
4.	FOUBTT3	Forest Mensuration
5.	FOUBTT4	Cytogenetics and Plant Breeding
6.	FOUBTG2	Forest Botany and Dendrology
7.	FOUBTS3	ECA-Extracurricular activity Field visit/ NSS/ Swachhta/ Physical Education/ Plantation Activities
8.	FOUCTT5	Forest Ecology and Biodiversity Conservation
9.	FOUCTT6	Fundamentals of Wildlife and its Management
10.	FOUCTT7	Forest Management
11.	FOUCTG3	Non Timber forest Products and Ethnobotany
12.	FOUCTS5	ECA-Extracurricular activity Field visit/ NSS/ Swachhta/ Physical Education/ Plantation Activities
13.	FOUDTT8	Remote Sensing and GIS application in Forestry



14.	FOUDDT9	Wood Science and Technology
15.	FOUDDT10	Forest Surveying and Engineering
16.	FOUDTG4	Sericulture
17.	FOUETT11	Watershed and its Management
18.	FOUETT12	Forest Biotechnology and tree improvement
19.	FOUETT13	Forest tree seed technology
20.	FOUETD1	Meteorology and crop production
21.	FOUETD1	Basic concept of horticultural and landscaping
22.	FOUFTT14	Forest Pathology and Entomology
23.	FOUFTT15	Agroforestry and tree outside forests
24.	FOUFTT16	Forest Economics
25.	FOUFTD2	Urban Forestry
26.	FOUFTD2	Land degradation and restoration
27.	FOUGTT18	Forest Policy, Legislation & Environmental Act
28.	FOUGTT19	World forestry Systems And Climate Change Mitigation
29.	FOUGTD3	Forestry Extension
30.	FOUGTD3	Entrepreneurship Development
31.	FOUHEF1	Socio Economic Survey-Village Attachment (report writing, presentation, Viva-Voce)



Department : Department of Forestry, Wildlife and Environmental Sciences

Programme Name : M.Sc. (Forestry and Environmental Sciences)

Academic Year : 2021-22

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1.	FOPATT1	Silviculture
2.	FOPATT2	Forest Biometry, Surveying & Engineering
3.	FOPATT3	Forest Management, Remote Sensing & GIS
	FOPATT4	Forest Protection
4.	FOPATT5	Forest Ecology and Biodiversity Conservation
	FOPATT6	Forest Policy, Laws and Environmental Legislation
5.	FOPBTT1	Forest Tree Improvement and Biotechnology
6.	FOPBTT2	Forest Industries and Wood Technology
7.	FOPBTT3	Wildlife Biology and Conservation
8.	FOPBTT4	Forest Soil and Watershed Management
9.	FOPBTT5	Global Environment and Climatic Changes
10.	FOPCTJ1	Forest Resource Analysis
11.	FOPCTJ2	Production Management in Nursery and Plantation Forestry
12.	FOPCTJ3	Finance and Marketing Management of Forest Resources
13.	FOPCTJ4	Trees Business Management
14.	FOPCTJ5	Sustainable Forest Management Changing World
15.	FOPCTO1	Urban Forestry
16.	FOPDEJ1	Forest Based Industrial Training



17.	FOPDPJ1	ICT Tools and techniques Applications in Forestry
18.	FOPCTR1	Breeding Methods in Forest Trees
19.	FOPCTR2	Forest trees Reproductive Biology and Seed Orchards
20.	FOPCTR3	Molecular Genetics of Forest Trees
21.	FOPCTR4	Quantitative Genetics of Forest Trees
22.	FOPCLR5	Forest Genetic Diversity, Conservation and Environmental Impact
23.	FOPDPR1	Forest Based Industrial Training
24.	FOPDPR1	ICT Tools and techniques Applications in Forestry

गुरु घासीदास विश्वविद्यालय
(केन्द्रीय विश्वविद्यालय अधिनियम 2009 क्र. 25 के अंतर्गत स्थापित केन्द्रीय विश्वविद्यालय)
कोनी, बिलासपुर - 495009 (छ.ग.)



Guru Ghasidas Vishwavidyalaya
(A Central University Established by the Central Universities Act 2009 No. 25 of 2009)
Koni, Bilaspur - 495009 (C.G.)

Scheme and Syllabus

LEARNING OUTCOME BASED CURRICULUM FRAMEWORK
(LOCF)

FOR

B.Sc. FORESTRY

(w.e.f. Academic session:2021-22)



“SCHOOL OF NATURAL RESOURCES”

DEPARTMENT OF FORESTRY, WILDLIFE & ENVIRONMENTAL SCIENCES

GURU GHASIDAS VISHWAVIDYALAYA

(A Central University established by the Central University Act, 2009 No. 25 of 2009)

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Course Structure and Credit Distribution

B.Sc. Forestry (4 -Year / 8- Semester) LOCF based Program

Semester	Course	Course Code	Name of the course	Credit	Hour/ week	Marks
I	Core-01	FOUATT1	Principles and Practice of Silviculture	3	3	100
	Core-01 Practical	FOUALT1		2	3	100
	Core-02	FOUATT2	Fundamentals of Soil Science	3	3	100
	Core-02 Practical	FOUALT2		2	3	100
	Generic Elective (GE)-01	FOUATG1	Basic Mathematics	4	4	100
	Seminar/Tutorial	FOUASS1		1	1	100
	Ability Enhancement Course (AEC-01)	FOUATA1	Drawn from the University Pool	2	...	100
	Skill Enhancement Course (SEC-01)	FOUATL1	Drawn From the University pool	2	..	100
	Extracurricular Activity-(ECA-01) *Additional Credit Course (Non-Mandatory)	FOUATS1	ECA-Extra-curricular activity (Field visit/ NSS/NCC/ Swachhta/ Plantation Activities)	2		100
	Physical Education	FOUATS2	Non Credit	-	2	100
	TOTAL				21	19
II	Core -03	FOUBTT3	Forest Mensuration	3	3	100
	Core -03 Practical	FOUBLT3		2	3	100
	Core -04	FOUBTT4	Cytogenetics and Plant Breeding	3	3	100

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	Core -04 Practical	FOUBLT4		2	3	100
	Generic Elective (GE)- 02	FOUBTG2	Forest Botany and Dendrology	3	3	100
	Generic Elective (GE)- 02 Practical	FOUBLG2		2	3	100
	Ability Enhancement Compulsory (AEC-02)	FOUBTA2	Drawn from the university pool	2	2	100
	Skill Enhancement Course(SEC- 02)	FOUBTL2	Drawn From the University pool	2	..	100
	Extracurricular Activity- (ECA-02) *Additional Credit Course (Non Mandatory)	FOUBTS3	ECA-Extracurricular activity(Field visit/ NSS/ Swachhta/ vocational Training/ Sports)	2	..	100
	Physical Education	FOUBTS4	Non Credit	-	2	100
	TOTAL			21	22	1000
Semester	Course Opted	Course Code	Name of the course	Credit	Hour/ week	Marks
III	Core -05	FOUCTT5	Forest Ecology and Biodiversity Conservation	3	3	100
	Core -05 Practical	FOUCLT5		2	3	100
	Core -06	FOUCTT6	Fundamentals of Wildlife and its Management	3	3	100
	Core -06 Practical	FOUCLT6		2	3	100
	Core -07	FOUCTT7	Forest Management	3	3	100
	Core -07 Practical	FOUCLT7		2	3	100
	Generic	FOUCTG3	Non Timber Forest	3	3	100

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	Elective-(GE)-03		Products and Ethnoforestry			
	Generic Elective (GE-3) Practical	FOUCLG3		2	3	100
	Ability Enhancement Course (AEC-03)	FOUCTA3	Drawn From the University Pool	2	...	100
	Extracurricular Activity-(ECA-03) *Additional Credit Course (Non Mandatory)	FOUCTS5	ECA-Extracurricular activity (Field visit/ NSS/NCC/ Swachhta/ Physical Education/ Plantation Activities)	2	..	100
	Total			24	24	1000
IV	Core -08	FOUDTT8	Remote Sensing and GIS Application in Forestry	3	3	100
	Core -08 Practical	FOUDLT8		2	3	100
	Core -09	FOUDTT9	Wood Science and Technology	3	3	100
	Core -09 Practical	FOUDLT9		2	3	100
	Core -10	FOUDTT10	Forest Surveying and Engineering	3	3	100
	Core -10 Practical	FOUDLT10		2	3	100
	Generic Elective-(GE)-04	FOUDTG4	Sericulture	3	3	100
	Generic Elective Practical (GE)-04	FOUDLG4		2	3	100
	Ability Enhancement Course (AEC-04)	FOUDTA4	Drawn From the University pool	2	...	100
		TOTAL			22	24
V	Core -11	FOUETT11	Watershed and its Management	3	3	100
	Core -11 Practical	FOUELT11		2	3	100

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	Core -12	FOUETT12	Forest Biotechnology and Tree Improvement	3	3	100
	Core -12 Practical	FOUELT12		2	3	100
	Core -13	FOUETT13	Forest Tree Seed Technology	3	3	100
	Core -13 Practical	FOUELT13		2	3	100
	Discipline Specific Elective DSE-1	FOUETD1	Meteorology and Crop Production	3	3	100
	Practical	FOUELD1		2	3	100
			Basic Concept of Horticultural and Landscaping			
	TOTAL			20	24	800
VI	Core -14	FOUFTT14	Forest Pathology and Entomology	3	3	100
	Core -14 Practical	FOUFLT14		2	3	100
	Core -15	FOUFTT15	Agroforestry and Tree Outside Forests	3	3	100
	Core -15 Practical	FOUFLT15		2	3	100
	Core -16	FOUFTT16	Forest Economics	3	3	100
	Core -16 Practical	FOUFLT16		2	3	100
	Discipline Specific Elective- (DSE-2)	FOUFTD2	Urban Forestry	3	3	100
	Practical	FOUFLD2		2	3	100
			Land Degradation and Restoration			
	Ability Enhancement Course (AEC-05)	FOUFTA5	Drawn from the University Pool	2	..	100
	MOOC Course (01)		Online MOOC Course	2
	TOTAL			24	24	900

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VII	Core -17	FOUGTT17	Biostatistics	3	3	100
	Core -17 Practical	FOUGLT17		2	3	100
	Core -18	FOUGTT18	Forest Policy, Legislation and Environmental Act	3	3	100
	Core -18 Practical	FOUGLT18		2	3	100
	Core -19	FOUGTT19	World Forestry Systems and Climate Change Mitigation	3	3	100
	Core -19 Practical	FOUGLT19		2	3	100
	Discipline Specific Elective- (DSE-3)	FOUGTD3	Forestry Extension	3	3	100
	Practical	FOUGLD3		2	3	100
			Entrepreneurship Development			
	Seminar	FOUGSS2	Seminar	2	2	100
TOTAL				22	26	900
VIII	INTR -1	FOUHEF1	Socio- economic Survey-Village attachment (Report Writing, Presentation, Viva-Voce)			200
	INTR - 2	FOUHEF2	Forest operation Work Experience (Report Writing, Presentation, Viva-Voce)			200
	INTR - 3	FOUHEF3	Forest Institute and Industrial visit (Report Writing, Presentation, Viva-Voce)			200
	Dissertation	FOUHDF1	Report Evaluation, Presentation, Viva-Voce			100
	The nature of the course in VIII Semester is field based. Socio- economic survey will be performed by the students in an assigned village. For exposure of forest operational work students will be attached with State Forest Department. Institute/ industrial training will be accomplished by the students through visits of nearby forest based Industries / Institutions.					
TOTAL			22 (6 credits for each Training and 4 credits for Dissertation segment)	48 Hours/ week for each Training segment separately	700	

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**COURSE SYLLABUS
FOR**

M.Sc. FORESTRY & ENVIRONMENTAL SCIENCES

Choice Based Credit System
(w.e.f. Academic session: 2021-22)



“SCHOOL OF NATURAL RESOURCES”

**DEPARTMENT OF FORESTRY, WILDLIFE & ENVIRONMENTAL
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**GURU GHASIDAS VISHWAVIDYALAYA
BILASPUR-495009, CHHATTISGARH**

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Course Structure
M.Sc. Forestry (2-Year / 4-Semester) CBCS Program

Semester	Course Opted	Course Code	Name of the Course	Credit	Hour/week	Marks
I st SEM	Core-01	FOPATT1	Silviculture	3	3	100
	Core-01 Practical	FOPALT1		1	3	100
	Core-02	FOPATT2	Forest Biometry, Surveying & Engineering	3	3	100
	Core-02 Practical	FOPALT2		1	3	100
	Core-03	FOPATT3	Forest Management, Remote Sensing & GIS	3	3	100
	Core-03 Practical	FOPALT3		1	3	100
	Core-04	FOPATT4	Forest Protection	3	3	100
	Core-04 Practical	FOPALT4		1	3	100
	Core-05	FOPATT5	Forest Ecology and Biodiversity Conservation	3	3	100
	Core-05 Practical	FOPALT5		1	3	100
	Core-06	FOPATT6	Forest Policy, Law and Environmental Legislation	3	3	100
	Core-06 Practical	FOPALT6		1	3	100
	TOTAL				24	36

II nd SEM	Core -07	FOPBTT1	Forest Tree improvement and Biotechnology	3	3	100
	Core -07 Practical	FOPBLT1		1	3	100
	Core -08	FOPBTT2	Forest Industries and Wood Technology	3	3	100
	Core -08 Practical	FOPBLT2		1	3	100
	Core -09	FOPBTT3	Wildlife Biology and Conservation	3	3	100
	Core -09 Practical	FOPBLT3		1	3	100

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	Core -10	FOPBTT4	Forest Soil and Watershed Management	3	3	100
	Core -10 Practical	FOPBLT4		1	3	100
	Core -11	FOPBTT5	Global Environment and Climate Change	3	3	100
	Core -11 Practical	FOPBLT5		1	3	100
	RM -01	FOPBTM1	Forest Statistics and Research Methodology	3	3	100
	RM-01 Practical	FOPBLM1		1	3	100
	TOTAL			24	36	1200

IIIrd SEM Forest Management (FM)	Core -01	FOPCTJ1	Forest Resource Analysis	3	3	100	
	Core-01 Practical	FOPCLJ1		1	3	100	
	Core -02	FOPCTJ2	Production Management in Nursery and Plantation Forestry	3	3	100	
	Core -02 Practical	FOPCLJ2		1	3	100	
	Core -03	FOPCTJ3	Finance and Marketing Management of Forest Resources	3	3	100	
	Core -03 Practical	FOPCLJ3		1	3	100	
	Core -04	FOPCTJ4	Tree Business Management	3	3	100	
	Core -04 Practical	FOPCLJ4		1	3	100	
	Core -05	FOPCLJ5	Sustainable Forest Management in Changing World	3	3	100	
	Core -05 Practical	FOPCLJ5		1	3	100	
	OE-01	FOPCTO1	Urban Forestry	2	2	100	
	Total				22	32	1100

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IV th SEM Forest Management(FM)					
Dissertation/Field work/ Internship/Project/Industry Visit/ Field Visit	FOPDDJ1	Field Training (Attachment with State Forest Department for understanding of Operations and Management / Practices currently used in Forest Management)	10	30	150
	FOPDEJ1	Forest Based Industrial Training	10	30	150
	FOPDPJ1	ICT Tools and Techniques Applications in Forestry.	03	09	50
	FOPDPJ2	Student Projects Dissertation	04	08	100
	Total		27	77	450
GRAND TOTAL			97	181	3950

III rd SEM Forest Genetic Resources (FGR)	Core -01	FOPCTR1	Breeding Methods in Forest Trees	3	3	100
	Core -01 Practical	FOPCLR1		1	3	100
	Core-02	FOPCTR2	Forest Trees Reproductive Biology and Seed Orchards	3	3	100
	Core -02 Practical	FOPCLR2		1	3	100
	Core-03	FOPCTR3	Molecular Genetics of Forest Trees	3	3	100
	Core -03 Practical	FOPCLR3		1	3	100
	Core-04	FOPCTR4	Quantitative Genetics of Forest Trees	3	3	100
	Core -04 Practical	FOPCLR4		1	3	100
	Core -05	FOPCLR5	Forest Genetic Diversity, Conservation and Environmental Impact	3	3	100








	Core -05 Practical	FOPCLR5		1	3	100
	OE-01	FOPCTO1	Urban Forestry	2	2	100
	Total			22	32	1100

IV th SEM Forest Genetic Resources (FGR)					
Dissertation/Field work/Internship/ Project/Industry Visit/ Field Visit	FOPDDR1	Field Training (Attachment with State Forest Department for understanding of Analysis of FGR, Forest Operations and Management of Forest Genetic Resources)	10	30	150
	FOPDER1	Forest Based Industrial Training	10	30	150
	FOPDPR1	ICT Tools and Techniques Applications in Forestry	03	09	50
	FOPDPR2	Student Projects Dissertations	04	08	100
		Total	27	77	450
GRAND TOTAL			97	181	3950

Grand Total of Credits: 95

- The Dissertation will be allotted in III Semester and will be evaluated at the end of IV Semester. Students will be given a topic for the project related to the curriculum by his/her supervisor arranged for the project.
- **Visits:** Visits to forest operation sites, forest nursery, wildlife habitats and plantation sites will be conducted as per the requirement of curriculum.




