



**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 : 2018-19**

***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.	NR/FR/CR/01/01/L	Principles and Practices of Silviculture
2.	NR/FR/CR/01/02/L	Fundamentals of Soil Science
3.	NR/FR/EC/01/01/P	ECA-Extracurricular activity Field visit/ NSS/ Swachhta/ Physical Education/ Plantation Activities
4.	NR/FR/CR/02/04/L	Introductory Botany
5.	NR/FR/CR/02/05/L	Forest Ecology and Biodiversity Conservation
6.	NR/FR/CR/02/06/L	Fundamentals of Wildlife
7.	NR/FR/CC/02/02/L	Environmental Studies
8.	NR/FR/EC/02/02/P	ECA-Extracurricular activity Field visit/ NSS/ Swachhta/ Physical Education/ Plantation Activities
9.	NR/FR/CR/03/07/L	Forest Mensuration
10.	NR/FR/CR/03/08/L	Cytogenetics and Plant Breeding
11.	NR/FR/CR/03/09/L	Forest Management
12.	NR/FR/GE/03/01/L	Ethnoforestry
13.	NR/FR/SC/03/01/L	Nursery Practices and Plantation Management
14.	NR/FR/CR/04/10/L	Fundamentals of Wood Science
15.	NR/FR/CR/04/11/L	Nursery Management and Commercial Forestry

***Courses Focus on Ethics, Gender, Human Values, Environment & sustainability and other value framework enshrined in Sustainable Development goals and National Education Policy-2020***  
**Criteria - I (1.1.3)**



16.	NR/FR/CR/04/12/L	Application of Remote Sensing and GIS in Forest and Watershed Management
17.	NR/FR/GE/04/02/L	Non Wood Forest Products and Utilization
18.	NR/FR/CR/05/13/L	Wildlife Management
19.	NR/FR/CR/05/14/L	Wood Technology
20.	NR/FR/CR/05/15/L	Forest Tree Seed Technology
21.	NR/FR/DS/05/01/L	Meteorology and Crop Production
22.	NR/FR/DS/05/02/L	Basic Concepts of Horticultural and Landscaping
23.	NR/FR/CR/06/16/L	Forest Pathology and Entomology
24.	NR/FR/CR/06/17/L	Agroforestry
25.	NR/FR/CR/06/18/L	Forest Economics
26.	NR/FR/CR/06/19/L	Forest Tree Improvement and Biotechnology
27.	NR/FR/DS/06/03/L	Carbon Forestry and Global Climate Change
28.	NR/FR/DS/06/04/L	Community Forestry
29.	NR/FR/CR/07/21/L	Forest Surveying and Engineering
30.	NR/FR/CR/07/22/L	Forest Policy, Legislation & Environmental Act
31.	NR/FR/CR/07/23/L	World forestry Systems
32.	NR/FR/DS/07/05/L	Fundamentals of Extension Education
33.	NR/FR/DS/07/06/L	Entrepreneurship Development
34.	NR/FR/CR/08/24/P	Socio Economic Survey-Village Attachment ( report writing, presentation, Viva-Voce)



**Department : Department of Forestry, Wildlife and**

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

**Academic Year : 2018-19**

**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.	319 (M. Sc. Forestry and Environmental Sciences)	Silviculture
2.		Forest Biometry, Surveying & Engineering
3.		Forest Management, Remote Sensing & GIS
4.		Forest Ecology and Biodiversity Conservation
5.		Forest Protection
6.		Forest Statistics & Research Methodology
7.		Forest Policy, Laws and Environmental Legislation
8.		Forest Tree Improvement and Biotechnology
9.		Wood Technology and Nanoforestry
10.		Wildlife Biology and Conservation
11.		Forest Soil and Watershed Management
12.		Forest Products and Industries
13.		Environment and Global Climatic Changes
14.		Breeding Methods in Forest Trees
15.		Forest Trees Reproductive Biology and Seed Orchards
16.		Molecular Genetics of Forest Trees
17.		Quantitative Genetics of Forest Trees



18.	Forest Genetic Diversity, Conservation & Environmental Impact
19.	Forest Resource Analysis
20.	Production Management in Nursery and Plantation Forestry
21.	Finance and Marketing Management of Forest Resources
22.	Tree Business Management
23.	Forest Management for Environmental Conservation

**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**

**CBCS COURSE SYLLABUS**

**FOR**

**B.Sc. FORESTRY**

(w. e. f. 2018-19)



**“SCHOOL OF NATURAL RESOURCES”**

**DEPARTMENT OF FORESTRY, WILDLIFE**

**& ENVIRONMENTAL SCIENCES**

**GURU GHASIDAS VISHWAVIDYALAYA**

**BILASPUR-495009, CHHATTISGARH**

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





**B.Sc. Forestry (4 -Year / 8- Semester) CBCS Programme**

Semester	Course Opted	Course Code	Name of the course	Credit	Hour / week
I	Core-01	NR/FR/CR/01/01/L	Principles and Practices of Silviculture	4	4
	Core-01 Practical	NR/FR/CR/01/01/P		2	4
	Core-02	NR/FR/CR/01/02/L	Fundamentals of Soil Science	4	4
	Core-02 Practical	NR/FR/CR/01/02/P		2	4
	Core-03	NR/FR/CR/01/03/L	Basic Mathematics	4	4
	Ability Enhancement Compulsory (CC-01)	NR/FR/CC/01/L	English Communication	4	4
	Extracurricular Activity (EC-01)	NR/FR/EC/01/01/P	ECA-Extracurricular activity Field visit/ NSS/ Swachhta/ Physical Education/ Plantation Activities	2	2
<b>TOTAL</b>				<b>24</b>	<b>26</b>
II	Core-04	NR/FR/CR/02/04/L	Introductory Botany	4	4
	Core-04 Practical	NR/FR/CR/02/04/P		2	4
	Core-05	NR/FR/CR/02/05/L	Forest Ecology and Biodiversity Conservation	4	4
	Core-05 Practical	NR/FR/CR/02/05/P		2	4
	Core-06	NR/FR/CR/02/06/L	Fundamentals of Wildlife	4	4
	Core-06 Practical	NR/FR/CR/02/06/P		2	4
	Ability Enhancement Compulsory (CC-02)	NR/FR/CC/02/02/L	Environmental Studies	4	4
	Extracurricular Activity (EC-02)	NR/FR/EC/02/02/P	ECA-Extracurricular activity/ Field visit/ NSS/ Swachhta/ vocational Training/ Sports/ Plantation activities	2	4
	<b>SUMMER (NC) Internship: 15 days</b>				2
<b>Total</b>				<b>26</b>	<b>132</b>
III	Core-07	NR/FR/CR/03/07/L	Forest Mensuration	4	4
	Core-07 Practical	NR/FR/CR/03/07/P		2	4
	Core-08	NR/FR/CR/03/08/L	Cytogenetics and Plant Breeding	4	4
	Core-08	NR/FR/CR/03/08/P		2	4

Department of Forestry, Wildlife and Environmental Science  
Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)  
Date: 26/07/18

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	Practical				
	Core -09	NR/FR/CR/03/09/L	Forest Management	4	4
	Core -09	NR/FR/CR/03/09/P		2	4
	Generic Elective-(GE-01)	NR/FR/GE/03/01/L	Ethnoforestry	4	4
	Generic Elective – Practical (GE-01) P	NR/FR/GE/03/01/P		2	4
	Skill Enhancement Course(SC-01)	NR/FR/SC/03/01/L	Nursery Practices and Plantation management	2	2
	Skill Enhancement Course(SC-01) P	NR/FR/SC/03/01/P		4	8
			<b>Total</b>	<b>30</b>	<b>42</b>
IV	Core -010	NR/FR/CR/04/10/L	Fundamentals of Wood Science	4	4
	Core -010	NR/FR/CR/04/10/P		2	4
	Core -011	NR/FR/CR/04/11/L	Nursery Management and Commercial Forestry	4	4
	Core -011	NR/FR/CR/04/11/P		2	4
	Core -012	NR/FR/CR/04/12/L	Application of Remote Sensing and GIS in Forest and Watershed Management	4	4
	Core -012	NR/FR/CR/04/12/P		2	4
	Generic Elective-(GE-02)	NR/FR/GE/04/02/L	Non Wood Forest Products and Utilization	4	4
	Generic Elective Practical(GE-02) P	NR/FR/GE/04/02/P		2	4
	SUMMER Internship: 15 days	(NC)	Swayam Swachhta/NSS/Industrial visit/ Others	2	2
			<b>TOTAL</b>	<b>26</b>	<b>132</b>
V	Core -013	NR/FR/CR/05/13/L	Wildlife Management	4	4
	Core -013	NR/FR/CR/05/13/P		2	4
	Core -14	NR/FR/CR/05/14/L	Wood Technology	4	4

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Department of Forestry, Wildlife and Environment  
Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)





Core -021	NR/FR/CR/07/21/L	Forest Surveying and Engineering	4	4
Core-021 Practical	NR/FR/CR/07/21/P		2	4
Core -022	NR/FR/CR/07/22/L	Forest Policy, Legislation & Environmental Act	4	4
Core-022 Practical	NR/FR/CR/07/22/P		2	4
Core 023	NR/FR/CR/07/23/L	World forestry System	4	4
Core-023 Practical	NR/FR/CR/07/23/P		2	4
Discipline Specific Elective- (DS-05)	NR/FR/DS/07/05/L	Fundamentals of Extension Education	4	4
Discipline Specific Elective- (DS-05) P	NR/FR/DS/07/05/P		2	4
Discipline Specific Elective- (DS-06)	NR/FR/DS/07/06/L	Entrepreneurship Development	--	--
Discipline Specific Elective- (DS-06) P	NR/FR/DS/07/06/P		--	--
<b>TOTAL</b>			<b>30</b>	<b>40</b>
<b>VIII</b>	Core -024	NR/FR/CR/08/24/P	Socio economic Survey-Village attachment ( report writing, presentation, Viva-Voce)	
	Core -025	NR/FR/CR/08/25/P	Forest operation Work Experience ( report writing, presentation, Viva-Voce)	
	Core -026	NR/FR/CR/08/26/P	Forest Institute and Industrial visit (report writing, presentation, Viva-Voce)	
	The nature of the course in VIII Semester is field based. Socio economic survey will be performed in an assigned village by the students. For exposure of forest operation 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.			
	<b>TOTAL</b>			<b>(06 credits for each training segment) = 18</b>
<b>GRAND TOTAL</b>			<b>208</b>	

06/08/18  
 Department of Forestry, Wildlife and Environmental Science  
 गुरु घासीदास विश्वविद्यालय, बिलासपुर (छ.ग.)  
 Guru Ghasidas Vishwavidyalaya, Bilaspur (C.G.)



गुरु घासीदास विश्वविद्यालय  
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Koni, Bilaspur - 495009 (C.G.)

COURSE SYLLABUS  
FOR

M.Sc. FORESTRY & ENVIRONMENTAL SCIENCES

(w. e. f. 2015-16)



“SCHOOL OF NATURAL RESOURCES”

DEPARTMENT OF FORESTRY, WILDLIFE  
& ENVIRONMENTAL SCIENCES

GURU GHASIDAS VISHWAVIDYALAYA

BILASPUR-495009, CHHATTISGARH

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

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*Handwritten signatures and dates:*  
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**DEPARTMENT OF FORESTRY, WILDLIFE & ENVIRONMENTAL SCIENCES**  
**GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR, CG**

**SEMESTER-WISE CHOICE BASED CREDIT SYSTEM OF M.Sc. FORESTRY & ENVIRONMENTAL SCIENCES**

M.Sc. I <sup>st</sup> Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credit
01.	Silviculture	3	--	1	4
02.	Forest Biometry, Surveying & Engineering	3	--	1	4
03.	Forest Management, Remote Sensing & GIS	2	1	1	4
04.	Forest Ecology and Biodiversity Conservation	3	--	1	4
05.	Forest Protection	3	--	1	4
06.	Forest Statistics & Research Methodology	3	1	1	5
				<b>Total Credits</b>	<b>25</b>

M.Sc. II <sup>nd</sup> Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credit
01.	Forest Policy, Laws and Environmental Legislation	2	1	1	4
02.	Forest Tree Improvement and Biotechnology	3	--	1	4
03.	Wood Technology and Nanoforestry	3	--	1	4
04.	Wildlife Biology and Conservation	3	--	1	4
05.	Forest Soil and Watershed Management	3	--	1	4
06.	Forest Products and Industries	3	--	1	4
07.	Environment and Global Climatic Changes	3	--	1	4
				<b>Total Credits</b>	<b>28</b>

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SPECIALIZATION  
FOREST GENETIC RESOURCES (FGR)

M.Sc. III <sup>rd</sup> Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Breeding Methods in Forest Trees	3	---	1	4
02.	Forest Trees Reproductive Biology and Seed Orchards	3	---	1	4
03.	Molecular Genetics of Forest Trees	3	---	1	4
04.	Quantitative Genetics of Forest Trees	3	---	1	4
05.	Forest Genetic Diversity, Conservation & Environmental Impact	3	---	1	4
Total Credits					20

M.Sc. IV <sup>th</sup> Semester		
S.No.	Title of Paper	Credits
01.	Field Training ( Attachment with State Forest Department for analysis of FGR & its distribution) Project report writing, Presentation & Viva-voce	10
02.	Industrial Training Project report writing, Presentation & Viva-voce	09
03.	Computational Skills	05
04.	Student Project	01
Total Credits		25

Grand Total of Credits = 98

- The student project will be allotted in III semester and will be evaluated at the end of IV semester. Students may choose any project related to their curriculum. There will be no supervisor for the project.
- **Visits:** Visits to forest operation sites, forest nursery, wildlife habitat and plantation sites will be conducted as per the requirement of curriculum.

M. Singh  
29.5.15

J. Singh  
29/6/15

J. Singh  
29/6/15  
Incharge



**SPECIALIZATION  
FOREST MANAGEMENT (FM)**

M.Sc. III <sup>rd</sup> Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Forest Resource Analysis	3	---	1	4
02.	Production Management in Nursery and Plantation Forestry	3	---	1	4
03.	Finance and Marketing Management of Forest Resources	3	---	1	4
04.	Tree Business Management	3	---	1	4
05.	Forest Management for Environmental Conservation	3	---	1	4
				<b>Total Credits</b>	<b>20</b>

M.Sc. IV <sup>th</sup> Semester			
S.No.	Title of Paper	Credits	
01.	Field Training ( Attachment with State Forest Department for analysis of Forest Management patterns & Management techniques)	10	
02.	Industrial Training Project report writing, Presentation & Viva-voce	09	
03.	Computational Skills	05	
04.	Student Project	01	
		<b>Total Credits</b>	<b>25</b>

**Grand Total of Credits = 98**

- The student project will be allotted in III semester and will be evaluated at the end of IV semester. Students may choose any project related to their curriculum. There will be no supervisor for the project.
- **Visits:** Visits to forest operation sites, forest nursery, wildlife habitat and plantation sites will be conducted as per the requirement of curriculum.

DDG, L<sup>4</sup>  
29/6/15

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29/6/15

Prash  
29/6/15  
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