



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 : 2017-18

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.	201 (B. Sc. Forestry)	Introduction and Practices of Silviculture
2.		Fundamentals of Geology and Soil Science
3.		Cytogenetics and Plant Breeding
4.		Introductory Botany
5.		Introductory Forest Economics
6.		Forest Ecology, Biodiversity and Conservation
7.		Principles of Hydrology and Watershed Management
8.		Forest Soil, Chemistry and Fertility
9.		Environmental Science
10.		Silviculture System
11.		Forest Biotechnology
12.		Wood Anatomy
13.		Forest Mensuration
14.		Principles and Methods of Tree improvement
15.		Forest Management



16.	Wood Technology& Nanoforestry
17.	Nursery Management and Commercial Forestry
18.	Rangeland Management
19.	Remote sensing and Its application in Forestry
20.	Forest Pathology
21.	Forest Policy and Legislation
22.	Utilization of Non-timber Forest Products
23.	Forest Tribology & Ethno-Forestry
24.	Fundamentals of Horticulture and Its Application
25.	Tree seed Technology & Plantation Forestry
26.	Fundamentals of Wildlife &Its Management
27.	Introductory Crop Production and Meteorology
28.	Fundamentals of Extension Education
29.	Agro Forestry system and Management
30.	Carbon Forestry
31.	Forest Entomology
32.	Marketing and Trade of Forest Produce
33.	Principles of Plant Physiology
34.	Forest Engineering & Surveying
35.	Wood Products &Utilization
36.	World Forestry Systems
37.	Entrepreneurship Development and communication skills
38.	Forestry Operations (Working Experience)
39.	Socio-economic survey - Village attachment



Department : Department of Forestry, Wildlife and Environmental Sciences

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

Academic Year : 2017-18

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



Scheme and Syllabus

COURSE SYLLABUS FOR

B.Sc. FORESTRY
(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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DEPARTMENT OF FORESTRY, WILDLIFE & ENVIRONMENTAL SCIENCES
GURU GHASIDAS VISHWAVIDYALAYA, BILASPUR, CG

SEMESTER-WISE CHOICE BASED CREDIT SYSTEM OF B.Sc. FORESTRY COURSE

B.Sc. I st Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Introduction and Practices of Silviculture	3	--	1	4
02.	Fundamentals of Geology and Soil Science	3	--	1	4
03.	Cytogenetics and Plant Breeding	3	--	1	4
04.	Introductory Botany	3	--	1	4
05.	Basic Mathematics	3	1	--	4
06.	Physical Activities (NC)	--	--	--	1
Total Credits					21

B.Sc. II nd Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Introductory Forest Economics	3	--	1	4
02.	Forest Ecology, Biodiversity & Conservation	3	--	1	4
03.	Principles of Hydrology and Watershed Management	2	1	1	4
04.	Forest Soil - Chemistry and Fertility	3	--	1	4
05.	Environmental Science	3	--	1	4
06.	Silviculture Systems	2	--	1	3
Total Credits					23

B.Sc. III rd Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Forest Biotechnology	3	1	1	5
02.	Wood Anatomy	3	--	1	4
03.	Forest Mensuration	3	--	1	4
04.	Principles and Methods of Tree improvement	3	--	1	4
05.	Forest Management	3	--	1	4
06.	Structural Grammar and Spoken English (NC)	2	--	--	2
Total Credits					23

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B.Sc. IV th Semester					
S. No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Wood Technology & Nanoforestry	3	--	1	4
02.	Nursery Management and Commercial Forestry	3	--	1	4
03.	Rangeland Management	2	1	1	4
04.	Remote sensing and Its application in Forestry	3	--	1	4
05.	Forest Pathology	3	--	1	4
06.	Forest Policy and Legislation	2	1	1	4
07.	Student Project	--	--	1	1
Total Credits					25

B.Sc. V th Semester					
S. No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Utilization of Non-timber Forest Products	3	--	1	4
02.	Forest Tribology & Ethno-Forestry	3	--	1	4
03.	Fundamentals of Horticulture and Its Application	2	1	1	4
04.	Tree seed Technology & Plantation Forestry	3	--	1	4
05.	Fundamentals of Wildlife & Its Management	3	--	1	4
06.	Introductory Crop Production and Meteorology	3	--	1	4
Total Credits					24

B.Sc. VI th Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Fundamentals of Extension Education	2	1	--	3
02.	Agro Forestry system and Management	3	--	1	4
03.	Carbon Forestry	3	--	1	4
04.	Forest Entomology	3	--	1	4
05.	Marketing and Trade of Forest Produce	2	1	1	4
06.	Principles of Plant Physiology	3	--	1	4
Total Credits					23

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B.Sc. VII th Semester					
S.No.	Title of Paper	Lecture	Tutorial	Practical	Credits
01.	Bio Statistics and Computer Application	3	1	1	5
02.	Forest Engineering & Surveying	3	--	1	4
03.	Wood Products & Utilization	3	--	1	4
04.	World Forestry Systems	2	1	1	4
05.	Entrepreneurship Development and communication skills	2	1	--	3
Total Credits					20

B.Sc. VIII th Semester		
S.No.	Title of Paper	Credits
01.	Forest Institutes and Industrial Visit/training Project report writing, Presentation & Viva-voce	8
02.	Forestry Operations (Working Experience) Project report writing, Presentation & Viva-voce	9
03.	Socio-economic survey - village attachment	8
Total Credits		25

Grand Total of Credits = 184

- 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 this project.
- Visits to forest operation sites, forest nursery, wildlife habitat and plantation sites will be conducted as per the requirement of curriculum.

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.)

COURSE SYLLABUS
FOR

M.Sc. FORESTRY & ENVIRONMENTAL SCIENCES

(w. e. f. 2015-16)



“SCHOOL OF NATURAL RESOURCES”

DEPARTMENT OF FORESTRY, WILDLIFE
& ENVIRONMENTAL SCIENCES

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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 st 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
				Total Credits	25

M.Sc. II nd 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
				Total Credits	28

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SPECIALIZATION
FOREST GENETIC RESOURCES (FGR)

M.Sc. III rd 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 th 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.

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SPECIALIZATION
FOREST MANAGEMENT (FM)

M.Sc. III rd 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
				Total Credits	20

M.Sc. IV th 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	
		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.

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