

## Course layout of Four Year B.Sc. (Forestry) Degree Programme

### Semester - I

Sr. No.	Course No.	Course Title	Credit
1	F/ ECON -111	Introductory Forest Economics	2+0=2
2	F/ SSAC -111	Fundamentals of Geology and Soil Science	1+1=2
3	F/ AGROMET - 111	Agricultural Meteorology	1+1=2
4	F/BOT- 111	Principles of Cytology and Genetics	1+1=2
5	F/HORT – 111	Fundamentals of Horticulture	2+1=3
6	F/BOT – 112	Principles of Plant Physiology	1+1=2
7	F/BOT – 113	Introductory Botany	2+1=3
		Total Credits	10+6 = 16
8	F/ MATH – 111	Basic Mathematics (Deficiency Course)	3+0=3(NC)
9	F/ LANG - 111	Structural Grammar and Spoken English	0+1=1 (NC)
10	PHYEDN – 111	Physical Education	0+1=1 (NC)

### Semester - II

Sr. No.	Course No.	Course Title	Credit
1	SAF – 121	Principles and Practices of Silviculture	3+1=4
2	FBT – 121	Dendrology	2+1=3
3	FBT – 122	Forest Ecology, Biodiversity and Conservation	1+1=2
4	F/ENGG – 121	Principles of Hydrology, Soil and Water Conservation	2+1=3
5	NRM – 121	Chemistry and Fertility of Forest Soil	2+1=3
6	FPU – 121	Ethnobotany	1+1=2
7	FBT – 123	Tree Physiology	1+1=2
		Total Credits	12+7= 19
8	NSS / NCC -121	National Service Scheme/ National Cadet Corps	0+1=1 (NC)

### Semester – III

Sr. No.	Course No.	Course Title	Credit
1	NRM – 232	Forest Engineering and Survey	1+1=2
2	FPU – 232	Wood Anatomy	1+1=2
3	FPU – 233	Logging and Ergonomics	1+1=2
4	NRM – 233	Soil Survey and Remote Sensing	2+1=3
5	SAF – 232	Forest Mensuration	2+1=3
6	FBT – 234	Principles of Tree Improvement	2+1=3

7	FBT – 235	Tree Seed Technology	1+1=2
8	SAF - 233	Nursery Management	1+1=2
9	F/SSAC - 232	Fundamentals of Biochemistry	1+1=2
		<b>Total Credits</b>	<b>12+9= 21</b>

#### Semester - IV

Sr. No.	Course No.	Course Title	Credit
1	F/ASDS – 241	Live Stock Management	1+1=2
2	FPU – 244	Wood Science and Technology	2+1=3
3	FPU – 245	Wood Products and Utilization	1+1=2
4	SAF – 244	Silviculture of Indian Trees	2+1=3
5	FBT – 246	Fundamentals of Wildlife	2+0=2
6	FBT – 247	Forest Pathology	2+1=3
7	F/EXTN – 241	Fundamentals of Extension Education	1+1=2
8	NRM - 244	Forest Tribology and Anthropology	2+0=2
9	SAF - 245	World Forestry System	2+0=2
		<b>Total Credits</b>	<b>15+6=21</b>

#### Semester - V

Sr. No.	Course No.	Course Title	Credit
1	FPU – 356	Medicinal and Aromatic Plants	2+1=3
2	F/STAT – 351	Elementary Statistics	1+1=2
3	F/COMP – 351	Introduction to Computer Application and Programming	1+1=2
4	NRM – 355	Range Land Management	2+1=3
5	SAF – 356	Silvicultural System	2+0=2
6	SAF – 357	Plantation Forestry and Wasteland Development	1+1=2
7	FBT – 358	Wildlife Management	1+1=2
8	NRM – 356	Principles of Forest Economics, Project Planning and Evaluation	1+1=2
9	SAF - 358	Environmental Science	2+1=3
		<b>Total Credits</b>	<b>13+8=21</b>

#### Semester - VI

Sr. No.	Course No.	Course Title	Credit
1	NRM – 368	Forest Management, Policy and Legislation	2+1=3
2	FPU – 367	Utilization of Non Timber Forest Products	2+1=3
3	SAF – 369	Agroforestry Systems and Management	2+1=3
4	NRM – 368	Forest Business Management	1+1=2
5	FBT – 369	Forest Entomology and Nematology	2+1=3
6	F/EXTN – 362	Entrepreneurship Development and Communication Skill	2+1=3
7	NRM - 369	Marketing and Trade of Forest Products	2+1=3

8	F/BIOT- 361	Fundamentals of Biotechnology	1+1=2
		<b>Total Credits</b>	<b>14+8=22</b>

### Semester - VII

Sr. No.	Course No.	Course Title	Credit
1	FVT – 471	Production and Marketing of Quality of Planting Material	0 + 20
2	FVT – 472	Cultivation and Processing of Medicinal Plants	0 + 20
3	FVT - 473	Natural Resource Management	0 + 20
		<b>Total Credits</b>	<b>20</b>

*Note:* Any one course to be offered

### Semester – VIII

Sr. No.	Course No.	Course Title	Credit
1	FOWE-481	Socio-economic Survey	0+2
	FOWE-482	Socio-economic Survey (Tribals)	0+1
	FOWE-483	Field training attachment with state forest department- Forest mensuration	0+2
	FOWE-484	Field Training (Attachment with State Forest Department- Silviculture)	0+2
	FOWE-485	Hand on training – Agroforestry	0+2
	FOWE-486	Field Training (Attachment with State Forest Department: Ecology & Biodiversity)	0+2
	FOWE-487	Field training – Tree improvement	0+2
	FOWE-488	Hands on Training (Institutional)	0+2
	FOWE-489	Hands on Training (Forest Based Industries)	0+3
	FOWE-4810	Report Writing & Presentation	0+2
		<b>Total credit</b>	<b>0+20</b>

## Course layout of M.Sc. in Forestry

### SEMESTER I

#### I) MAJOR COURSES:

Sr.No.	Course No.	Subject	Credit
1	FOR-501	Silviculture	1+1
2	FOR-502	Forest Biometry	1+1
3	FOR-503	Forest Management	1+1
4	FOR-504	Forest Product Chemistry and Industry	2+1
5	FOR-505	Forest Ecology & Biodiversity Conservation	2+1
6	FOR-506	Forest Resource Management & Economics	1+1
<b>Total Major Courses</b>			<b>8+6=14</b>

#### II) SUPPORTING COURSES:

7	F/COMP-511	Computer Application & Information Technology	0+1
8	F/STAT-513	General Statistical Methods And Research Methodology	1+1
<b>Total of Supporting Courses</b>			<b>1+2=3</b>

**Total courses for I Semester**      **9+8=17**

#### III) Compulsory Non Credit Courses

9	PGS 501	Library And Information Services	0+1
10	PGS 504	Basic Concepts In Laboratory Techniques	0+1

### SEMESTER II

#### I) MAJOR COURSES:

1	FOR-507	Forest Protection	1+1
2	FOR-508	Tree Improvement	1+1
3	FOR-509	Wood Modification and Composite wood	1+1
<b>A</b> <b>Total Major Courses</b>			<b>3+3=6</b>

#### II) SUPPORTING COURSES:

4	FOR-512	Remote Sensing and Geometric Information Technology	1+1
<b>B</b> <b>Total of Supporting Courses</b>			<b>1+1=2</b>
5	<b>C #</b>	<b>Specialized Minor Courses</b> (from the four respective streams to be offered)	5 Credits
<b>Total of A +B+C credit load for II Semester</b>			<b>13+5# Credits</b>

#### III) Compulsory Non Credit

6	PGS 502	Technical Writing And Communications Skills	0+1
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7	PGS 503 (e-Course)	Intellectual Property And Its Management In Agriculture	1+0
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### SEMESTER III

#### II) SUPPORTING COURSES:

1	FOR 591	Seminar	0+1
2	#	<b>Specialized Minor Courses</b> (from the four respective streams to be offered)	4 Credits
<b>Total courses for III Semester</b>			<b>5 + 4 # credits</b>

#### III) Compulsory Non Credit

4	PGS 505 (e-Course)	Agricultural Research, Research Ethic And Rural Development Programmes	1+0
5	PGS 506 (e-Course)	Disaster Management	1+0

### SEMESTER IV

1	FOR 599	Research	0+20
To be evaluated as Satisfactory/Non satisfactory			
<b>Total courses for IV Semester</b>			<b>20 credits</b>

The four major disciplines of Forestry have been classified into various field of specialization.

Sr No.	Major discipline	Minor Course (Field of specialization)	Degree Nomenclature
1	Silviculture & Agroforestry (SAF)	Plantation Technology	M.Sc. Forestry ( Plantation Technology)
		Agro-Forestry	M.Sc. Forestry ( Agro-Forestry)
2	Natural Resource Management (NRM)	Watershed Management	M.Sc. Forestry ( Watershed Management)
		Eco-Tourism	M.Sc. Forestry ( Eco-Tourism)
		Environment Management	M.Sc. Forestry ( Environment Management)
		Forest Business Management	M.Sc. Forestry ( Forest Business Management)
3	Forest Biology & Tree Improvement (FBT)	Forest Genetic Resources	M.Sc. Forestry ( Forest Genetic Resources)
		Forest Biotechnology	M.Sc. Forestry ( Forest Biotechnology)
4	Forest Products & Utilization (FPU)	Wood Science and Technology	M.Sc. Forestry ( Wood Science and Technology)
		Medicinal and Aromatic Plants	M.Sc. Forestry ( Medicinal and Aromatic Plants)

### Specialization Minor Courses

- # Any one specialization from four respective streams with 9 credits to be completed in Second and Third Semester.  
(To be decided by the University authorities as per the availability of staff and facilities)

#### **A. Forest Products & Utilization (FPU)**

##### **1. Wood Science and Technology**

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1.	WST 521	Wood Identification	0+2
2.	WST 522	Wood Chemistry	1+1
3.	WST 523	General Properties Of Wood	1+1
4.	WST 524	Wood Seasoning & Preservation	2+1
5.	WST 525	Paper & Pulp Technology	2+1

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##### **2. Medicinal and Aromatic Plants**

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1.	MAP 521	Basics Of Plant Production And Breeding Techniques	2+1
2.	MAP 522	Medicinal Chemistry & Processing Of Map's	2+1
3.	MAP 523	Biotechnological Approaches And Agro Techniques For Map Species.	2+1
4.	MAP 524	Improvement Of Medicinal And Aromatic Plants	1+1
5.	MAP 525	Role Of Medicinal And Aromatic Plants In Health Care Systems	2+0
6.	MAP 526	Pharmacognosy Of Map's	1+1
7.	MAP 527	Study Tour (Visit To Pharmaceutical And Processing Units)	0+1

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#### **B. Silviculture & Agroforestry (SAF)**

##### **1. Plantation Technology**

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1.	PT 521	Seed Collection, Storage And Testing	2+1
2.	PT 522	Modern Nursery Technology	1+1
3.	PT 523	Nutrient & Weed Management In Nursery & Plantation	2+1
4.	PT 524	Management Of Insect-Pests And Diseases	1+1
5.	PT 525	Energy Plantations And Bio-Fuels	1+1
6.	PT 526	Plantation Forestry	2+1

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##### **2. Agro-Forestry**

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1.	AF 521	Agroforestry Systems	2+1
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2.	AF 522	Soil And Water Management In Agroforestry	1+1
3.	AF 523	Crops And Animals Production Management In Agroforestry	2+1
4.	AF 524	Fruit Plants, Trees & Shrubs For Agroforestry	2+1
5.	AF 525	Economics Of Agroforestry Systems	2+1
6.	AF 526	Range Land And Pasture Management	2+0
7.	AF 527	Forests And People	1+1

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### **C. Natural Resource Management (NRM)**

#### **1. Watershed Management**

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WM 521	Watershed Concepts, Project Formulation And Planning	2+1
WM 522	Applications Of Remote Sensing And GIS In Watershed Management	1+1
WM 523	Watershed Survey, Mapping And Structural Engineering Designs	2+1
WM 524	Watershed Hydrology And Resources Conservation	2+1
WM 525	Production System And Bio-Diversity In Watershed.	3+1
WM 526	People's Participation And Impact Analysis In Watershed	2+1

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#### **2. Eco-Tourism**

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1.	ET 521	Ecotourism- Concepts And Modern Approaches	2+2
2.	ET 522	Eco Systems Of The World	2+0
3.	ET 523	Ecotourism In Protected Areas	2+1
4.	ET 524	Ecotourism Landscaping	2+1
5.	ET 525	Economics Of Ecotourism	2+1
6.	ET 526	Design And Management Of Ecotourism	2+1

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#### **3. Environment Management**

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1.	EM 521	Introduction To Environmental Sciences	2+0
2.	EM 522	Environmental Pollution	2+1
3.	EM 523	Environmental Analytical Techniques	1+1
4.	EM 524	Global Climatic Changes	2+0
5.	EM 525	Environmental Policy Law And International Conventions	3+0
6.	EM 526	Environmental Impact Assessment	2+1

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#### **4. Forest Business Management**

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1.	FBM 521	Forest Resource Analysis	2+1
2.	FBM 522	Finance And Marketing Management Of Forest Resources	2+1

3.	FBM 523	Farm Management	3+0
4.	FBM 524	Production Management Of Nursery And Plantation Forestry	2+1
5.	FBM 525	Project Planning, Monitoring And Evaluation	2+1
6.	FBM 526	Managerial Economics	3+0

#### **D. Forest Biology & Tree Improvement (FBT)**

##### **1. Forest Genetic Resources**

1.	FGR 521	Breeding Methods In Forest Trees	2+1
2.	FGR 522	Reproductive Biology Of Forest Trees	2+1
3.	FGR 523	Tree Seed Orchards	2+1
4.	FGR 524	Quantitative Genetics In Forest Tree Breeding	3+0
5.	FGR 525	Forest Genetic Diversity And Conservation	3+0

##### **2. Forest Biotechnology**

1.	FB 521	Biotechnology Approaches In Forestry	2+1
2.	FB 522	Plant Tissue Culture	2+1
3.	FB 523	Molecular Biology	2+1
4.	FB 524	Principles & Techniques of Genetic Engineering	2+1
5.	FB 525	Environmental Pollutants And Biotechnology	2+0

#### **IV) Compulsory Non-Credit Courses For PG**

1	PGS 501	Library And Information Services	0+1
2	PGS 502	Technical Writing And Communications Skills	0+1
3	PGS 503 (e-Course)	Intellectual Property And Its Management In Agriculture	1+0
4	PGS 504	Basic Concepts In Laboratory Techniques	0+1
5	PGS 505 (e-Course)	Agricultural Research, Research Ethic And Rural Development Programmes	1+0
6	PGS 506 (e-Course)	Disaster Management	1+0
<b>Total Compulsory non credit courses</b>			<b>3+3=6</b>