



Broad Subject Matter Area (BSMA) - 2022 Committee on Forestry PG course Curricula

Nomenclature of Degree Programme

(a) M.Sc. Programmes

- i) M.Sc. Forestry (Silviculture and Agroforestry)**
- ii) M.Sc. Forestry (Forest Biology and Tree Improvement)**
- iii) M.Sc. Forestry (Forest Products and Utilization)**
- iv) M.Sc. Forestry (Forest Resource Management)**

(b) Ph.D. Programmes

- i) Ph.D. Forestry (Silviculture and Agroforestry)**
- ii) Ph.D. Forestry (Forest Biology and Tree Improvement)**
- iii) Ph.D. Forestry (Forest Products and Utilization)**
- iv) Ph.D. Forestry (Forest Resource Management)**



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1.1 Discipline – 1 M.Sc. Forestry (Silviculture and Agroforestry)

1. M.Sc. Forestry (Silviculture and Agroforestry)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
SAF 501*	I	Silviculture	2 + 1
SAF 502*	II	Forest Biometry	1 + 1
SAF 503*	I	Silvicultural Practices	1 + 1
SAF 504*	II	Agroforestry Systems	2 + 1
SAF 505*	I	Interactions in Agroforestry Systems	1 + 1
SAF 506	II	Modern Nursery Technologies	1 + 1
SAF 507	I	Plantation Forestry	2 + 1
SAF 508	II	Industrial Agroforestry	1 + 1
SAF 509	I	Climate Change and Conservation Silviculture	2 + 0
SAF 510	II	Trees and Shrubs for Agroforestry	1 + 1
SAF 511	I	Economics of Agroforestry Systems	2 + 1
SAF 512	II	Tree Seed Technology	2 + 1
SAF 513	I	Nutrient and Weed Management in Production Forestry	1 + 1
SAF 514	II	Crops and Live Stock Management in Agroforestry	2+0
Minor Courses			
		Courses from Forest Biology and Tree Improvement or Forest Products and Utilization	08
Supporting Courses			
FOR 511*	I	General Statistical Methods and Computer Applications	2+1
		Any other course relevant to M. Sc. research problem	03
Common Courses			
		Library and Information Services	1+0
		Technical Writing and Communications Skills	1+0
		Intellectual Property and its management in Agriculture	1+0
		Basic Concepts in Laboratory Techniques	1+0
		Agricultural Research, Research Ethics and Rural Development Programmes	1+0
SAF 591*	I/II	Master's Seminar	1+0
ii) Thesis Research			
SAF 599		Master's Research	0+30
*Compulsory Core Courses			



1.1 Discipline – 1 Ph.D. Forestry (Silviculture and Agroforestry)

2. Ph.D. Forestry (Silviculture and Agroforestry)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
SAF 601*	I	Quantitative Silviculture	2+1
SAF 602*	II	Agroforestry Research and Management	2+1
SAF 603	I	Forest Stand Dynamics	1+0
SAF 604	II	Productivity and Evaluation of Agroforestry Systems	2+1
SAF 605	I	Forest Stand Management Techniques	1+1
SAF 606	II	Agroforestry for Ecosystem Services and Environmental Benefits	2+0
SAF 607	I	Plantation Forest Productivity	1+1
SAF 608	II	Restoration Forestry	1+0
SAF 609	I	Regeneration Silviculture	2+1
SAF 610	II	Forest Soil Management	1+1
SAF 611	I	Agroforestry for Sustainable Agriculture	1+0
Minor Courses			
		Courses from Forest Biology and Tree Improvement or Forest Products and Utilization	06
Supporting Courses			
FOR 610*	I	Research Methodology in Forestry	2+1
FOR 611	II	Research and Publication Ethics	1+1
SAF 691*	I/II	Doctoral Seminar	1+0
SAF 692*	I/II	Doctoral Seminar	1+0
ii) Thesis Research			
SAF 699		Doctoral Research	0+75

*Compulsory Core Courses



1.2 Discipline-2 M.Sc. Forestry (Forest Biology and Tree Improvement)

1. M. Sc. Forestry (Forest Biology and Tree Improvement)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
FBT 501 *	I	Applied Forest Tree Improvement	2+1
FBT 502	II	Forest Ecology and Biodiversity Management	2+1
FBT 503*	I	Breeding Methods in Forest Trees	2+1
FBT 504	II	Reproductive Biology of Forest Trees	2+1
FBT 505	I	Tree Seed Orchards	2+1
FBT 506*	II	Quantitative Genetics in Forest Tree Breeding	2+1
FBT 507	I	Forest Genetic Diversity and Conservation	3+0
FBT 508*	II	Biotechnology in Forestry	2+1
FBT 509	I	Clonal Forestry	2+0
FBT 510	II	Forest Ecophysiology	2+1
FBT 511	I	Physiology of Woody Plants	2+1
FBT 512	II	Breeding for Insect Pest and Disease Resistance in Trees	2+1
FBT 513	I	Tree Seed Technology	2+1
Minor Courses			
		Courses from Silviculture and Agroforestry or Forest Products and Utilization	08
Supporting Courses			
FOR 511*	I	General Statistical Methods and Computer Applications	2+1
		Any other course relevant to MSc research problem	03
Common Courses			
		Library and Information Services	1+0
		Technical Writing and Communications Skills	1+0
		Intellectual Property and its management in Agriculture	1+0
		Basic Concepts in Laboratory Techniques	1+0
		Agricultural Research, Research Ethics and Rural Development Programmes	1+0
FBT 591*	I/II	Master's Seminar	1+0
ii) Thesis Research			
FBT 599		Master's Research	0+30

*Compulsory Core Courses



1.2 Discipline-2 Ph.D. Forestry (Forest Biology and Tree Improvement)

2. Ph.D. Forestry (Forest Biology and Tree Improvement)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
FBT 601*	I	Special Topics in Tree Improvement	2+1
FBT 602	II	Forest Genetics and Tree Breeding	2+0
FBT 603*	I	Biometrical Genetics	2+1
FBT 604	II	Forest Tree Reproduction	2+1
FBT 605	I	Molecular Genetics of Forest Trees	2+1
FBT 606	II	Genetics of Forest Ecosystems and Conservation Biology	3+0
FBT 607	I	Tree Physiology and Forest Productivity	1+1
FBT 608	II	Tree Seed Management	2+1
Minor Courses			
		Courses from Silviculture and Agroforestry or Forest Products and Utilization	06
Supporting Courses			
FOR 610*	I	Research Methodology in Forestry	2+1
FOR 611	II	Research and Publication Ethics	1+1
FBT 691*	I/II	Doctoral Seminar	1+0
FBT 692*	I/II	Doctoral Seminar	1+0
ii) Thesis Research			
FBT 699		Doctoral Research	0+75

*Compulsory Core Courses



1.3 Discipline-3 M.Sc. Forestry (Forest Products and Utilization)

1. M.Sc. Forestry (Forest Products and Utilization)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
FPU 501*	I	Non Wood Forest Products Management	2+1
FPU 502	II	Applied Wood Technology	2+1
FPU 503	I	Pulp and Paper Technology	2+1
FPU 504	II	Composite Wood Technology	2+1
FPU 505*	I	Forest Products Laboratory Techniques	0+2
FPU 506*	II	Agro-techniques of Medicinal and Aromatic Crops	2+1
FPU 507	I	Breeding Techniques and Improvement of Medicinal and Aromatic Crops	2+1
FPU 508	II	Chemistry and Processing of Medicinal and Aromatic Plants	2+1
FPU 509*	I	Wood Identification	0+2
FPU 510*	II	Chemistry of Forest Products and Industries	2+1
FPU 511	I	Wood Chemistry	1+1
FPU 512	II	Wood Physics	1+1
FPU 513	I	Wood Seasoning and Preservation	2+1
FPU 514	II	Production of Medicinal and Aromatic Crops	1+1
FPU 515	I	Medicinal and Aromatic Plants in Health Care Systems	2 +0
FPU 516	II	Pharmacognosy of Medicinal and Aromatic Plants	1+1
Minor Courses			
		Courses from Silviculture and Agroforestry or Forest Biology and Tree Improvement	08
Supporting Courses			
FOR 511*	I	General Statistical Methods and Computer Applications	2+1
		Any other course relevant to MSc research problem	03
Common Courses			
		Library and Information Services	1+0
		Technical Writing and Communications Skills	1+0
		Intellectual Property and its management in Agriculture	1+0
		Basic Concepts in Laboratory Techniques	1+0
		Agricultural Research, Research Ethics and Rural Development Programmes	1+0
FPU 591*	I/II	Master's Seminar	1+0
ii) Thesis Research			
FPU 599		Master's Research	0+30

*Compulsory Core Courses



1.3 Discipline-3 Ph.D. Forestry (Forest Products and Utilization)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
FPU 601*	I	Developments in Wood and Non-Wood Forest Products	3+0
FPU 602	II	Energy and Chemicals from Wood	2+0
FPU 603	I	Wood and Wood Technology	2+1
FPU 604 *	II	Analytical Techniques in Forest Products	1+2
FPU 605	I	Chemistry of Medicinal and Aromatic Plants	2+1
FPU 606	II	Processing Technology of Forest Products	2+1
FPU 607	I	Value Addition and Marketing of Forest Products	2+1
FPU 608	II	Modern Trends in Wood Modification	2+1
FPU 609	I	Development in Pulp and Paper Technology	2+0
FPU 610	II	Application of Traditional Knowledge	2+0
FPU 611	I	Production of Quality Planting Material of Medicinal and Aromatic Plants	2+1
FPU 612	II	Processing Technology of Medicinal & Aromatic Plants	2+1
FPU 613	I	Biosynthesis of Secondary Metabolites	3+0
FPU 614	II	Value Additions and Marketing of Medicinal & Aromatic Plants	2+1
Minor Courses			
		Courses from Silviculture and Agroforestry or Forest Biology and Tree Improvement	06
Supporting Courses			
FOR 610*	I	Research Methodology in Forestry	2+1
FOR 611	II	Research and Publication Ethics	1+1
FPU 691*	I/II	Doctoral Seminar	1+0
FPU 692*	I/II	Doctoral Seminar	1+0
ii) Thesis Research			
FPU 699		Doctoral Research	0+75

***Compulsory Core Courses**



1.4 Discipline-4 M.Sc. Forestry (Forest Resource Management)

1. M.Sc. Forestry (Forest Resource Management)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
FRM 501*	I	Forest Biometry and Management	2+1
FRM 502	II	Ecology and Management of Forest Soils	2+1
FRM 503*	I	Remote Sensing and Geographical Information System in Natural Resource Management	2+1
FRM 504	II	Land Use Planning and Watershed Management	2+1
FRM 505*	I	Forest Resource Economics	1+1
FRM 506*	II	Forest Ecosystem Services and Valuation	2+1
FRM 507	I	Environmental Impact Assessment and Auditing	1+1
FRM 508*	II	Forest Policy, law and International Conventions	2+0
FRM 509	I	Global Climate Change Impact, Mitigation and Adaptation	2+0
FRM 510*	II	Participatory Approaches in Forest Resource Management	1+1
FRM 511	I	Management of Tree Insect-Pests and Diseases	2+1
FRM 512	II	Forest Ecology, Biodiversity and Management	2+1
Minor Courses			
		Courses from Silviculture and Agroforestry or Forest Biology and Tree Improvement or Forest Products and Utilization	08
Supporting Courses			
FOR 511*	I	General Statistical Methods and Computer Applications	2+1
		Any other course relevant to MSc research problem	03
Common Courses			
		Library and Information Services	1+0
		Technical Writing and Communications Skills	1+0
		Intellectual Property and its management in Agriculture	1+0
		Basic Concepts in Laboratory Techniques	1+0
		Agricultural Research, Research Ethics and Rural Development Programmes	1+0
FRM 591*	I/II	Master's Seminar	1+0
ii) Thesis Research			
FRM 599		Master's Research	0+30

*Compulsory Core Courses



1.4 Discipline-4 Ph.D. Forestry (Forest Resource Management)

Course Code	Semester	Course Title	Credit Hrs.
Major Courses			
FRM 601*	I	Forest Management	2+1
FRM 602	II	Forest Economic Analysis	2+1
FRM 603	I	Climate Change and Forestry	1+1
FRM 604	II	Geo-informatics in Natural Resource Management	2+1
FRM 605*	I	Environmental Impact Analysis and Assessment	2+1
FRM 606	II	Forest Soil Management	2+1
FRM 607	I	Environmental Modelling and Biostatistics	2+0
FRM 608	II	Approaches in Forest Resource Management	1+1
FRM 609	I	Forest Hydrology and Watershed Management	2+1
FRM 610	II	Operational Research in Forest Management	1+1
Minor Courses			
		Courses from Silviculture and Agroforestry or Forest Biology and Tree Improvement or Forest Products and Utilization	06
Supporting Courses			
FOR 610*	I	Research Methodology in Forestry	2+1
FOR 611	II	Research and Publication Ethics	1+1
FRM 691*	I/II	Doctoral Seminar	1+0
FRM 692*	I/II	Doctoral Seminar	1+0
ii) Thesis Research			
FRM 699		Doctoral Research	0+75

*Compulsory Core Courses