

**UNDERGRADUATE CURRICULUM
MAJOR IN FOREST RESOURCE
MANAGEMENT
IN 2016**

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MAJOR IN FOREST RESOURCE MANAGEMENT

*(Attached to Decision No. 1728/QĐ-DT dated December 03rd, 2016 issued by the
Rector of Thai Nguyen University of Agriculture and Forestry)*

1. General information

Major: Forest Resource Management

Major code: 7620211

Training level: University

Training time: 4 years

Training form: Full-time

2. Training objective

Training professional engineers for forest resource management in the field of forest management and protection, having the ability to manage and organize the sustainable development of environmental resources and various functions of forests. The major objective is to train professional forestry engineers in the field of forest resource management, having the ability to manage and organize the sustainable development of environmental resources and various functions of forests.

3. Learning outcomes

3.1 Political qualities, ethics and health

- Having a sense of civic responsibility of the Socialist Republic of Vietnam, being a good citizen, strictly observing and complying with the current constitution and laws;

- Having a political stance, powerful thoughts, sense of discipline and understanding of professional ethics and values.

- Having an awareness and ability to improve professional qualifications;

- Ensuring good health for work;

- Having a fair, objective and cooperative attitude at work;

- Respecting colleagues and partners;

3.2 Knowledge

- Having an understanding of the fundamentals of Marxism - Leninism; the revolutionary policies of the Vietnamese Communist Party; Ho Chi Minh ideology.
- Having basic knowledge of social sciences and humanities, international integration that is suitable for the major;
- Having a thorough grasp of basic scientific knowledge to meet the requirements for mastering fundamental and specialized courses;
- Mastering fundamental courses: plant physiology, plant biochemistry, forest measurement, forest plants, soil and plant nutrition, forest tree cultivars, project management, forestry extension, etc.;
- Mastering specialized courses: silviculture, afforestation, forest management, monitoring of forest resource developments, prevention of forest pests and diseases, forest investigation, forestry planning, forest fire prevention and fighting, environmental management, watershed management, forest protection, etc.;
- Having the ability to apply and develop professional knowledge and carrying on one's research and in-depth study at a higher level;
- Having the ability to manage scientific research and transfer technology in the field of forest resource management;
- Having an informatics certificate – level B and proficiently using specialized software such as SPSS, MapInfo, etc.;
- Having a TOEIC certificate (score 350 or equivalent).

3.3 Skills

- Having the ability to work independently and in groups;
- Having skills of communication, cooperation and working with the community;
- Having communications skills and using supporting facilities;
- Organizing and implementing educational activities/developing regulations and conventions on forest management and protection.
- Planning for forest protection
- Organizing and carrying out investigations
- Checking, supervising and handling violations of forest laws.

- Forest fire prevention and fighting and prevention of forest pests and diseases.
- Assessment of forest resource developments
- Exploitation supervision
- Having research skills in the fields of forest resource protection, silviculture, planning, investigation and social forestry.
- Having skills of labor organization and production management in forestry enterprises and production teams.
- Planning, training and transferring forest management technology.
- Having skills of summarizing, analyzing, evaluating, forecasting, planning and writing reports.

4. Positions and workplace

- Positions: Technical staff, managers and researchers in the field of forest resource management.
- Workplace:
 - + Agencies under the Ministry of Agriculture and Rural Development, management board of special use forests and protective forests, Forest Protection Department, Department of Forestry, Forest Protection Sub-Department, Sub-Department of Forestry, National Agriculture and Forestry Extension Center, Department of Agriculture and Rural Development, Division of Agriculture, Agriculture Extension Centers at provincial, district and commune levels, agro-forestry extension departments, forest protection administration and afforestation yards;
 - + Forestry enterprises, forest protection and development centers and wildlife rescue centers;
 - + Agroforestry Research Institutes: Forestry Research Institutes, Northern mountainous Agriculture and Forestry Science Institute, etc.;
 - + Educational and training institutions: Universities, Colleges and High Schools that provide training in forest resource management.
 - + Other institutions involved in the forestry major.

5. Candidates and subject combinations for admission

- High school graduates satisfying the requirements under the undergraduate admission regulations of the Ministry of Education and Training.

- The subject combinations for admission include the following combinations: Mathematics, Physics, Chemistry; Mathematics, Chemistry, Biology; Mathematics, Literature, Chemistry; Mathematics, Biology, Geography.

6. Knowledge that students need to accumulate

120 credits excluding physical education and 165 teaching periods of national defense education.

7. Training process, grading system and graduation conditions

The training process, grading system and graduation conditions follow the full-time undergraduate training regulations using the credit system, attached to Decision No. 43/2007/QĐ-BGD&ĐT and concretized by Decision No. 756/QĐ-ĐT dated August 21st, 2013 issued by the Rector of Thai Nguyen University of Agriculture and Forestry.

8. Curriculum

No.	Course title (in Vietnamese)	Course title (in English)	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)	Subject code
A	Kiến thức Đại cương	General Courses	48			
I	Các học phần bắt buộc	Compulsory Courses	38			
a)	<i>Lý luận chính trị</i>	<i>Political science</i>	10			
1	Những nguyên lý cơ bản của chủ nghĩa Mac – Lenin (Nguyên lý 1)	The Fundamentals of Marxism - Leninism (1)	2	30	0	MLP121
2	Những nguyên lý cơ bản của chủ nghĩa Mac – Lenin (Nguyên lý 2)	The Fundamentals of Marxism - Leninism (2)	3	45	0	MLP132
3	Tư tưởng Hồ Chí Minh	Ho Chi Minh Ideology	2	30	0	HCM121
4	Đường lối cách mạng của ĐCSVN	Revolutionary Policies of the Vietnamese Communist Party	3	45	0	VCP131
b)	<i>Ngoại ngữ, tin học, khoa học tự nhiên</i>	<i>Foreign Languages, Informatics, Natural Science</i>	28			
5	Hóa học	Chemistry	2	25	5	CHE121
6	Hóa phân tích	Analytical Chemistry	2	25	5	ACH121
7	Sinh học đại cương	General Biology	2	25	5	GBI121
8	Toán cao cấp	Mathematics	2	30	0	MAT121
9	Xác suất - Thống kê	Probability and Statistics	3	45	0	PST131
10	Tiếng Anh 1	English 1	3	45	0	ENG131
11	Tiếng Anh 2	English 2	3	45	0	ENG132
12	Tiếng Anh 3	English 3	4	60	0	ENG143
13	Tin học đại cương	General Informatics	3	15	60	GIN131
14	Xã hội học đại cương	General Sociology	2	30	0	GSO121
15	Nhà nước và pháp luật	State and Laws	2	30	0	SLA121
II	Các học phần tự chọn đại	Elective Courses (Choosing	10			

	cương (Chọn 10 TC)	10 credits)				
	PP tiếp cận khoa học	Scientific Approach Methodology	2	30	0	SAM121
16-21	Tiếng việt thực hành	Vietnamese in Use	2	15	15	PVL121
	Sinh thái môi trường	Environmental Ecology	2	30	0	EEC121
	Sinh học phân tử	Molecular Biology	2	30	0	MBI121
	Vật lý	Physics	2	30	0	PHY121
	Toán ứng dụng	Applied Mathematics	2	30	0	AMA121
	An toàn vệ sinh lao động	Occupational Safety and Health	2	30	0	WSH121
	Ô nhiễm Môi trường	Environmental Pollution	2	30	0	EPO121
	Địa lý kinh tế Việt Nam	Vietnam Economic Geography	2	30	0	VEG121
III	Giáo dục thể chất* (chọn đủ 3TC)	Physical Education* (Choosing 3 credits)	3			
17-19	Tay không, điền kinh, thể dục	Physical Exercise, Athletics, Physical Education	1	9	21	PHE111
	Bóng chuyền	Volleyball	1	9	21	PHE112
	Cầu lông	Badminton	1	9	21	
	Đá cầu	Shuttlecock Kicking	1	9	21	
	Võ	Kungfu	1	9	21	
	Bóng rổ	Basketball	1	9	21	
	Bóng đá	Football	1	9	21	PHE113
IV	Giáo dục quốc phòng*	National Defense Education*	165			
B	Kiến thức giáo dục chuyên nghiệp	Professional Courses				
I	Kiến thức cơ sở ngành	Fundamental Courses	20			
a)	Các học phần bắt buộc	Compulsory Courses	16			
23	Đo đạc	Forest Measurement	2	15	15	FME221
24	Khí tượng nông nghiệp	Agricultural Meteorology	2	30		AME221
25	Khoa học gỗ	Wood Science	2	26	4	WSC221
26	Đa dạng sinh học	Biodiversity	2	30		BDI221
27	Thực vật học	Botany	2	20	10	BOT221
28	Phương pháp thí nghiệm trong lâm nghiệp	Experimental Methodology in Forestry	2	24	6	EME 221
29	Sinh thái rừng	Forest Ecology	2	30		FEC231
30	Nguyên lý bảo tồn	Principles of Conservation	2	30		PPR231
b)	Các học phần tự chọn (Chọn 4 TC trong các học phần dưới đây)	Elective Courses (Choosing 3 credits of the following courses)	4			
31-32	Khai thác lâm sản	Forest Product Exploitation	2	30		FPE321
	Lâm nghiệp xã hội đại cương	General Social Forestry	2	30		SFO321
	Khoa học tài nguyên thiên nhiên	Natural Resources and Science	2	30		NRS221
	Tiếng la tinh	Latin Language	2	30		LLA221
II	Kiến thức ngành	Specialized Courses	33			
a)	Các học phần bắt buộc	Compulsory Courses	15			
33	Bệnh cây lâm nghiệp	Forest Pathology	2	24	6	FPA321
34	Cây rừng	Forest Plants	2	30		FPL221
35	Côn trùng lâm nghiệp	Forest Entomology	2	24	6	FEN321
36	Động vật rừng	Forest Zoology	2	30		FZO321
37	Quản lý & BV các loại rừng	Forest Management and Protection	2	30		FMP321

38	Kỹ thuật lâm sinh	Silviculture Techniques	3	45		STE331
39	Nghiệp vụ hành chính kiểm lâm	Administrative Operations in Forest Protection	2	30		FRP321
b)	<i>Các học phần tự chọn (Chọn 18 TC trong các học phần dưới đây)</i>	<i>Elective Courses (Choosing 18 credits of the following courses)</i>	18			
40-48	Điều tra rừng	Forest Inventory	2	24	6	FIN321
	Phân tích, đánh giá chính sách trong quản lý tài nguyên thiên nhiên	Analysis and Assessment of policies in Natural Resource Management	2	30		AEP 321
	Lâm sản ngoài gỗ	Non-timber Forest Products	2	30		NFP321
	Luật và chính sách lâm nghiệp	Forestry Laws and Policies	2	30		FPL321
	Quản lý lửa rừng	Forest fire Management	2	30		FFM321
	Quản lý lưu vực	Watershed Management	2	30		WMA321
	Quản lý môi trường	Environmental Management	2	30		EMG321
	Quy hoạch lâm nghiệp	Forest Planning	2	30		FOL321
	Trồng rừng	Afforestation	2	24	6	AF321
	Sản lượng rừng	Forest Production	2	30		FPR321
	Khuyến nông - khuyến lâm	Agroforestry Extension	2	30		AFE321
	Đánh giá tác động môi trường	Environmental Impact Assessment	2	30		EIA321
	Quản trị doanh nghiệp	Corporate Governance	2	30		EAD321
	Du lịch sinh thái	Ecotourism	2	30		ETO321
III	Kiến thức bổ trợ	Supplementary Courses	6			
49	Dịch vụ môi trường rừng	Forest Environmental Services	2	30		FES321
50	Kinh tế rừng	Forest Economics	2	30		FEC321
51	Ứng dụng CNTT trong QLTNR	Application of Information Technology in Forest Resource Management	2	15	15	IFM321
IV	Thực tập nghề nghiệp	Professional Internship	3			
52	TTNN1: Côn trùng - Bệnh cây lâm nghiệp	Professional Internship 1: Entomology and Pathology	1		15	FRM411
53	TTNN2: Cây rừng	Professional Internship 2: Forest Plants	1		15	FRM412
54	TTNN3: Nghiệp vụ hành chính kiểm lâm	Professional Internship 3: Administrative Operations in Forest Protection	1		15	FRM413
55	Thực tập tốt nghiệp	Graduation Internship	10		150	FRM 905
V	Rèn nghề	Vocational Training	5			
25	RN1. Sản xuất cây giống lâm nghiệp, trồng và chăm sóc rừng	Vocational training 1: Forest tree cultivar production, Afforestation and Forest care	3		30	SFM431
	RN2: Ứng dụng công nghệ thông tin giải đoán ảnh vệ tinh và biên tập bản đồ, theo dõi diễn biến tài nguyên rừng	Vocational training 2: Application of information technology for interpretation of satellite images, map editing and natural resource monitoring	2		45	SFM422
	Tổng cộng	Total	120	1446	444	

Notes:

- Physical education, national defense and security education and practice experience are not included in the curriculum.

- A credit = 15 teaching periods (theory) = 30 teaching periods (practice) = 60 teaching periods (professional internship) (equivalent to 1 week of field works)

9. Teaching plan

The courses are distributed by semester in 4 academic years as follows:

1. First year

* Semester 1

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Physical Education 1:	1	0	30
2	Chemistry	2	25	5
3	Fundamental of Marxism-Leninism (1)	2	30	
4	General Biology	2	25	5
5	English 1	3	45	
6	Vietnamese Language Practice	2	15	15
7	Advanced Mathematics 1	2	30	
8	General Sociology	2	30	
	Total	16	200	55

* Semester 2

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Physical Education 2: Volleyball	1	-	30
2	Analytical Chemistry	2	25	5
3	Political Economy and Scientific Socialism (2)	3	45	
4	Molecular Biology	2	30	
5	English 2	3	30	
6	Physics	2	30	
7	Probability and Statistics	3	45	
8	National Defense and Security Education (165 teaching periods = 5 weeks)			
	Total	16	205	35

2. Second year

* Semester 3

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Physical Education 3: Football	1	6	24
2	State and Laws	2	30	
3	Experimental Methods in Forestry	2	24	6

4	Scientific Approach Methods	2	30	
5	Environmental Ecology	2	30	
6	Botany	2	20	10
7	English 3	4	60	
8	Introduction to Informatics	3	15	30
	Total	18	215	70

*** Semester 4**

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Plant Pathology	2	24	6
2	Forest Entomology	2	24	6
3	Forest Measurement	2	15	15
4	Forest Zoology	2	30	
5	Agricultural Meteorology	2	30	
6	General Social Forestry	2	30	
7	Forest Ecology	2	30	
8	Field works 1: Entomology and Plant Pathology	1	-	15
	Total	15	183	42

3. Third year

*** Semester 5**

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Non-timber Forest Products	2	30	
2	Silviculture Techniques	3	45	
3	Biodiversity	2	30	
4	Forest Plants	2	30	
5	Forest Inventory	2	24	6
6	Afforestation	2	24	6
7	Forests Management and Protection	2	30	
8	Field works 2: Forest Plants	1	-	15
9	Vocational training 1: Forest tree cultivar production, Afforestation and Forest care	3	-	30
	Total	18	213	57

*** Semester 6**

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Revolutionary Policies of the Vietnamese Communist Party	3	45	

2	Forestry Laws and Policies	2	30	
3	Administrative Operations in Forest Protection	2	30	
4	Principle of Conservation	2	30	
5	Analysis and Assessment of policies in Natural Resource Management	2	30	
6	Forest Fire Management	2	30	
7	Forest Planning	2	30	
8	Vocational training 2: Application of information technology for interpretation of satellite images, map editing and natural resource monitoring	2	-	30
9	Field works 3: Administrative operations in forest protection	1	-	15
10	Application of Information Technology in Forest Resource Management	2	15	15
	Total	21	240	60

4. Fourth year

* Semester 7

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Forest Environmental Services	2	30	
2	Forest Product Exploitation	2	30	
3	Wood Science	2	26	4
4	Forest Economics	2	30	
5	Watershed Management	2	30	
6	Environmental Management	2	30	
7	Ho Chi Minh Ideology	2	30	
	Total	14	206	4

* Semester 8

No	Course title	Number of credits	Number of teaching periods (theory)	Number of teaching periods (practice)
1	Graduation Internship	10		150
	Total	10		150