

Curriculum

Master of Science Program in Forest Resource and Environmental Administration

Curriculum version 2026

KU
KASETSART
UNIVERSITY



FACULTY OF FORESTRY
KASETSART UNIVERSITY

Faculty of Forestry,
Kasetsart University

Last updated: March 23, 2026 |

Master of Science Program in Forest Resource and Environmental Administration

Course Title	Master of Science Program in Forest Resource and Environmental Administration
Name of the degree	Master of Science (Forest Resource and Environmental Administration) M.S. (Forest Resource and Environmental Administration)
Academic Institution	Faculty of Forestry, Kasetsart University

Program Learning Outcome (PLO)

PLO1

Develop approaches for forest and environmental resource management by integrating knowledge in forestry, environment, law, and digital technology to enhance management efficiency based on sustainability.

PLO2

Generate knowledge in forest and environmental resource management through systematic research processes in accordance with research ethics.

PLO3

Effectively communicate knowledge, concepts, and academic proposals in forest and environmental resource management to diverse stakeholders in a clear and context-appropriate manner.

PLO4

Demonstrate respect for others, work collaboratively and constructively with others, and pursue continuous self-development.



Program duration:

2 years



Language of instruction:

Thai and English

Consideration, Approval, and Publication of the Program



The program was reviewed by the Academic Committee of Kasetsart University at Meeting No. 11/2025 held on November 3, 2025.



The program was approved by the University Council of Kasetsart University at Meeting No. 11/2025 held on November 24, 2025.



The program will be published as a program that meets the standards of the Thailand Qualifications Framework for Higher Education (TQF: HED), 2022, in the academic year 2027.

Curriculum structure

Plan 1, Type A2

Total credit required: minimum 36 credits

◆ **Compulsory courses:** minimum 24 credits

01311597	Seminar Presentation and discussion on current interesting topics in forest resource and environmental administration at the master's degree level.	2 credits
01311511	Concepts of Forest Resources and Environment Definition and types of natural resources. Definition and components of the environment. Ecosystems and ecosystem services. Situation of forest and environmental resources in Thailand and globally. Economic, social, and cultural roles of forest and environmental resources. Roles of forest and environmental resources in climate change and adaptation. Impacts of forest and environmental resource problems on the economy and society. Contemporary environmental concepts. Systems analysis of forest resource and environmental. Case studies.	3 credits
01311512	Integrated Administration of Forest Resource and Environment Theories of development. Concepts of development-oriented administration. Processes of development administration. Principles and concepts of natural resource and environmental management. Organizational structures and roles in forest and environmental resource sectors. Principles of organizational administration in forest resource and environmental agencies. Forest and environmental governance. Public participation. Conflict management in forest and environmental resources. Analysis and planning for resource management. Case studies.	3 credits
01311521	Forest and Environmental Laws and Conventions Principles of law enforcement and law declaration processes. Laws related to in-country forest and environment. International conventions and agreements related to forest and environment. Forest certification and international trade.	3 credits
01311534	Digital Technology for Forest Resources and Environmental Administration Geo-information system for forest and environmental administration. Remote sensing. Global navigation satellite system. Geographic information system. Application of digital technology in forest and environmental administration. Drone and sensors, 3D technology. Artificial intelligence. Virtual reality. Augmented reality. Data visualization. Blockchain. Case studies.	3 credits
01311591	Research Methods in Forest Resource and Environmental Administration Research principles and methods in forest resource and environmental administration. Problem analysis for research topic identification, data collection for research planning. Identification of samples and techniques. Analysis, interpretation and discussion of research result, report writing for presentation and publication.	3 credits
01xxxxxx	Elective courses	7 credits
◆	Thesis: minimum 12 credits	
01311599	Thesis Research at the master's degree level and compile into a thesis.	12 credits

Elective courses

Students are required to choose at least 7 credits from the following courses.

01301582	Environmental Impact Assessment Principles and assessment of resource status and environmental systems. Concepts of development and ecological development projects, principles and methods of environmental impact assessment. Laws related to environmental impact assessment and environmental economics impact assessment. Mitigation and monitoring measures to environmental quality.	3 credits
01304516	Forest Certification Concepts and principles of forest certification. Protocols and processes in forest certification. Forest certification authorities. Forest certification in Thailand. Field trip required.	3 credits
01306564	Management of Urban Green Spaces Evolution of urban green spaces. Principles and management of urban green space planning. Administration and related organizations. Measures and research regarding urban green space management. Field trip required.	3 credits
01308534	Ecotourism Management Concepts and principles of ecotourism. Ecotourism components. Ecotourism site development and impact prevention. Interpretation and education for ecotourists. Community participation in ecotourism. Market management and brand development. Ecotourism planning and management in protected areas. Evaluation of ecotourism management. Case studies and lesson learnt of ecotourism management. Field trip required.	3 credits
01311513	Forest and Environmental Governance Concepts, definitions, components, principles and role of governance in forest resource and environmental administration. Laws and regulations related to forest and environmental governance. Framework for forest and environmental governance analysis. Process, techniques and tools in assessment and monitoring of forest and environmental governance. Case studies.	3 credits
01311522	Economics of Forest Resource and Environmental Administration Economic concepts and means in forest resource and environmental administration. Bio economy, circular economy and green economy. Economic appraisal in forestry and environmental-related projects. Assessment of payments for ecosystem service. Case studies.	3 credits
01311523	Forest Environmental Management Forest ecosystem and environmental condition and problems at local, regional, and global levels. Impacts of climate change and land use on forest resources. Pollution and waste in forest areas with treatment technologies. Environmental economics, ecosystem services, and carbon credit mechanisms. Environmental forest status assessment. Environmental impact assessment. Development of mitigation and monitoring measures. Integrated and participatory forest environmental management. Forest environmental management with sustainable development goals. Environmental management planning. Case studies.	3 credits
01311533	Forest Resources and Environment and Global Climate Change Overview of climate change science. Impacts of climate change on forests resources and environment. Role of forest ecology to climate change. National and international policy, planning and implementation for climate change mitigation and adaptation in forest sector. Forest carbon measurement and monitoring and their applications.	3 credits
01311535	Human Dimension of Forest Resource and Environmental Administration Development, concepts, and paradigms in forest resource and environmental management. Human dimension concepts and theories relevant to forest resource and environmental management. Social and cultural changes in relation to forest resource and environmental management. Tools and methodologies for studying human dimensions. Application of human dimension concepts to forest resource and environmental management. case studies.	3 credits
01311596	Selected Topics in Forest Resource and Environmental Administration Selected topics in forest resource and environmental administration at the master's degree level. Topics are subject to change each semester.	3 credits
01311598	Special Problems Study and research in forest resource and environmental administration at the master's degree level and compile into a written report.	1-3 credits

Study Plan

Year 1 First semester

01311511	Concepts of Forest Resources and Environment	3 credits
01311521	Forest and Environmental Laws and Conventions	3 credits
01311591	Research Methods in Forest Resource and Environmental Administration	3 credits
01311534	Digital Technology for Forest Resources and Environmental Administration	3 credits

Year 1 Second semester

01311512	Integrated Administration of Forest Resource and Environment	3 credits
01311597	Seminar	1 credit
	Elective courses	7 credits

Year 2 First semester

01311597	Seminar	1 credit
01311599	Thesis	6 credits

Year 2 Second semester

01311599	Thesis	6 credits
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Qualifications of Applicants

- 1 Applicants must hold a bachelor's degree or its equivalent.
- 2 Other requirements shall be in accordance with the regulations of the University.



Criteria for completion of studies according to the curriculum

- ✓ Complete all courses as specified in the program, with a cumulative grade point average (GPA) of not less than 3.00 on a 4.00 scale or its equivalent.
- ✓ Meet the English language proficiency requirements as prescribed by the Graduate School with the approval of the University Council.
- ✓ Submit the thesis and pass the final oral examination, thereby achieving the program learning outcomes in accordance with the Thailand Qualifications Framework for Graduate Education, as evaluated by an examination committee appointed by the Graduate School. The final oral examination shall be conducted as an open examination.
- ✓ The thesis or part of the thesis must be published or at least accepted for publication in the form of an article, innovation, invention, or other academic work that is accessible in accordance with the regulations of the University Council.
- ✓ Other requirements shall be in accordance with the regulations of the University.

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Integrate knowledge with practice to ensure development of sustainable forestry
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CONTACT US

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