Appendix 1: Module descriptions

Module name	**International forest development policy**
Module code	UWFMT11 M_ESS 2.18
Module coordinator	Dr. Sarah Burns sarah_lilian.burns@tu-dresden.de
Learning outcomes	Students will be familiar with the theoretical principles of international relations, multilateralism, and international development cooperation. They will be familiar with their practical manifestation in the political field of forestry development policy and cooperation. They are able to adopt an exploratory research approach and are familiar with the central international and national actors and organizations in the policy field. Students are able to use policy field analysis to critically describe, analyse and question complex constellations of international actors, international regulatory systems/institutions, and national specialist policies. Based on a research-oriented approach, students are able to grasp the diversity of international organizations in the policy field of international forest relations and forest development policy and to integrate this knowledge into their professional future.
Contents	Contents of the module are - bi- and multilateral theories of international relations and their applications with reference to forests, - Theories and practice of international and rural development policies related to forests, - Theory and practice of governmental, intergovernmental, and non- governmental international forest-related organizations in the context of forest cooperation, - Policy field analysis including analysis of forest-specific political problems, policy objectives, instruments, and implementation measures as well as networking with forest-relevant international organizations and political practitioners.
Teaching and learning methods	2 WTH seminar, 2 WTH traveling seminar, self-study.
Prerequisites for	No knowledge is required.

participation	
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry. It creates the prerequisites for the module Project planning and management in development cooperation. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, from which modules must be selected in accordance with Section 27 (3) of the examination regulations for the master's degree programme in Ecosystem Services.
Requirements for awarding credit points	The credit points are earned when the module examination has been passed. The module examination consists of a complex assignment of 40 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Forest utilization: materials, processes, and products**
Module code	UWFMT12
Module coordinator	Prof. Dr. Markus Rüggeberg markus.rueggeberg@tu-dresden.de
Learning outcomes	Students are able to identify selected wood species, of tropical origin, to explain structure-property relationships of plant tissues with effects on the practical use of wood and non-timber forest products (NTFPs) and to describe important wood species and non- timber products of tropical forests and to recognize their potential for sustainable forest management. They can evaluate the sustainability and further development of technological processes for the use and processing of wood and NTFPs. This includes harvesting, transportation, storage, sorting, and processing.
Contents	Contents of the module are - Anatomy and hierarchical structure of plants, especially wood; - Identification of tropical woods based on macroscopic anatomical characteristics; - General harvesting schemes, utilization, and product lines for natural and planted forests with harvesting, transport, positioning, sorting, and processing of wood; and - production systems for non-timber forest products with socio- economic and technical aspects, including post-harvest handling and interfaces to markets.
Teaching and learning methods	3 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	Knowledge of plant anatomy at Bachelor level is required. Preparatory literature: Schweingruber, F.H., Börner, A., Schulze, E.D. (2008): Atlas of woody plant stems. Springer Verlag Berlin, Heidelberg.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry.
Requirements for awarding credit points	The credit points are earned when the module examination has been passed. The module examination consists of a non-public oral examination lasting 40 minutes. The examination language is English.

Credit points and grades	5 credit points can be acquired through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Personality, leadership, and career development**	
Module code	UWFMT13	
Module coordinator	Dr. Eckhard Auch eckhard.auch@tu-dresden.de	
Learning outcomes	Students are able to assess and design appropriate management, advisory and decision-making tasks. They are able to reflect on their own personalities, set professional goals and develop strategies to achieve them. Students are able to make ethically sound judgments and are capable of social commitment. They are able to operate successfully in an international, intercultural, inter-, and transdisciplinary work context with a forest focus. They know comprehensive professional methods for making constructive decisions with highly diverse and conflicting interest groups in the context of natural resources.	
Contents	Contents of the module are - Personal development with reflection on your own personality as well as your own professional training and career goals, with a strategy for achieving these goals, - mission statement and strategy development as well as decision making, - Individual study planning to achieve goals, - Group dynamics, moderation, and counselling, - Social competence and basic elements of good professional and scientific practice, - Techniques for work and self-organization, leadership methods and discussion techniques, rhetoric and negotiation and presentation techniques.	
Teaching and learning methods	4 WTH seminar, self-study.	
Prerequisites for participation	No knowledge is required.	
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry.	
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a complex performance of 50 hours.	
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.	

Frequency of the module	The module is offered every academic year, starting in the winter semester	
Workload	The total workload is 150 hours.	
Duration of the module	The module comprises two semesters.	

Module name	**Forest ecology for silviculture and nature conservation**	
Module code	UWFMT14	
Module coordinator	Prof. Dr. Dominik Thom dominik.thom@tu-dresden.de	
Learning outcomes	Students are able to classify, analyse and evaluate subtropical and tropical forest ecosystems and their biodiversity. They have in-depth knowledge of how forest structure and tree species composition influence biotic communities and ecosystem services. They understand the forest dynamics of tropical forest ecosystems and how these could change under climate change. They are able to assess ecological and social risks for ecosystem services and the protection of biodiversity. Students are able to acquire new knowledge from primary literature and question it critically.	
Contents	Contents of the module are - Tropical primary and secondary forests - Concepts of sustainability - Ecosystem processes of forest ecosystems - Succession and stand development - Biodiversity and ecosystem services of tropical forests - Influence of climate change on tropical forests - Site and stand approach - Creation of silvicultural target formulations - Spatial and temporal scales of forest management - Basic features of segregated and integrative management systems - Scientific analysis of primary literature	
Teaching and learning methods	2 WTH lecture, 2 WTH seminars, self-study.	
Prerequisites for participation	Basic knowledge of forest ecosystems and biodiversity at bachelor's level is required.	
Applicability	The module is a compulsory module in the master's degree programme Tropical Forestry. It is a prerequisite for the modules Economics of forest re- sources, Silviculture in tropical forests, Forest landscape restoration and conservation.	
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a complex performance of 40 hours. The examination language is English.	

Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.	
Frequency of the module	The module is offered every winter semester.	
Workload	The total workload is 150 hours.	
Duration of the module	The module lasts one semester.	

Module name	**Monitoring forest growth using ground-based and remote sensing methods**	
Module code	UWFMT15 M_ESS 2.19	
Module coordinator	Prof. Dr. Marieke van der Maaten-Theunissen marieke.theunissen@tu-dresden.de	
Learning outcomes	Students are familiar with the functionality, handling, and application of important tree measurement instruments as well as the methodology for recording tree/forest growth. They are familiar with satellite systems, methods, and data products of remote sensing for the observation and quantification of forest growth. They are also familiar with forest growth, dendroecological and remote sensing data and have a basic understanding of how such data can be used to monitor forest ecosystems.	
Contents	The module covers methods from the fields of forest growth science, dendroecology and environmental remote sensing, which are used to monitor and quantify the condition of forests. This includes Instruments and methods for tree and stand surveying, tree ring analysis, derivation of primary production and biomass from remote sensing data, mapping of forest areas and the evaluation of data sets in R and Geographic Information Systems.	
Teaching and learning methods	2 WTH lecture, 2 WTH exercise, self-study.	
Prerequisites for participation	Basic knowledge of ecology and descriptive statistics at Bachelor level is required.	
Applicability	The module is a compulsory module in the master's degree programme Tropical Forestry. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, from which modules must be selected in accordance with Section 27 (3) of the Examination Regulations for the master's degree programme in Ecosystem Services.	
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a non-public oral examination lasting 20 minutes. The examination language is English.	
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.	

Frequency of the module	The module is offered every winter semester.	
Workload	The total workload is 150 hours.	
Duration of the module	The module lasts one semester.	

Module name	**Organizing sustainable forest management**
Module code	UWFMT21
Module coordinator	Dr. Eckhard Auch eckhard.auch@tu-dresden.de
Learning outcomes	Students are able to analyse forms of organization for forestry and related land uses in the Global South. They are able to design and conduct case-related analyses of forestry organizations and cooperations, to critically reflect on the results of case studies and comparative analyses and to derive conclusions for sustainable tropical forestry. Students are able to design and bring about changes in organizations, involve the members of the organization as actors in analysis and change processes, anticipate their interests, and translate them into beneficial measures. Furthermore, they can critically examine the interests of organizations with regard to the ethical standards of sustainable forestry.
Contents	Contents of the module are basic types of forestry organizations in the Global South and their cooperation, concepts of tree-based production and management systems in the Global South, organizational development and change, corporate decision-making, and strategy development as well as innovation and modernization in organizations. Corporate social responsibility and instruments for the comprehensive socio-economic analysis of forestry organizations are further contents of the module
Teaching and learning methods	1 WTH exercise, 2 WTH seminar, 3 WTH traveling seminar, self-study
Prerequisites for participation	Basic knowledge of forestry science at bachelor's level is required.
Applicability	The module is a compulsory module in the master’s degree programme Tropical Forestry
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a portfolio of 40 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination performance
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.

Duration of the module	The module lasts one semester.

Module name	**Economics of forest resources**
Module code	UWFMT22
Module coordinator	Prof. Dr. Peter Deegen peter.deegen@tu-dresen.de
Learning outcomes	Students understand the economic interrelationships of forestry and know how statements and statement systems come about. They will be familiar with the most important instruments for the economic analysis of forestry and will be able to apply them on a case-by-case basis when analysing new problems or their own problems that are not too complex.
Contents	Contents of the module are - Theory of action, in particular: Maximization principle, ageing principle, marginal principle, applied to forestry action problems, economics of silvicultural management of even-aged and uneven- aged pure and mixed stands, in particular: Investment models, stand greening, felling time and utilization rate, mixing proportions in forest plantations, - Economics of land use, in particular: Basic model of land allocation, allocation of land between agriculture and forestry, analysis of the change in land use with changes in product and factor prices, land use in closed, open and mixed economies, combined land use, such as agroforestry and the like, and - Economics of forest ecosystem services (ESS), in particular: Extension of the model of combined land use to ESS; methods of valuation of ESS and economic analysis of conflicts of use in the provision of ESS.
Teaching and learning methods	2 WTH lecture, 1 WTH exercise, 1 WTH seminar, self-study.
Prerequisites for participation	Competence to be acquired in the module Forest ecology for silviculture and nature conservation are required.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a written examination lasting 120 minutes. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module

	grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.
Accompanying literature	Buongiorno, J., Gilles, K. J. (2003): Decision Methods for Forest Re- source Management. Academic Press. Cooter, R., Ulen, T. (2016): Law & Economics. Chapter 4: An economic theory of property. Pearson, Addision-Wesley. Deegen, P., Hostettler, M., Navarro Guillermo A. (2011): The Faust- mann model as a model for a forestry of prices. European Journal of Forest Research 130: 353-368. Deegen, P., Halbritter, A. (2018): The pure market allocation of land between forestry and agriculture. Forest Policy and Economics 97: 122-131. Klemperer, D. W., Bullard S. H., Grado, S. C., Measells, M. K., Straka, T. J. (2023): Forest Resource Economics and Finance. Stephen F. Aus- tin State University Press.

Module name	**Managing ecosystem services in forestry**
Module code	UWFMT23
Module coordinator	Prof. Dr. Andreas Bitter andreas.bitter@tu-dresden.de
Learning outcomes	Students are familiar with the theories and models of multifunctional forestry, innovative inventory methods and operational production and business models for various forest ecosystem services. Students will be able to analyse forest enterprises with regard to natural features such as ecosystem functions and stocking, production potential and economic performance and to create operational plans based on this.
Contents	Contents of the module are theories and models of multifunctional forestry and forest ecosystem services, innovative methods of inventorying biodiversity, ecosystem functions and stocking. Further contents are in particular the GIS-supported integration of various inventory results, their analysis and area-related visualization in the form of thematic maps. In addition, the module includes production in forestry operations for different operating systems on the basis of stand and forest development types as well as presentations on operational management based on business models for forest ecosystem services with special attention to product formation and marketing.
Teaching and learning methods	3 WTH lecture, 1 WTH exercise, self-study.
Prerequisites for participation	Basic knowledge of silviculture and forest economics at bachelor's level is required.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a written examination lasting 90 minutes. The examination language is English.
Credit points and grades	The module is worth 5 credit points. The module grade corresponds to the grade of the examination paper.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Quantitative methods in analysing socio-ecological systems**
Module code	UWFMT24
Module coordinator	Prof. Dr. Uta Berger uta.berger@tu-dresden.de
Learning outcomes	Students are able to apply basic and common statistical methods in forest sciences. They are able to use these methods competently for the planning and implementation of forestry research. Students are familiar with conducting statistical analyses with the statistical software R. They can create data tables, manage data sets, and write scripts for data visualization and analysis in R. They have detailed, comprehensive knowledge of basic statistical methods such as linear models and generalized linear models as well as qualitative and quantitative methods for analysing socio-economic data. Students will also be able to select suitable statistical methods for a given data set, conduct analyses in R independently, interpret the results correctly and present all statistical methods and results used in oral and written form to a specialist audience.
Contents	Contents of the module are central statistical procedures, basic techniques of experimental design, data collection, data processing and data analysis as well as mathematical basics of forest biometrics and applied statistics, statistical decision problems and test procedures. Further contents of the module are the development of statistical models in the statistical development environment R/RStudio, the management and analysis of data as well as the solving of tasks and the critical discussion of the results. The module also covers current, discipline-specific approaches such as spatial statistics, time series analyses and quantitative network analyses.
Teaching and learning methods	1 WTH lecture, 3 WTH exercise, self-study.
Prerequisites for participation	Basic knowledge of biometrics and applied statistics at bachelor's level is required. Preparatory literature: Gotelli, N.J., Ellison, A.M. (2013): A primer of ecological statistics. Sinauer. Hector, A. (2021): The New Statistics with R: An Introduction for Biologists. Oxford University Press.
Applicability	The module is a compulsory module in the master's degree programme Tropical Forestry. It creates the prerequisites for the

	module agent- based modelling for socio-ecological systems.
Requirements for awarding credit points	The credit points are earned when the module examination has been passed. The module examination consists of a complex assignment of 35 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Silviculture in tropical forests**
Module code	UWFMT25 M_ESS 2.22
Module coordinator	Prof. Dr. Dominik Thom dominik.thom@tu-dresden.de
Learning outcomes	Students know important management systems of tropical forests. They are able to apply methods of sustainable planning, implementation, monitoring, and control for long-term forest management. They are able to develop silvicultural strategies for multifunctional forest management. Furthermore, they are able to assess the risk of disturbance to forests and design measures for dealing with disturbances. Students are able to acquire new knowledge from primary literature and integrate it into management concepts.
Contents	Contents of the module are - Plantation management - Natural forest management - Special management systems of tropical forests - Rejuvenation methods - Conservation and enhancement of biodiversity and ecosystem services - Disturbance management - Adaptation concepts to climate change - Scientific analysis of primary literature
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	The master's degree programme in Tropical Forestry requires the skills acquired in the module Forest Ecology for Silviculture and Nature Conservation.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, of which modules must be selected in accordance with Section 27 (3) of the examination regulations for the master's degree programme in Ecosystem Services.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a complex performance of 40 hours. The examination language is English.

Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Research design and planning in intercultural contexts**
Module code	UWFMT31
Module coordinator	Dr. Tatiane Micheletti tatiane.micheletti@tu-dresden.de
Learning outcomes	Students will be familiar with the key features of scientific theories and approaches to research design in the natural, technical, and social sciences. They will be able to critically reflect on schools of thought and evaluate their strengths and appropriateness in relation to research objectives. They know how to generate and analyse data to answer research questions. Students are able to identify research questions and objectives, design their own research project, plan it operationally and defend it in front of a specialist audience. They know the basic standards of scientific quality assurance and publishing and are able to constructively assess research plans
Contents	Contents of the module are - Philosophy of science, - Research designs in natural, technical, and social sciences, - Possibilities of generating and analysing data with literature analysis, - Adaptation and use of literature databases, - Standards, development, and evaluation of research plans in the field of forests worldwide, - creation of tables and graphics in the research plan as well as - good scientific practice and quality assurance in science.
Teaching and learning methods	4 WTH seminar, self-study.
Prerequisites for participation	Basic knowledge of scientific work at bachelor's level is required.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a portfolio lasting 60 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.

Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Project planning and management in development cooperation**
Module code	UWFMT32
Module coordinator	Dr. Carsten Schusser Carsten.Schusser@tu-dresden.de
Learning outcomes	Students will be able to identify and analyse development-relevant problems for sustainable forest and land use. Students will be able to develop solutions for the identified problems with objectives and measures in the form of concrete project proposals. Students know methods for identifying and specifying problems, are familiar with preliminary studies for planning development projects, project tenders, project implementation concepts, their management tools and methods for monitoring and evaluation. Students have strengthened their social, personal and communication skills through project management, teamwork and presentation and are able to record, design, implement, control, monitor, evaluate and adapt project tenders and project plans.
Contents	The module covers methods for identifying problems in development cooperation in the context of sustainable use of forests and natural resources. Based on the problems identified, the module also covers concepts for planning development projects and the instruments used to implement and manage them. The module also covers project control, project management, project monitoring and project evaluation.
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	The competences to be acquired in the module: International Forest Development Policy are required.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a complex performance of 50 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Society, community and individual: concepts and methods**
Module code	UWFMT16
Module coordinator	Prof. Dr. Lukas Giessen lukas.giessen@tu-dresden.de
Learning outcomes	Students will be familiar with the basic principles of social science theory formation using analytical concepts. They know the basic methods of social empirical research for data collection and analysis. Based on a research-oriented approach, students are able to record and analyse individual units of social systems related to forests worldwide, such as societies, interest groups, communities, organizations, institutions, households, and individuals. They are able to apply these in a differentiated way in the context of tropical forestry and land use. Students are able to apply social science survey and analysis methods to specific issues of tropical forestry and land use.
Contents	Contents of the module are - Basic theories and selected concepts of management-oriented social sciences with reference to tropical forestry and land use, - Survey methods of empirical social research, in particular interviews, written surveys, group discussions, observation, participant observation, content analysis, experiment, and secondary analyses as well as - application of selected methods to issues of tropical forestry and land use.
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	Knowledge of social studies or social studies at basic A-level is required.
Applicability	The module is one of eight elective modules in the Supplementary Qualifications module group in the master's degree programme in Tropical Forestry, of which two modules must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination has a duration of 30 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.

Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Urban Forestry**
Module code	UWFMT17
Module coordinator	Dr. Ulrich Pietzarka ulrich.pietzarka@tu-dresden.de
Learning outcomes	Students know the importance of trees and woody plants in urban and peri-urban landscapes and the problems of their integration at various levels. They will be able to plan urban tree management in tropical and other regions and to control and evaluate it during the implementation phase. This enables them to plan green spaces in tropical cities and to monitor their sustainable management.
Contents	Contents of the module are - Planning, administration and management of woody plants and trees in urban, peri-urban and street habitats in tropical regions, - Inventory procedures, planning methods, governance, budgeting, and implementation of urban and peri-urban tree management at all levels, from the village to the mega-city, - Services and products such as environmental, cultural, social, and socio-hygienic effects, - Production and use of tree products, biological characteristics of tree species for their use as roadside trees, - Management of urban forests, parks, gardens and individual trees with tree care, methods of tree evaluation, - diagnosis of diseases, climbers, and epiphytes, - Methods and equipment for determining damage, wound reactions, crown-root interactions, wood growth, individual life history and evaluation of the tree, - genetics, safety aspects, legal requirements, and pruning, as well as - Aspects of science transfer, environmental education, and local networks.
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	Knowledge of ecology, tree biology and management at bachelor's level is required.
Applicability	The module is one of eight elective modules in the Supplementary Qualifications module group in the master's

	degree programme in Tropical Forestry, of which two modules must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a written examination lasting 120 minutes. A presentation lasting 15 minutes is a prerequisite for the examination. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.
Literature accompanying the module	Chin, W.Y. (2003): Tropical trees and shrubs - a selection for urban plantings. Sun Tree Publishing, Singapore. Cox, S. (2011): Urban trees - a practical management guide. Crowood Press, Marlborough. Draper, B.D., Richards, P.A. (2009): Dictionary for managing trees in urban environments. CSRIO Publishing, Melbourne. Harris, R.W. et al. (2015): Arboriculture. Pearson Education, New Jersey. Konijnendijk, C.C. et al. (2005): Urban forests and trees. Springer Verlag Berlin, Heidelberg. Miller, R.W. (2015): Urban Forestry. Prentice-Hall, London. Roloff, A. (ed.) (2016): Urban Tree Management for the sustainable development of green cities. Wiley-Blackwell, Chichester, UK. Roloff, A. (2004): Trees - Phenomena of adaptation and optimization. Ecomed, Landsberg. Trowbridge, P.J., Bassuk, N.L. (2004): Trees in the urban landscape. Wiley-VCH, New Jersey.

Module name	**Dendroecology**
Module code	UWFMT26 UWFMF39 UW-M-GI-23
Module coordinator	Dr. Ernst van der Maaten ernst.vandermaaten@tu-dresden.de
Learning outcomes	Students have a comprehensive knowledge of the potential of dendroecological methods and are able to independently plan and conduct a dendroecological research project. Furthermore, students can present their research results in English and can compare and discuss their results with relevant literature, including English- language literature.
Contents	The module covers topics on the fundamental analysis of environmental influences on the growth and vitality of trees using different tree ring parameters as well as current questions on the influence of climate change on forest ecosystems. Further focal points are the planning and implementation of a research project, literature research and time series analysis.
Teaching and learning methods	1.5 WTH lecture, 2.5 WTH exercise, self-study. In accordance with Section 6 (8) of the study regulations, the module requires a minimum of 5 participants.
Prerequisites for participation	Knowledge of statistics, in particular trend analysis: correlations at bachelor's level is required. In addition, basic knowledge in the use of the statistical software R/RStudio is desirable. Preparatory literature: Speer, J.H. (2012): Fundamentals of Tree-Ring Research. The University of Arizona Press, Tucson, 333 p. Online introductions, for example DataCamp.com
Applicability	The module is one of eight elective modules in the Supplementary Qualifications module group in the master's degree programme in Tropical Forestry, two of which must be selected. The module is one of 30 elective modules in the master's degree programme in Forestry, of which modules amounting to 50 credit points must be selected. The module is one of 12 elective modules in the elective area of complementary Computer Science and Geosciences in the master's degree programme in Geoinformatics, from which modules worth

	15 credit points must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a complex assignment of 25 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Climate Change**
Module code	UWFMT27
Module coordinator	Prof. Dr. Matthias Mauder matthias.mauder@tu-dresden.de
Learning outcomes	Students have a systemic understanding of climate change through the integrative consideration of climatic processes. They will have knowledge of complex interrelationships and a better understanding of conflicts in climatic issues relating to natural resources.
Contents	Contents of the module are - Climate change and its interactions with atmospheric trace substances and vegetation, - The demands of global change on all natural resources, in particular soil, water, and air, for example the dependence of the water supply and its use on natural spatial and economic conditions, - Clarification of climate change using limited resources against the backdrop of a changing world, - Earth-atmosphere system with regard to climate change as an essential component of global change, - The state of climate research, in particular data, methods and results including interactions with the hydrosphere and biosphere, and - Different climate factors as an example of the development of the paleoclimate and recent climate change.
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	Knowledge of the basics of meteorology and hydrology at bachelor level as well as knowledge of mathematics, physics and chemistry at basic baccalaureate level are required.
Applicability	The module is one of eight elective modules in the Supplementary Qualifications module group in the master's degree programme in Tropical Forestry, of which two modules must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a public oral examination lasting 20 minutes and a written examination lasting 90 minutes. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module

	grade is calculated from the unweighted average of the grades of the two examinations.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Forest sites and catchment hydrology**
Module code	UWFMT28
Module coordinator	Prof. Dr. Natalie Orlowski natalie.orlowski@tu-dresden.de
Learning outcomes	Students are able to understand and analyse basic factors and processes in the plant-soil system in the context of watersheds. Furthermore, they will be able to investigate land use conflicts concerning soil and water resources in forested catchment areas. They are able to apply methods for the simulation and evaluation of scenarios such as climate and spatial distribution of land use, which serve as a basis for interdisciplinary concepts for the sustainable management of water catchment areas. Students are able to communicate, argue and present specialist content in an understandable way.
Contents	The module includes the role of forests in watersheds and water cycles as well as their ecosystem services related to soil properties such as water retention. Current and future challenges in watershed management, the relationship between water supply and food security, climate change, integrated land use planning and management, trade-offs and synergies between forestry and water management, especially in regions with low/unevenly distributed precipitation and high evaporation, as well as concepts of site-appropriate and adapted land uses such as agroforestry are further contents of the module.
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, 1 day excursion, self-study. In accordance with Section 6 (8) of the study regulations, a minimum of 5 participants is required to complete the module.
Prerequisites for participation	Knowledge from the fields of forest sciences, especially soil science, biogeochemistry, hydrology, climatology at bachelor's level is required.
Applicability	The module is one of eight elective modules in the module group Supplementary Qualifications in the master's degree programme in Tropical Forestry, two of which must be selected.
Requirements for awarding credit points	The credit points are earned when the module examination is passed. The module examination consists of a complex performance of 50 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.

Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**International water issues**
Module code	UWFMT29 MHSE 10
Module coordinator	Prof. Dr. Peter Krebs peter.krebs@tu-dresden.de
Learning outcomes	Students are familiar with the water situation in other countries and are able to reflect on their own experiences. They will have a global overview of the water situation and will be able to better categorize what they have learned and make decisions.
Contents	Contents of the module are selected water-specific issues of the home countries as well as general aspects of the water situation, i.e. hydrological regime, climate situation including the expected climate change, supply situation with drinking or industrial water, the wastewater situation or the management of floods or water-related natural hazards, for example landslides and tsunamis. Further contents of the module are relevant projects or organizations in different regions as well as the examination of these with reference to individual experiences.
Teaching and learning methods	3 WTH seminar, self-study.
Prerequisites for participation	Basic knowledge of hydro sciences, knowledge of regional water management and hydrology at bachelor's level is required.
Applicability	The module is one of eight elective modules of the module group Supplementary Qualifications in the master's degree programme in Tropical Forestry, of which two modules must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a combined term paper of 20 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Forest organization internship**
Module code	UWFMT01
Module coordinator	Dr. Carsten Schusser Carsten.Schusser@tu-dresden.de
Learning outcomes	Students are familiar with professional practice in a relevant occupational field as well as the work culture, processes and tasks in an organization related to forest sciences or forests worldwide. They are able to apply the knowledge and skills they have acquired during their studies in a work environment related to the programme, recognize practical problems and contribute to practical professional solutions. They are able to recognize the possibilities and difficulties of the practical feasibility of the methodological skills they have acquired during their studies. They can assess themselves in terms of their professional strengths and weaknesses and contribute to working teams in an intercultural and professionally ethical manner. Furthermore, they can actively participate in working groups and give reasons for procedures and results and provide constructive feedback to colleagues. Students have consolidated their social skills and teamwork skills and strengthened their personality.
Contents	The content of the module is practical or conceptual work in a working environment related to the degree programme with reference to forests worldwide, preferably in the tropics or sub-tropics. The placement is freely selectable.
Teaching and learning methods	At least 3 weeks of internship blocked in time, self-study.
Prerequisites for participation	No knowledge is required.
Applicability	The module is one of eight elective modules in the module group: supplementary qualifications in the master's degree programme in Tropical Forestry, two of which must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of an ungraded portfolio of 30 hours. The examination language is English
Credit points and grades	5 credit points can be earned through the module. The module is assessed as "passed" or "failed" in accordance with § 15 paragraph 1 and 5 PO.

Frequency of the module	The module is offered every semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Open study project**
Module code	UWFMT02
Module coordinator	Dr. Carsten Schusser Carsten.Schusser@tu-dresden.de
Learning outcomes	With reference to forests worldwide, students are able to identify projects, recognize and define subject-related project goals and tasks, plan and design the content of a project and carry it out independently. Based on theory, students are able to develop solutions using a comprehensive interdisciplinary approach. They are able to conduct project conception, planning, and implementation, including the presentation of results based on a project task. They are able to present and critically discuss results in written and oral form. Students have strengthened their personality and have deepened their social and communication skills through project-specific teamwork. They can work effectively and efficiently in a team using all their strengths and compensate for weaknesses.
Contents	The content of the module is the application of the fundamentals and methods of forestry science to work on a scientific issue in a professionally relevant context. The specific content is based on a current task with practical or research relevance.
Teaching and learning methods	2 WTH project, self-study.
Prerequisites for participation	Forest science basics at Bachelor level are required.
Applicability	The module is one of eight elective modules of the module group Supplementary Qualifications in the master's degree programme in Tropical Forestry, of which two modules must be selected.
Requirements for awarding credit points	Credit points are earned when the module examination has been passed. The module examination consists of a complex assignment of 100 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination
Frequency of the module	The module is offered every semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**International processes for the protection and sustainable management of forests**
Module code	UWFMT33 UWFMF05 M_ESS 2.23
Module coordinator	Dr. Sarah Burns sarah_lilian.burns@tu-dresden.de
Learning outcomes	Students know and understand political science concepts, actors, processes, and instruments with forest policy relevance at different political levels. They are familiar with the complexity of forest and environmental policy processes in multi-level systems. They are also able to critically interpret data on the state and development of forest resources.
Contents	The module covers initiatives for the sustainable management of forest resources and the protection of forests at international, pan-European and EU level. The module also focuses on forest regimes and their relationship to other environmental regimes such as climate, water and deserts as well as political science explanatory approaches, for example multilateral negotiation, multi-level governance and public-private partnerships to explain horizontal and vertical interdependencies of national environmental policy in questions of forest use and forest protection and their consequences.
Teaching and learning methods	3 WTH lecture, 1 WTH seminar, self-study.
Prerequisites for participation	Basic knowledge of policy formulation and implementation at national level at bachelor's level is required. Preparatory literature: Krott, M. (2005). Forest policy analysis. Springer Science & Business Me- dia.
Applicability	The module is a compulsory module in the master's degree programme in Tropical Forestry in the Governance profile. The module is a compulsory module in the master's degree programme in Forest Sciences. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, of which modules must be selected in accordance with Section 27 (3) of the examination regulations for the master's degree programme in Ecosystem Services.
Requirements for awarding	Credit points are earned when the module examination has been

credit points	passed. The module examination consists of a written examination lasting 180 minutes. The examination language is English.
Credit points and grades	5 credit points can be acquired through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	Forest governance in multi-level contexts
Module code	UWFMT34 M_ESS 2.3
Module coordinator	Prof. Dr. Lukas Giessen lukas.giessen@tu-dresden.de
Learning outcomes	Students are familiar with theoretical and practical development aspects of forest governance as forest-related management at the socio-political level. They are able to apply these at different scales from global to local. They know the exemplary application of forest governance in current research from local, regional, national to international, regional, and global contexts. Students are thus able to adopt a critical, methodologically- reflective research attitude towards current forest governance research at different scales and to critically analyse their interaction. They are able to critically question scientific methods and to further develop them in the context of scientific and practical development issues and to develop their own designs.
Contents	Contents of the module are - Journal Club based on a critical, methodically reflective, research- oriented attitude, - Critical reflection and discussion of current forest governance research and its methodology, - Analysis of selected international global and regional forest policy agreements and policy initiatives, - analyses of selected national forest policy agreements and policy initiatives, and - analyses of selected sub-national and local forest policy agreements and policy initiatives.
Teaching and learning methods	4 WTH seminar, self-study.
Prerequisites for participation	In the master's degree programme in Tropical Forestry, basic knowledge of forest policy and social science fundamentals at bachelor's level is required.
Applicability	The module is a compulsory module in the master's degree programme Tropical Forestry in the Governance profile. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, of which modules according to § 27 (3) of the examination regulations for the master's degree programme in Ecosystem Services.

Requirements for awarding credit points	Credit points are earned when the module examination has been passed. The module examination consists of a term paper of 60 hours. The examination language is English.
Credit points and grades	5 credit points can be acquired through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Conflict management and communication**
Module code	UWFMT35 M_ESS 2.21
Module coordinator	Dr. Jude Ndzifon Kimengsi jude_ndzifon.kimengsi@tu-dresden.de
Learning outcomes	Students will be able to identify and assess land use-based conflicts and analyse them on the basis of theory. They will be able to select and adapt methods and instruments for dealing with them and apply them in practice. They are familiar with the social and communication science principles for dealing with conflicts and are able to apply ethical standards in their application. Students are able to manage communication processes between conflicting groups of actors.
Contents	Contents of the module are - Theories and concepts of verbal and non-verbal communication, - Communication as social behaviour, - Conflicts as part of social systems, - Conflict typologies and conflict diagnosis, - conflict management and transformation, - Examples and analysis of land-use related conflicts, - strategies for mediation and moderation and Participation in the context of rural development.
Teaching and learning methods	4 WTH seminar, self-study.
Prerequisites for participation	Knowledge of social sciences at bachelor's level is required.
Applicability	In the master's degree programme in Tropical Forestry, the module is one of seven elective modules in the Governance profile, of which two modules must be selected, and one of seven elective modules in the Management profile, of which four modules must be selected. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, of which modules must be selected in accordance with Section 27 (3) of the examination regulations for the master's degree programme in Ecosystem Services.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a complex assignment of 40

	hours. The examination language is English.
Credit points and grades	5 credit points can be acquired through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Participatory innovation in forest bio-economy value chains**
Module code	UWFMT36
Module coordinator	Prof. Dr. Thomas Purfürst thomas.purfuerst@tu-dresden.de
Learning outcomes	Students are able to analyse and design participatory innovation processes, conduct wood-based bioeconomy, value chain and cluster analyses, identify and promote social and technical innovations including digitalization and actively involve stakeholders in analysis and change processes. They are able to critically reflect on the results of analyses, produce tailored solutions and extract concepts and formulate theories from corresponding case studies and comparative analyses. Students are able to shape the transfer of results into beneficial participatory action and to lead critical discussions on interests in innovations of organizations with regard to ethical standards.
Contents	Contents of the module are products and services from trees and their production, aggregation and processing, national and international policy and green economic principles, analysis methods for markets, value chains, economic clusters, concepts and tools for participatory innovation, development of new products, business models, improvement of the value chain as well as consulting methods for small farmers.
Teaching and learning methods	4 WTH seminar, self-study.
Prerequisites for participation	General knowledge of forestry science at Bachelor level is required.
Applicability	In the master's degree programme in Tropical Forestry, the module is one of seven elective modules in the Governance profile, of which two modules must be selected, and one of seven elective modules in the Management profile, of which four modules must be selected.
Requirements for awarding credit points	Credit points are earned when the module examination has been passed. The module examination consists of a portfolio of 60 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.

Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Forest landscape restoration and conservation**
Module code	UWFMT37
Module coordinator	Dr. Carsten Schusser Carsten.Schusser@tu-dresden.de
Learning outcomes	Students are able to recognize the causes and effects of deforestation and forest landscape degradation and are familiar with management approaches and methods for the protection, conservation, and rehabilitation of forests worldwide. They are able to develop and implement management measures to rehabilitate and restore degraded forest landscapes.
Contents	The module covers the causes and effects of forest landscape degradation and the management measures available to rehabilitate and restore degraded forest landscapes. This includes case studies to illustrate their implementation, such as Payment for Ecosystem Services, protected area management, and the concept of Forest and Landscape Restoration (FLR).
Teaching and learning methods	1 WTH lecture, 1.5 WTH exercise, 1.5 WTH seminar, self-study.
Prerequisites for participation	The competences to be acquired in the module Forest ecology for silviculture and nature conservation are required.
Applicability	The module is one of seven elective modules in the master's degree programme in Tropical Forestry in the Governance profile, of which two modules must be selected, and one of seven elective modules in the Management profile, of which four modules must be selected.
Requirements for awarding credit points	Credit points are earned when the module examination has been passed. The module examination consists of a complex performance of 40 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module comprises one semester.

Module name	**Global change ecology**
Module code	UWFMT38
Module coordinator	Prof. Dr. Bernhard Schuldt bernhard.schuldt@tu-dresden.de
Learning outcomes	Students know the causes and consequences of anthropogenic environmental changes and the resulting disturbances of the complex relationships of organisms with their abiotic and biotic environment. They are able to survey and understand the effects of climatic changes, substance inputs or changes in land use at different levels, from organisms, populations, and biotic communities to ecosystems.
Contents	Contents of the module are range shifts, tree mortality, loss of biodiversity, biogeography, climate change, land use change and intensification, ecosystem functions, disturbance ecology and material flows.
Teaching and learning methods	2 WTH lecture, 2 WTH seminar, self-study.
Prerequisites for participation	Basic biological knowledge at Bachelor level is required.
Applicability	The module is one of seven elective modules in the master's degree programme in Tropical Forestry in the Governance profile, of which two modules must be selected, and one of seven elective modules in the Management profile, of which four modules must be selected.
Requirements for awarding credit points	Credit points are earned when the module examination has been passed. The module examination consists of a written examination lasting 120 minutes. A presentation lasting 15 minutes is a prerequisite for the examination. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination paper.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 working hours.
Duration of the module	The module lasts one semester.
Literature accompanying	Coomes D., Burslem D., Simonson, W. (eds.) (2014): Forests and global change. Cambridge University Press.

the module	Girona, M.M., Morin, H., Gauthier, S., Bergeron, Y. (eds.) (2023): Boreal forests in the face of climate change. Springer Verlag, Cham. Hauck, M., Leuschner, C., Homeier, J. (2019): Climate change and vegetation - A global overview. Springer Spektrum Berlin, Heidelberg. Schulze, E.- D., Beck, E., Buchmann, N., Clemens, S., Müller-Hohenstein, K., Scherer- Lorenzen, M. (eds.) (2019): Plant Ecology. 2nd edition, Sprin- ger Verlag Berlin, Heidelberg. Wohlgemuth, T., Jentsch, A., Seidel, R. (eds.) (2022): Disturbance Ecology. Springer Verlag, Cham.

Module name	International Wildlife Management
Module code	UWFMT39
Module coordinator	Prof. Dr. Dr. Sven Herzog sven.herzog@tu-dresden.de
Learning outcomes	Students know and understand the basics of managing wildlife populations in tropical and subtropical regions, including the concepts of species conservation through consumptive and non-consumptive use, the evaluation of species and habitats, damage prevention and the management of human-wildlife conflicts and nature conservation conflicts. Students are able to make well-founded decisions in the context of the management, conservation and development of wildlife populations and their habitats and to develop their own sustainable wildlife management concepts at municipal or company level. Students are able to evaluate the resource "wildlife" in "community based natural resource management" and implement its sustainable use. They are able to participate responsibly in the development of wildlife management concepts at higher levels, for example within the framework of national nature conservation, hunting, or fishing legislation. Students know the basics of moderation, mediation and conflict management and can apply these in relevant situations.
Contents	Contents of the module are: - Fundamentals of the management of wildlife populations in temperate, tropical, and subtropical regions, - Possibilities of conservation through consumptive and non- consumptive use and valuation of wildlife, - Importance of wildlife in the context of community-based natural resource management, - important international organizations and intergovernmental agreements on species conservation, - Identification and solutions to human-wildlife conflicts and conservation conflicts, - the role of international NGOs as part of the problem or part of the solution and - case studies from different regions.
Teaching and learning methods	1 WTH lecture, 3 WTH seminar, self-study.
Prerequisites for	Basic ecological knowledge at Bachelor level is required.

participation	
Applicability	The module is one of seven elective modules in the master's degree programme in Tropical Forestry in the Governance profile, of which two modules must be selected, and one of seven elective modules in the Management profile, of which four modules must be selected.
Requirements for awarding credit points	Credit points are earned when the module examination has been passed. The module examination consists of a complex performance of 40 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Agent-based modelling for socio-ecological systems**
Module code	UWFMT40 M_ESS 2.20
Module coordinator	Prof. Dr. Uta Berger uta.berger@tu-dresden.de
Learning outcomes	Students will be able to use agent-based models to answer their own research questions on the behaviour and dynamics of socio-ecological systems in a changing environment and under different management scenarios. They are able to evaluate the suitability and quality of such models for the respective application. Students can implement and analyse their own models in the NetLogo development environment, conduct simulation experiments, and evaluate them qualitatively and quantitatively with the help of statistical analyses, for example with the help of the R statistical software.
Contents	Contents of the module are in particular individual- or agent-based simulation models (ABM) to describe the variability, behaviour and interactions of autonomous agents, for example of plants, animals, humans and organisms in their respective environment as well as the adaptation to changing conditions, evolutionary change and social learning. Further contents are the investigation of complex socio- ecological systems, basic principles of agent-based modelling, successful models for the investigation of forest ecosystems and the implementation and testing of own models. In addition, the use and application of the NetLogo software platforms for model development, analysis techniques and applications for exploring the dynamics of socio-ecological systems, for example the effects of environmental and management scenarios on forest structure or resource availability or the effectiveness of nature conservation measures on the development of endangered animal populations are further contents of the module.
Teaching and learning methods	1 WTH lecture, 3 WTH exercise, self-study.
Prerequisites for participation	Basic knowledge of writing computer scripts and small programs at basic bachelor level as well as basic knowledge of quantitative, computer-assisted analyses of socio-ecological systems at bachelor level are required. The competencies to be acquired in the module Quantitative methods in analysing socio-ecological systems are also required. Preparatory literature: Railsback, S.F., Grimm, V. (2019): Agent-Based and Individual-Based

	Modelling. Princeton University Press.
Applicability	In the master's degree programme in Tropical Forestry, the module is one of seven elective modules in the Governance profile, of which two modules must be selected, and one of seven elective modules in the Management profile, of which four modules must be selected. The module is one of 37 elective modules in the master's degree programme in Ecosystem Services, of which modules must be selected in accordance with Section 27 (3) of the examination regulations for the master's degree programme in Ecosystem Services.
Requirements for awarding credit points	The credit points are earned if the module examination is passed. The module examination consists of a complex performance of 40 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every winter semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Module name	**Global Forestry Field Course**
Module code	UWFMT41
Module coordinator	Dr. Carsten Schusser Carsten.Schusser@tu-dresden.des
Learning outcomes	Students know the most important current issues in forestry and the most important social and political influences on the management of natural resources by different groups of people in specific environmental contexts. They can conduct field work under difficult conditions and adapt plans to the actual circumstances. They can also process relevant information, communicate clearly, precisely, and confidently in writing, and assess the usefulness of methods and the reliability of the data collected as well as the significance of the results obtained. Students will be able to argue persuasively and think critically within a particular academic discipline, demonstrate values of scholarship, especially inquiry, reflection, integrity, open-mindedness, evidence-based thinking and collegiality, and address problems by collecting, analysing and evaluating appropriate qualitative and quantitative information and using it creatively.
Contents	The contents of the module are an international stay and experience of the local conditions in a middle- or low-income country and topics relating to sustainable global forestry. Further content includes a range of topics on locations, natural and managed vegetation areas and forest conservation and sustainability issues. The module also includes meetings and discussions with local actors, topic-specific group work and a small research project, including data collection, data analysis and reporting under supervision.
Teaching and learning methods	2 weeks project blocked at the beginning of the semester, self-study. Participation in the module is limited to 20 participants in accordance with Section 6 (7) of the study regulations.
Prerequisites for participation	Knowledge of various data collection approaches, the associated data collection instruments and their respective limitations, the application of theories, concepts, and analytical frameworks under locally specific conditions in the field as well as knowledge of planning fieldwork under difficult conditions at bachelor's level are required.
Applicability	In the master's degree in Tropical Forestry, the module is one of seven elective modules in the Governance profile, of which two modules must be selected, and one of seven elective modules in

	the Management profile, of which four must be selected.
Requirements for awarding credit points	Credit points are awarded if the module examination is passed. The module examination consists of a combined term paper of 60 hours. The examination language is English.
Credit points and grades	5 credit points can be earned through the module. The module grade corresponds to the grade of the examination.
Frequency of the module	The module is offered every summer semester.
Workload	The total workload is 150 hours.
Duration of the module	The module lasts one semester.

Appendix 2: Study schedule

The type and scope of the programme in WTH as well as the required work, their type, scope, and structure can be found in the module descriptions.

Module code	Module name	1st semester	2nd semester	3rd semester (M)	4th semester	CP
		V/Ü/S/TS/P	V/Ü/S/TS/P	V/Ü/S/TS/P	V/Ü/S/TS/P	
Modules of the compulsory area						
UWFMT11	International forest development policy	0/0/2/2/0 PL				5
UWFMT12	Forest utilization: materials, processes, and products	3/0/2/0/0 PL				5
UWFMT13	Personality, leadership, and career development	0/0/3/0/0 (3 PL)	0/0/1/0/0 PL (2 CP)			5
UWFMT14	Forest ecology for silviculture and nature conservation	2/0/2/0/0 PL				5
UWFMT15	Monitoring forest growth using ground-based and remote sensing methods	2/2/0/0/0/0 PL				5
UWFMT21	Organizing sustainable forest management		0/1/2/3/0 PL			5
UWFMT22	Economics of forest resources		2/1/1/0/0 PL			5
UWFMT23	Managing ecosystem services in forestry		3/1/0/0/0 PL			5
UWFMT24	Quantitative methods in analysing socio-ecological systems		1/3/0/0/0 PL			5
UWFMT25	Silviculture in tropical forests		2/0/2/0/0 PL			5
UWFMT31	Research design and planning in intercultural contexts			0/0/4/0/0 PL		5
UWFMT32	Project planning and management in development cooperation			2/0/2/0/0 PL		5

Module code	Module name	1st semester	2nd semester	3rd semester (M)	4th semester	CP
		V/Ü/S/TS/P	V/Ü/S/TS/P	V/Ü/S/TS/P	V/Ü/S/TS/P	
Modules of the elective area						
Module group - Supplementary qualifications (two of which must be selected)						
UWFMT16	Society, community and individual: concepts and methods	2/0/2/0/0 PL				5
UWFMT17	Urban Forestry	2/0/2/0/0 PVL, PL				5
UWFMT26	Dendroecology		1,5/2,5/0/0/0 PL			5
UWFMT27	Climate Change		2/0/2/0/0 2xPL			5
UWFMT28	Forest Sites and Catchment Hydrology		2/0/2/0/0 1 day field trip PL			5
UWFMT29	International water issues		0/0/3/0/0 PL			5
UWFMT01	Forest organization internship		0/0/0/0/0 3 weeks internship* PL			5
UWFMT02	Open study project		0/0/0/0/2 PL			5
Module group - Profiles						
Governance profile - compulsory modules						
UWFMT33	International processes for the protection and sustainable management of forests			3/0/1/0/0 PL		5
UWFMT34	Forest governance in multi-level contexts			0/0/4/0/0 PL		5
Governance profile - elective modules (two of which must be chosen)						

UWFMT35	Conflict management and communication			0/0/4/0/0 PL		5
UWFMT36	Participatory innovation in forest bio-economy value chains			0/0/4/0/0 PL		5
UWFMT37	Forest landscape restoration and conservation			1/1,5/1,5/0/0 PL		5
UWFMT38	Global change ecology			2/0/2/0/0 PVL, PL		5
UWFMT39	International Wildlife Management			1/0/3/0/0 PL		5
UWFMT40	Agent-based modelling for socio-ecological systems			1/3/0/0/0 PL		5
UWFMT41	Global Forestry Field Course		0/0/0/0/0 2 weeks project* PL			5

Module code	Module name	1st semester	2nd semester	3rd semester (M)	4th semester	CP
		V/Ü/S/TS/P	V/Ü/S/TS/P	V/Ü/S/TS/P	V/Ü/S/TS/P	
Management profile - elective modules (four of which must be selected)						
UWFMT35	Conflict management and communication			0/0/4/0/0 PL		5
UWFMT36	Participatory innovation in forest bio-economy value chains			0/0/4/0/0 PL		5
UWFMT37	Forest landscape restoration and conservation			1/1,5/1,5/0/0 PL		5
UWFMT38	Global change ecology			2/0/2/0/0 PVL, PL		5
UWFMT39	International Wildlife Management			1/0/3/0/0 PL		5
UWFMT40	Agent-based modelling for socio-ecological systems			1/3/0/0/0 PL		5
UWFMT41	Global Forestry Field Course		0/0/0/0/0 2 weeks project* PL			5
					Final thesis Colloquium	25 5
CP		28	32	30	30	120

WTH Weekly Teaching Hours
V Lecture
Ü Exercise
S Seminar
TS Travelling Seminar
P Project

M Mobility window
E Excursion
CP ECTS Credit Points
PL Examination
PVL Pre-exam requirement
* Blocked at the beginning of the semester