

Directory of Modules

**zu der Prüfungs- und Studienordnung für
den Master-Studiengang "Sustainable Forest
and Nature Management" (SUFONAMA)
(Amtliche Mitteilungen I 36/2012 S. 1891)**

Modules

| | |
|--|------|
| M.Forst.1512: International forest policy and economics..... | 5992 |
| M.Forst.1513: Monitoring of forest resources..... | 5994 |
| M.Forst.1523: Biometrical research methods..... | 5996 |
| M.Forst.1600: Forest management under different climatic conditions..... | 5997 |
| M.Forst.1601: Bioclimatology and global change..... | 5998 |
| M.Forst.1606 (SUF): Forestry in Germany..... | 5999 |
| M.Forst.1607: Biodiversity, NTFP's and wildlife management..... | 6001 |
| M.Forst.1609: Remote sensing image processing with open source software..... | 6003 |
| M.SUFONAMA.1: Contemporary temperate forest and nature management..... | 6004 |
| M.SUFONAMA.2: Location specific knowledge in forest and nature management..... | 6006 |
| M.SUFONAMA.3: Joint summer module..... | 6008 |
| M.SUFONAMA.4: Research planning..... | 6010 |

Index by areas of study

1) Sustainable Forest and Nature Management (SUFONAMA)

a) Erstes Studienjahr in Göttingen

Wird das erste Studienjahr in Göttingen studiert, sind nachfolgende Module im Umfang von insgesamt 60 C erfolgreich zu absolvieren.

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| M.Forst.1512: International forest policy and economics (6 C, 4 SWS)..... | 5992 |
| M.Forst.1513: Monitoring of forest resources (6 C, 4 SWS)..... | 5994 |
| M.Forst.1523: Biometrical research methods (6 C, 4 SWS)..... | 5996 |
| M.Forst.1600: Forest management under different climatic conditions (6 C, 4 SWS)..... | 5997 |
| M.Forst.1606 (SUF): Forestry in Germany (10 C, 7 SWS)..... | 5999 |
| M.Forst.1609: Remote sensing image processing with open source software (6 C, 4 SWS)..... | 6003 |
| M.SUFONAMA.1: Contemporary temperate forest and nature management (5 C)..... | 6004 |
| M.SUFONAMA.2: Location specific knowledge in forest and nature management (7,5 C)..... | 6006 |
| M.SUFONAMA.3: Joint summer module (7,5 C, 6 SWS)..... | 6008 |

b) Zweites Studienjahr in Göttingen

Studierende, die zum zweiten Studienjahr an die Universität Göttingen kommen, müssen folgende Module im Umfang von insgesamt 30 C sowie die Masterarbeit erfolgreich absolvieren:

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| M.Forst.1513: Monitoring of forest resources (6 C, 4 SWS)..... | 5994 |
| M.Forst.1600: Forest management under different climatic conditions (6 C, 4 SWS)..... | 5997 |
| M.Forst.1601: Bioclimatology and global change (6 C, 4 SWS)..... | 5998 |
| M.Forst.1607: Biodiversity, NTFP's and wildlife management (6 C, 4 SWS)..... | 6001 |
| M.SUFONAMA.4: Research planning (6 C)..... | 6010 |

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| Georg-August-Universität Göttingen Module M.Forst.1512: International forest policy and economics <i>English title: International Forest Policy and Economics</i> | | 6 C 4 WLH |
| Learning outcome, core skills: Global environmental and forest policy: The objective is that students get basic knowledge of both the key policies related to forests and the application of the policy analysis on such issues. Students acquire comprehension about global forest related policy processes and factual knowledge about forest actors affecting the policy on a global level. The seminar combines a lead-in to global policy theory and its translation in practical, empirical knowledge about actors and processes of high importance in forestry. The different instruments for international policy formulation and implementation are discussed using case studies. International forest economics: The lecture is split in two main areas: 'International Wood Markets' and 'International Environmental and Forest Conservation'. The first part deals with the international trade with wood and wood products. International markets and the consequences of protectionism are analysed. Furthermore, aspects of international wood marketing are shown. In the second part, international environmental problems are described and possibilities as well as constraints for international co-operation are discussed. Finally, relations between environmental conservation and economic development are analysed. | | C/Weekly lecture hours in total: Attendance time: 56 h Self-study time: 124 h |
| Course: Global environmental and forest policy (Seminar) | | 2 WLH |
| Examination: Written exam (60 Minuten) Examination requirements: <ul style="list-style-type: none"> • Knowledge about political theories on forest and environmental policies • Application of the policy analysis on forest and environmental policies | | 3 C |
| Course: International forest economics (Lecture) | | 2 WLH |
| Examination: Written exam (60 Minuten) Examination requirements: <ul style="list-style-type: none"> • Knowledge about international wood markets, international trade with wood, wood products, aspects of international wood marketing and the consequences of protectionism. • Knowledge about international environmental problems and economic approaches towards their solution as well as knowledge about the relations between forest conservation and economic development. | | 3 C |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Dr. Christiane Hubo | |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] | |

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| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: |
| Maximum number of students: not limited | |

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| <p>Georg-August-Universität Göttingen</p> <p>Module M.Forst.1513: Monitoring of forest resources</p> <p><i>English title: Monitoring of Forest Resources</i></p> | <p>6 C 4 WLH</p> |
| <p>Learning outcome, core skills:</p> <p>Familiarize the students with the range of methods and techniques applied to forest monitoring in the preparation, planning, implementation and analysis phase. Objective is that the students are eventually in the position to carry out their own monitoring projects, and that they have the criteria to judge the quality of monitoring projects in general. Focus is on the target-oriented planning and the definition of the most appropriate sampling design and plot design that guarantees the generation of high-quality information for the decision makers in forestry.</p> | <p>C/Weekly lecture hours in total:</p> <p>Attendance time: 56 h Self-study time: 124 h</p> |
| <p>Course: Monitoring of forest resources (Exercise, Lecture)</p> <p><i>Contents:</i></p> <p>Forest monitoring is a forestry discipline that aims at the comprehensive and objective characterization of the forests as a production system and/or as an ecological system in a defined geographic area, in terms of status quo and changes. Forest inventories are the core element of monitoring and they generate data and information required by foresters, forest politicians and forest researchers to support decision making.</p> <p>The course module "Monitoring of forest resources" intends to familiarize the students with the range of methods and techniques applied to forest inventories in the preparation, planning, implementation and analysis phase. Objective is that the students are eventually in the position to carry out their own monitoring projects of forests and related resources, and that they know the criteria to judge the quality of monitoring projects in general. Focus is on the target-oriented planning and the definition of the most appropriate sampling design and plot design that guarantees the generation of high-quality information for the decision makers in forestry. That includes comprehensive presentation of statistical sampling. Examples of small and large area inventories and monitoring are presented and critically analysed. The important remote sensing applications for forest monitoring are not dealt with in detail in this module, as this topic is covered in other modules; but the relevance of integrated inventories (combining field sampling and remote sensing) is addressed. The development of forest inventories towards integrated "landscape inventories", "multi-resource inventories", "tree inventories" is also addressed of this course.</p> <p>Prerequisites: Sound basis in "Forest mensuration" and basic statistics.</p> | <p>4 WLH</p> |
| <p>Examination: Written exam (120 minutes)</p> | |
| <p>Examination requirements:</p> <p>Target-oriented planning and the definition of the most appropriate sampling design and plot design that guarantees the generation of high-quality information for decision makers in forestry and related fields. Introductory knowledge about remote sensing imagery (aerial photographs and satellite imagery) as one of the data sources employed in forest inventories. The development of forest inventories towards integrated "landscape inventories", "multi-resource inventories", "tree inventories". The students</p> | |

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| should be in the position to plan and carry out their own inventory projects, and that they have the criteria to judge the quality of inventory projects of others. | |
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| Admission requirements: none | Recommended previous knowledge: none |
| Language: English | Person responsible for module: Prof. Dr. Christoph Kleinn |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: |
| Maximum number of students: not limited | |

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| Georg-August-Universität Göttingen | | 6 C 4 WLH |
| Module M.Forst.1523: Biometrical research methods | | |
| Learning outcome, core skills: Understanding and application of basic techniques of descriptive and confirmative statistics, as well as basic experimental designs and sampling techniques. Analysis of experimental data sets by an appropriate statistical programme package (at present: Statistica). Skills in describing and estimating forest stand parameters, forest structure and tree shape, and modelling of forest growth and development. | | C/Weekly lecture hours in total: Attendance time: 56 h Self-study time: 124 h |
| Courses: | | |
| 1. Biometric data analysis and experimental design (Exercise, Lecture) | | 2 WLH |
| 2. Forest dynamics (Exercise, Lecture) | | 2 WLH |
| Examination: PC based written exam (120 minutes) | | |
| Examination requirements: Understanding and application of basic techniques of descriptive and confirmative statistics, as well as basic experimental designs and sampling techniques. Analysis of experimental data sets by an appropriate statistical programme package. Quantitative methods to describe forest density, forest structure and tree morphology, modelling tree growth, calculating sustainable harvests for even-aged and continuous cover forests and the biological role of insects in forest ecosystems. | | |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Prof. Dr. Joachim Saborowski | |
| Course frequency: jedes Sommersemester | Duration: 1 Semester[s] | |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: | |
| Maximum number of students: 30 | | |

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| Georg-August-Universität Göttingen Module M.Forst.1600: Forest management under different climatic conditions <i>English title: Forest Management under Different Climatic Conditions</i> | 6 C 4 WLH |
| Learning outcome, core skills: The course imparts knowledge about the sustainable management of forest ecosystems. Based on some fundamentals of forest ecology such as the impact of competitive interactions between trees, options of stand management are presented. Mixed stands and their management are of special importance. The course will provide information on how to analyze forest stands and how to derive appropriate silvicultural treatments in order to achieve the goals set by a given forest owner. Examples from temperate and tropical forest ecosystems will be given. An excursion illustrates the concept of continuous-cover-forestry for multiple uses which is presently the most important approach in Central European silviculture. | C/Weekly lecture hours in total: Attendance time: 56 h Self-study time: 124 h |
| Courses: 1. Forest Ecosystem management (Lecture) 2. Management of Tropical and subtropical forests (Lecture) 3. Continuous cover Forestry for multiple uses (Excursion) | 2 WLH 1 WLH 1 WLH |
| Examination: Written exam (90 minutes) | |
| Examination requirements: Knowledge of silvicultural measures such as tending, thinning and final harvest systems and understanding how these measures impact ecological and physiological processes (tree competition, biomass partitioning, etc.). Fundamentals of the Close-to-nature forestry approach. | |
| Admission requirements: none | Recommended previous knowledge: Basics in tree physiology and soil science |
| Language: English | Person responsible for module: Prof. Dr. Christian Ammer |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: |
| Maximum number of students: not limited | |

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| Georg-August-Universität Göttingen Module M.Forst.1601: Bioclimatology and global change <i>English title: Bioclimatology and global change</i> | | 6 C 4 WLH |
| Learning outcome, core skills: Scientific basis of climate and climate change, trace gas budgets of soils and whole ecosystems and the potential to sequester carbon and nitrogen in managed and unmanaged terrestrial ecosystems. | | C/Weekly lecture hours in total: Attendance time: 56 h Self-study time: 124 h |
| Course: Bioclimatology and global change (Lecture) <i>Contents:</i> The module "Bioclimatology and Global Change" will introduce the students to the global climate system and its interaction with the biosphere. A lecture course will focus on the scientific basis of climate and climate change covering basic physical and chemical processes governing the climate system, climate zones, modelling as well as global and regional climate phenomena with a focus on tropical climates. A seminar course will highlight trace gas budgets of soils and whole ecosystems and their potential to sequester carbon and nitrogen in managed and unmanaged terrestrial ecosystems and their vulnerability to climate change. Using journal literature the students will work out oral presentations concerning current research topics concerning the global climate system and its interaction with the biosphere. | | 4 WLH |
| Examination: Written exam (90 minutes) and oral presentation (ca. 20 minutes) | | |
| Examination requirements: Understanding the most relevant processes at the biosphere-atmosphere interface and of biogeochemical cycles. Being able to find, read, evaluate, and present scientific literature related to Global Change. | | |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Prof. Dr. Alexander Knohl | |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] | |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: | |
| Maximum number of students: not limited | | |

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| Georg-August-Universität Göttingen Module M.Forst.1606 (SUF): Forestry in Germany <i>English title: Forestry in Germany</i> | 10 C 7 WLH |
| Learning outcome, core skills: Course objectives: Basic understanding of the history, recent developments and perspectives in the forestry sector and related industries in Germany Course contents: Important aspects of German Forestry are introduced to foreign students interested in the forest management as practised in Germany as well as the wood-processing industry. Contents are forest management, silviculture, forest utilisation, labour science and process technology, forest economics, tree improvement and genetics, forest inventory and remote sensing (forest management inventories in Germany, the German National Forest Inventory, applications of remote sensing in forestry planning in Germany). Teaching and learning methods: Several field trips are intended to give a more detailed overview of i) Gene conservation and forest tree breeding, ii) Wood processing and wood Biology, iii) Forest development and processing technology, iv) Management of community forests, v) Silviculture of major tree species in Germany, vi) Road construction and maintenance, harvesting of timber and other forest operations and vii) Forest assessment and forest planning. Competences acquired: Based on concrete examples the student will get a basic understanding of various aspects of forestry in Germany | C/Weekly lecture hours in total: Attendance time: 98 h Self-study time: 202 h |
| Course: Forestry in Germany (Seminar, Excursion) | 4 WLH |
| Examination: Oral presentation (ca. 15 minutes) with written outline (max. 15 pages) | 6 C |
| Course: Forestry in Germany+ (Excursion) | 3 WLH |
| Examination: Oral presentation (ca. 10 minutes) | 4 C |
| Examination requirements: Important aspects of German Forestry as well as of the wood-processing industry. Forest management, silviculture, forest utilisation, labour science and process technology, forest economics, tree improvement and genetics, forest inventory and remote sensing (forest management inventories in Germany, the German National Forest Inventory, applications of remote sensing in forestry planning in Germany). | |
| Admission requirements: none | Recommended previous knowledge: none |
| Language: English | Person responsible for module: Prof. Dr. Reiner Finkeldey |
| Course frequency: jedes Sommersemester | Duration: 1 Semester[s] |
| Number of repeat examinations permitted: | Recommended semester: |

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| cf. examination regulations | |
| Maximum number of students: not limited | |

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| Georg-August-Universität Göttingen Module M.Forst.1607: Biodiversity, NTFP's and wildlife management <i>English title: Biodiversity, NTFP's and wildlife management</i> | 6 C 4 WLH |
| <p>Learning outcome, core skills:</p> <p>Course objectives: Non-timber forest products (NTFPs) are important sources of income and nutrition in many regions. While the harvesting of these products is commonly based on traditional knowledge, a systematic approach to a sustainable management is often not in place. Moreover the use of NTFPs is often in conflict with other forest use (e.g. timber extraction, protected areas) or extraction of NTFPs exceeds sustainable levels. A rigorous ecological / economic assessment of the resource thus represents a first important step towards the understanding and development of sustainable management systems. A wide range of NTFPs is introduced that are relevant in different regions of the world. In the second part of this module, we will discuss recent topics in international forest conservation.</p> <p>Course contents: The taxonomy, ecology, and economic and cultural importance of major NTFPs are described. Different assessment and monitoring approaches are presented and discussed.</p> <p>The course covers the basic concepts of wildlife ecology and conservation, including habitat requirements, population dynamics, and predator-prey relationships. Commonly-used methods for estimating wildlife-habitat relationships and population parameters will be explained through practical exercises. Examples from the published literature will then serve to illustrate the use of these basic concepts and method for the sustainable management of wildlife resources. These examples will include case studies dealing with population estimation, setting harvesting quote, mitigating human-wildlife conflicts, and identifying priority areas for habitat conservation. The presentation of different nature conservation strategies and nature reserve systems in Europe and Non-European foreign countries qualify and enlarge the knowledge of nature conservation. The contents comprises topics of assessment of biodiversity, international categories of protected areas and assessment of conservation status, conservation problems and priorities in the temperate and boreal forests and in tropical forests as well, hot spots, deforestation, selective logging, rehabilitation of exploited forests, poaching, national parks, ecotourism, conservation problems in grasslands, hunting tourism, economic use of game resources, conservation problems of islands and exotic species.</p> <p>Teaching and learning methods: Lectures; paper presentations by students on specific topics;</p> <p>Competences acquired: The students are familiar with a wide range of NTFPs and wildlife and have a good command of the relevant assessment and monitoring techniques.</p> | <p>C/Weekly lecture hours in total:</p> <p>Attendance time: 56 h Self-study time: 124 h</p> |
| <p>Courses:</p> <p>1. Non timber forest products and biodiversity conservation (Exercise, Lecture)</p> <p>2. Wildlife management (Exercise, Lecture)</p> | <p>2 WLH</p> <p>2 WLH</p> |
| <p>Examination: Oral presentation (ca. 25 minutes) and oral exam (ca. 10 minutes)</p> | |

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| Examination requirements: Familiarity with a wide range of NTFPs and wildlife; good command of the relevant assessment and monitoring techniques. | | |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Prof. Dr. Niko Balkenhol | |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] | |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: | |
| Maximum number of students: 30 | | |

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| Georg-August-Universität Göttingen Module M.Forst.1609: Remote sensing image processing with open source software <i>English title: Remote Sensing Image Processing with Open Source Software</i> | | 6 C 4 WLH |
| Learning outcome, core skills: This combined lecture and lab makes the student familiar with principles of digital image processing and GIS integration, with a focus on applications in forestry and ecology. The software GRASS is used which is freely available as open source software. Students are encouraged to bring their own notebook computers, if available. | | C/Weekly lecture hours in total: Attendance time: 56 h Self-study time: 124 h |
| Course: Remote sensing image processing with open source software (Exercise, Lecture) <i>Contents:</i> Notions of remote sensing and digital imagery are briefly addressed. General characteristics of open source software are presented. The software GRASS is introduced and being used for typical tasks of digital image processing of remote sensing imagery, such as image enhancement, geometric corrections, cloud masking, 3D visualization, vector to raster transformation, and eventually image classification. If teaching progress allows, case studies and the integration of sampling and image interpretation are presented and discussed. | | 4 WLH |
| Examination: Oral exam (ca. 15 minutes) and practical exam (ca. 15 minutes) | | |
| Examination requirements: The students should give evidence that they know the application-oriented technical bases of remote sensing and the possibilities and limitations of remote sensing when applied to problems of forest management and conservation. They shall also prove that they have acquired sufficient insight and skills in using the software of the lecture so that they are able to solve basic image processing problems and they should give evidence that they can systematically approach larger problems. | | |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Prof. Dr. Christoph Kleinn | |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] | |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: | |
| Maximum number of students: not limited | | |

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| <p>Georg-August-Universität Göttingen</p> <p>Module M.SUFONAMA.1: Contemporary temperate forest and nature management</p> <p><i>English title: Contemporary Temperate Forest and Nature Management</i></p> | <p>5 C</p> |
| <p>Learning outcome, core skills:</p> <p>Course objectives: This course focuses on enabling participants' ability to apply scientific knowledge and reasoning to critically assess and discuss popular discourses on topics in the global policy debate within a selected topic of relevance to forest and nature management. The topic may vary from year to year; currently the course focuses on the relationships between climate change and management strategies - from the impact of climate change on forest and nature health and productivity to the subsequent related impacts on management strategies.</p> <p>Course contents: The first part of the course emphasises the biophysical and economic impacts of climate change on forests and nature in temperate countries. Central themes are changes in forest and nature cover and composition, stocks and growth of timber and non-timber forest products, and associated economic impacts. The second part of the course emphasises the forest and nature related impacts on management strategies, with particular attention to the complex production and conservation issues and the selection of adaptation and mitigation strategies.</p> <p>Teaching and learning methods: The course is entirely based on interactions in virtual space. Each theme is structured as a standard format e-module: (i) students study provided topic literature and complete a self-test multiple-choice exercise; texts and problems are continuously discussed online with module responsible faculty, (ii) students online discuss exercises with each other, facilitated by course responsible faculty and specially invited resource persons.</p> <p>Examination: Students are assessed based on their participation. Each multiple-choice test and online discussion is assessed and students awarded a percentage mark; their final mark is determined by the sum of percentages across the entire course, internal examiner.</p> <p>Competencies acquired: (i) Knowledge about climate change, forest and nature development relationships, (ii) ability to critically assess and discuss discourses and evidence in this area, (iii) ability to assess how science is used in policy debates, and (iv) ability and experience in interacting and discussing in professional forums.</p> <p>Online course</p> | <p>C/Weekly lecture hours in total:</p> <p>Attendance time: 0 h Self-study time: 150 h</p> |
| <p>Course: Contemporary temperate forest and nature management (Course)</p> | |
| <p>Examination: Term paper (max. 10 pages)</p> <p>Examination prerequisites:</p> <p>80% of points from online diskussion</p> | |
| <p>Examination requirements:</p> <p>(i) Knowledge about climate change, forest and nature development relationships, (ii) ability to critically assess and discuss discourses and evidence in this area, (iii) ability</p> | |

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| to assess how science is used in policy debates, and (iv) ability and experience in interacting and discussing in professional forums. | |
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| Admission requirements: none | Recommended previous knowledge: none |
| Language: English | Person responsible for module: Prof. Dr. Alexander Knohl |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: |
| Maximum number of students: not limited | |

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| <p>Georg-August-Universität Göttingen</p> <p>Module M.SUFONAMA.2: Location specific knowledge in forest and nature management</p> <p><i>English title: Location Specific Knowledge in Forest and Nature Management</i></p> | <p>7,5 C</p> |
| <p>Learning outcome, core skills:</p> <p>Course objectives: The aim is to impart a thorough understanding of the importance of field work preparation. This will be achieved through acquisition of in-depth factual location specific knowledge, building on theoretical knowledge obtained in other courses, relevant to temperate forest and nature management issues and development of practical skills with emphasis on (i) ability to collect, analyse and evaluate appropriate qualitative and quantitative information, and combining this with (ii) choice of appropriate research tools in order to plan high quality field work.</p> <p>Course contents: The course is a preparatory course for the Joint Summer Module. The course includes training in locating and assessing location specific literature; conducting critical online discussions as part of project preparation; preparing and analysing empirically based project proposals; selecting appropriate data collection instruments; finalising a fieldwork project proposal.</p> <p>Teaching and learning methods: Teaching is done through internet based e-modules. Each module contains well- defined learning objectives, literature and exercises, including multiple-choice self-tests and mediated online discussions. Students will work in inter-institutional virtual groups to arrive at project proposals that will form the basis for field work in the Joint Summer Module.</p> <p>Examination: Final mark made up of assessment of project proposal (50%) and completion of multiple-choice tests and online discussion participation in e-modules (50%).</p> <p>Competences acquired: In-depth location specific factual knowledge; ability to collect, analyse and evaluation qualitative and quantitative information; ability to select and design relevant data collection instruments; ability to design coherent research project proposal; ability to reflect on risks and ethics in relation to data collection in developing countries.</p> <p>Online course</p> | <p>C/Weekly lecture hours in total:</p> <p>Attendance time: 0 h</p> <p>Self-study time: 225 h</p> |
| <p>Course: Location specific knowledge in forest and nature management (Course)</p> | |
| <p>Examination: Term paper (project proposal; max. 10 pages)</p> <p>Examination prerequisites:</p> <p>50% of points from written tests and online discussion participation in e-modules</p> | |
| <p>Examination requirements:</p> <p>In-depth location specific factual knowledge; ability to collect, analyse and evaluation qualitative and quantitative information; ability to select and design relevant data collection instruments; ability to design coherent research project proposal; ability to reflect on risks and ethics in relation to data collection in developing countries.</p> | |

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| Admission requirements: none | Recommended previous knowledge: none |
| Language: English | Person responsible for module: Prof. Dr. Alexander Knohl |
| Course frequency: jedes Sommersemester | Duration: 1 Semester[s] |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: |
| Maximum number of students: not limited | |

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| Georg-August-Universität Göttingen Module M.SUFONAMA.3: Joint summer module <i>English title: Joint Summer Module</i> | | 7,5 C (Anteil SK: 3 C) 6 WLH |
| Learning outcome, core skills: Course objectives: (i) To visit and observe a range of field sites of diverse forest and nature structure, land use and management practices; (ii) to meet local managers and administration; (iii) to meet local interest groups and users; iv) to participate in group discussions about the issues raised during visits; v) to develop a critical and analytical attitude to the natural and managed environment; vi) to develop skills in designing and executing a research project. Course contents: A two-week field course to an environmentally diverse area. This will alternate between the Consortium countries. Students will be taken to a variety of sites, which demonstrate a range of forest and nature types, and a range of conservation and sustainability issues. Some of these will involve meeting and discussion with local experts. In the second week, students will work in small teams on a project evolved in discussion with the teaching staff. Teaching and learning methods: <u>Students will apply concepts acquired during theoretical lectures in Year 1 of the Course. Field exercises will demonstrate the applicability of the central concepts. Each student will participate in a supervised group. Each group will prepare a synopsis before the project, conduct fieldwork, prepare and submit a course report.</u> | | C/Weekly lecture hours in total: Attendance time: 84 h Self-study time: 141 h |
| Course: Joint summer module (Excursion) | | |
| Examination: Group presentation (ca. 30 min. / 40%) and supplementary report (max. 5,000 words / 60%) | | |
| Examination requirements: Students should be able to: identify and discuss the key factors that influence the management of forest and natural areas in particular environmental contexts. Key skills include: an ability to apply principles to locally specific knowledge/conditions; to critically judge the usefulness of methods and the reliability of collected data as well as the significance of obtained results; project and hypothesis design and execution; data interpretation and analysis. | | |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Prof. Dr. Alexander Knohl | |
| Course frequency: jedes Sommersemester | Duration: 1 Semester[s] | |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: | |
| Maximum number of students: | | |

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| Georg-August-Universität Göttingen Module M.SUFONAMA.4: Research planning <i>English title: Research Planning</i> | 6 C |
| <p>Learning outcome, core skills:</p> <p>Course objectives: The aim of the course is to provide tools for, and experience with, systematic design of research projects related with natural and social science aspects of natural resources management. An additional important aim is inculcation of the values of scholarship: inquiry, reflection, integrity, open mindedness, evidence-based thinking, and collegiality.</p> <p>Course contents: This course requires students to prepare a plan for a research study within natural resources management, e.g. a thesis. The plan must incorporate a literature review, a clear statement of hypotheses or questions to be addressed, an outline of the methods to be used and an assessment of any risks and ethical issues involved. Identification and assessment of risk and ethical issues is an essential feature designed to ensure that projects are carried out safely and with due regard to others and the environment. The review is expected to contain a critical appraisal of the assembled material and to be produced to journal standard. The values of scholarship are addressed through sessions of student peer review on drafts produced during the course.</p> <p>Teaching and learning methods: The course is organised as a combination of lectures, theoretical exercises, discussions and student peer review of course paper drafts focusing on critical discussion of student presentations and development of constructive comments. Specific activities include: introduction to course; supervisor identification and consultations; presentation of research design principles; student presentation of draft parts of research design; review of peers' draft research design; student-led topical presentations, incl. critical review of selected published paper.</p> <p>Examination: Portfolio examination. Participation in student peer review and submission of comments to peers; submission of individual course paper.</p> <p>Competences acquired: Understanding of the quality parameters of research design. Ability to (i) argue cogently and to think critically within the parameters of a particular academic discipline; (ii) apply principles for good research design, including critical discussion of literature and problem identification, development of hypotheses and research questions, determination of data requirements, and selection of appropriate methods; and (iii) reflect on risks and ethical issues in relation to project implementation. Students should be able to (i) demonstrate independent learning skills necessary for the foundation of lifelong learning; (ii) tackle scientific problems by collecting, analysing and evaluating appropriate qualitative and quantitative information and using it creatively; and (iii) display the competencies, key skills, behaviour and attitudes in relation to individual and group work required in a professional working life.</p> <p>Online course</p> | C/Weekly lecture hours in total: Attendance time: 8 h Self-study time: 172 h |
| Course: Research planning (Course) | |
| Examination: Term paper (max. 10 pages) | |

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| Examination prerequisites: Participation in student peer review and submission of comments to peers | | |
| Examination requirements: Understanding of the quality parameters of research design. Ability to (i) argue cogently and to think critically within the parameters of a particular academic discipline; (ii) apply principles for good research design, including critical discussion of literature and problem identification, development of hypotheses and research questions, determination of data requirements, and selection of appropriate methods; and (iii) reflect on risks and ethical issues in relation to project implementation. Students should be able to (i) demonstrate independent learning skills necessary for the foundation of lifelong learning; (ii) tackle scientific problems by collecting, analysing and evaluating appropriate qualitative and quantitative information and using it creatively; and (iii) display the competencies, key skills, behaviour and attitudes in relation to individual and group work required in a professional working life. | | |
| Admission requirements: none | Recommended previous knowledge: none | |
| Language: English | Person responsible for module: Prof. Dr. Alexander Knohl | |
| Course frequency: jedes Wintersemester | Duration: 1 Semester[s] | |
| Number of repeat examinations permitted: cf. examination regulations | Recommended semester: | |
| Maximum number of students: not limited | | |