

Modulverzeichnis

**zu der Prüfungs- und Studienordnung
für den gemeinsamen konsekutiven bi-
nationalen Master-Studiengang "Internationaler
Naturschutz" (Amtliche Mitteilungen I Nr.
24/2013 S. 746, zuletzt geändert durch
Amtliche Mitteilungen I Nr. 29/2026 S. 711)**

Übersicht nach Modulgruppen

I. Master-Studiengang "Internationaler Naturschutz"

Es müssen nach Maßgabe der nachfolgenden Bestimmungen 120 C erworben werden.

M.FES.221: Modern Methods in Ecology (6 C, 4 SWS)..... 7042

1. Fachstudium (Göttingen)

Es sind Module nach Maßgabe der nachfolgenden Bestimmungen im Umfang von insgesamt wenigstens 30 C erfolgreich zu absolvieren.

a. Pflichtmodule

Es müssen folgende 3 Pflichtmodule im Umfang von insgesamt 18 C erfolgreich absolviert werden:

M.INC.1001: International Nature Conservation (6 C, 4 SWS)..... 7062

M.INC.1005: Population biology in nature conservation (6 C, 8 SWS)..... 7065

M.INC.1007: Assessment of wildlife species for nature conservation (6 C, 8 SWS)..... 7068

b. Wahlpflichtmodule

Es müssen wenigstens zwei der folgenden Module im Umfang von insgesamt wenigstens 12 C erfolgreich absolviert werden.

Anstelle der genannten Module können auf Antrag, der an die*den Studiendekan*in der Fakultät für Biologie und Psychologie zu richten ist, andere Module (Alternativmodule) nach Maßgabe der nachfolgenden Bestimmungen absolviert werden: Es muss sich um ein Mastermodul aus dem Bereich „Naturschutz“, „Biodiversität“ oder „Ökologie“ handeln. Dieses Modul darf sich inhaltlich nicht mit bereits belegten Modulen signifikant überschneiden. Dem Antrag ist die Zustimmung der Lehrereinheit oder Fakultät, die das Alternativmodul anbietet, beizufügen. Die Entscheidung trifft die*der Studiendekan*in der Fakultät für Biologie und Psychologie. Der Antrag kann ohne Angabe von Gründen abgelehnt werden; ein Rechtsanspruch auf Zulassung eines Alternativmoduls besteht nicht.

M.Agr.0009: Biological Control and Biodiversity (6 C, 6 SWS)..... 7005

M.Agr.0058: Plant herbivore interactions (6 C, 4 SWS)..... 7007

M.Agr.0089: Ökologisches Seminar (3 C, 2 SWS)..... 7011

M.Bio-NF.401: International Nature Conservation at the Federal Agency for Nature Conservation, Vilm (3 C, 2 SWS)..... 7013

M.Bio.001: Statistics for Biology using R (6 C, 4 SWS)..... 7014

M.Bio.366: Introduction to Behavioral Biology (3 C, 3 SWS)..... 7016

M.Biodiv.402: Plant ecology and ecosystems research (6 C, 4 SWS)..... 7017

M.Biodiv.403: Vegetation ecology and vegetation history (6 C, 4 SWS)..... 7018

M.Biodiv.404: Animal ecology (6 C, 4 SWS)..... 7019

M.Biodiv.412: Conservation biology (6 C, 4 SWS).....	7020
M.Biodiv.426: Reproduction and evolution of flowering plants (6 C, 4 SWS).....	7024
M.Biodiv.428: Biodiversity and biogeography of embryophyta (6 C, 4 SWS).....	7025
M.Biodiv.435: Field studies in phytodiversity, vegetation ecology and palaeoecology (6 C, 8 SWS).....	7027
M.Biodiv.450: Impact of global climate change on plant communities and their functional traits (6 C, 8 SWS).....	7029
M.Biodiv.482: Field studies in conservation biology (6 C, 4 SWS).....	7031
M.Biodiv.605: Project studies in animal evolution and biodiversity (6 C, 4 SWS).....	7034
M.FES.111: Introduction to Ecological Modelling (6 C, 4 SWS).....	7035
M.FES.112: Biodiversity Measurement (6 C, 4 SWS).....	7036
M.FES.113: Soil Hydrology (6 C, 4 SWS).....	7038
M.FES.115: Statistical Data Analysis with R (6 C, 4 SWS).....	7039
M.FES.311: Tropical forest ecology and silviculture (6 C, 4 SWS).....	7043
M.FES.718: Botanical/Biogeographical excursion (6 C, 4 SWS).....	7048
M.FES.721: Ecological functions of wildlife: implications for conservation and management (6 C, 4 SWS).....	7049
M.Forst.212: Ökologische und politische Grundlagen des Waldnaturschutzes (6 C, 4 SWS).....	7052
M.Forst.214: Biodiversität (6 C, 4 SWS).....	7053
M.Forst.739: Grundlagen und Anwendung Geografischer Informationssysteme in den Lebenswissenschaften (6 C, 2 SWS).....	7057
M.Forst.786: Wald-Wild-Seminar (6 C, 4 SWS).....	7059
M.Geg.03: Globaler Umweltwandel / Landnutzungs- / Landbedeckungsänderung (6 C, 4 SWS).....	7060
M.INC.1003: Animal Conservation (6 C, 4 SWS).....	7063
M.INC.1006: Data analysis for field biologists (6 C, 8 SWS).....	7066
M.SIA.A11: Tropical animal husbandry systems (6 C, 4 SWS).....	7099
M.SIA.E11: Socioeconomics of Rural Development and Food Security (6 C, 4 SWS).....	7101
M.SIA.I12: Sustainable International Agriculture: basic principles and approaches (6 C, 4 SWS).....	7110
M.WIWI-VWL.0008: Development Economics I: Macro Issues in Economic Development (6 C, 4 SWS).....	7115
M.WIWI-VWL.0055: Globalization and Development (6 C, 2 SWS).....	7117
SK.Bio.311: Ethnobotanik (3 C, 2 SWS).....	7119

SK.Bio.329: Forschungspraktikum (4 Wochen) (6 C, SWS).....	7120
SK.Bio.331: Forschungspraktikum (8 Wochen) (12 C, SWS).....	7121
SK.Bio.332: Internship for master degree students (8 C).....	7122
SK.Biodiv.337: Citizen Science for Biodiversity (3 C, 2 SWS).....	7123

2. Fachstudium (Canterbury)

Es müssen Wahlpflichtmodule im Umfang von insgesamt wenigstens 30 C erfolgreich absolviert werden.

Mit Genehmigung der an der Lincoln University zuständigen Stelle können auch andere Module als Wahlmodule belegt werden.

M.INC.ECOL.608: Research Methods in Ecology (10 C, 13 SWS).....	7070
M.INC.ECOL.609: Conservation Biology (10 C, 13 SWS).....	7072
M.INC.ECOL.612: Wildlife Management (10 C, 13 SWS).....	7073
M.INC.ECOL.631: Animal Behaviour (10 C, 13 SWS).....	7074
M.INC.ECON.615: Applied Research Methods (10 C, 13 SWS).....	7075
M.INC.ERST.601: Advanced Theory in Resource Studies (10 C, 13 SWS).....	7077
M.INC.ERST.606: Advanced Geographic Information Systems A (10 C, 13 SWS).....	7079
M.INC.ERST.607: Advanced Geographic Information Systems B (10 C, 13 SWS).....	7081
M.INC.ERST.620: Advanced Environmental Management Systems (10 C, 13 SWS).....	7082
M.INC.ERST.630: Environmental Policy and Planning (10 C, 13 SWS).....	7084
M.INC.ERST.632: Economics in Environmental Policy (10 C, 13 SWS).....	7085
M.INC.ERST.636: Aspects of Sustainability: an international perspective (10 C, 13 SWS).....	7086
M.INC.MGMT.611: Management Research Methods (10 C, 13 SWS).....	7087
M.INC.MGMT.615: Planning and Assessing International Development Projects (10 C, 13 SWS).....	7089
M.INC.RECN.626: Natural Resource Recreation & Tourism (10 C, 13 SWS).....	7091
M.INC.SOCI.601: Social Science Research Methods (Quantitative) (10 C, 13 SWS).....	7093
M.INC.SOCI.602: Social Science Research Methods (Qualitative) (10 C, 13 SWS).....	7095
M.INC.TOUR.603: Tourism Management (10 C, 13 SWS).....	7096
M.INC.TOUR.604: Tourist Behaviour (10 C, 13 SWS).....	7098

3. Praxis-Semester

Es muss folgendes Modul im Umfang von 30 C erfolgreich absolviert werden:

M.INC.2001: Praxis-Semester (30 C).....	7069
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4. Masterarbeit

Durch die erfolgreiche Anfertigung der Masterarbeit werden 30 C erworben.

5. Fachstudium in Göttingen für Studierende im Sommersemester

Studierende der Lincoln University, die ihr Fachstudium in Göttingen im Sommersemester absolvieren, müssen an der Universität Göttingen wenigstens vier der folgenden Wahlpflichtmodule im Umfang von insgesamt wenigstens 30 C erfolgreich absolvieren; für Studierende der Lincoln University, die im Wintersemester den Studienaufenthalt an der Universität Göttingen absolvieren, gelten abweichend die Bestimmungen nach Nr. 1 entsprechend.

Studierende der Universität Göttingen, die aus organisatorischen Gründen ihren Wahlpflichtbereich in Göttingen im Sommersemester absolvieren bzw. vervollständigen, können an der Universität Göttingen bis zu 6 der folgenden Wahlpflichtmodule im Umfang von insgesamt bis zu 36 C erfolgreich absolvieren.

M.Agr.0022: Honigbienen und Wildbienen in der Agrarlandschaft (6 C, 4 SWS).....	7006
M.Agr.0061: Projektpraktikum Naturschutz in der Agrarlandschaft (6 C, 4 SWS).....	7009
M.Agr.0089: Ökologisches Seminar (3 C, 2 SWS).....	7011
M.Agr.0197: Sustainability – basics and application (6 C, SWS).....	7012
M.Bio-NF.401: International Nature Conservation at the Federal Agency for Nature Conservation, Vilm (3 C, 2 SWS).....	7013
M.Biodiv.403: Vegetation ecology and vegetation history (6 C, 4 SWS).....	7018
M.Biodiv.412: Conservation biology (6 C, 4 SWS).....	7020
M.Biodiv.423: Plant ecology: Study of habitats (6 C, 8 SWS).....	7022
M.Biodiv.424: Field studies of plant ecology, phytodiversity, and ecosystems research (6 C, 8 SWS).....	7023
M.Biodiv.428: Biodiversity and biogeography of embryophyta (6 C, 4 SWS).....	7025
M.Biodiv.431: Applied vegetation ecology and multivariate analysis (6 C, 8 SWS).....	7026
M.Biodiv.435: Field studies in phytodiversity, vegetation ecology and palaeoecology (6 C, 8 SWS).....	7027
M.Biodiv.443: Field studies in animal ecology and zoological biodiversity (6 C, 8 SWS).....	7028
M.Biodiv.478: Field studies in systematics, biodiversity and ecology of marine invertebrates (6 C, 8 SWS).....	7030
M.Biodiv.482: Field studies in conservation biology (6 C, 4 SWS).....	7031
M.Biodiv.488: Conservation biology: Ornithology (6 C, 8 SWS).....	7033
M.Biodiv.605: Project studies in animal evolution and biodiversity (6 C, 4 SWS).....	7034
M.FES.122: Ecological Simulation Modelling (6 C, 4 SWS).....	7040
M.FES.124: Modern Concepts and Methods in Macroecology and Biogeography (6 C, 4 SWS).....	7041

M.FES.221: Modern Methods in Ecology (6 C, 4 SWS).....	7042
M.FES.321: Ecopedology of the tropics and subtropics (6 C, 4 SWS).....	7044
M.FES.713: Forestry in Germany (6 C, 4 SWS).....	7046
M.FES.729: Biodiversity and ecosystem functioning (6 C, 4 SWS).....	7051
M.Forst.222: Klima- und Bodenschutz (6 C, 4 SWS).....	7055
M.INC.1004: Protected Areas (6 C, 10 SWS).....	7064
M.SIA.E12M: Quantitative Research Methods in Rural Development Economics (6 C, 4 SWS).....	7102
M.SIA.E14: Evaluation of rural development projects and policies (6 C, 4 SWS).....	7103
M.SIA.E24: Topics in Rural Development Economics I (6 C, 4 SWS).....	7104
M.SIA.E37: Agricultural policy analysis (6 C, 6 SWS).....	7106
M.SIA.E40: Agriculture, Environment and Development (6 C, 4 SWS).....	7108
M.SIA.I20: Agriculture and ecosystem services (6 C, 4 SWS).....	7112
M.SIA.P10: Tropical agro-ecosystem functions (6 C, 4 SWS).....	7114
SK.Biodiv.338: Know your species! Biodiversity recording in a digital citizen-science era (3 C, 3 SWS).....	7124

II. Ergänzende Hinweise

1. Modulprüfungen

Soweit in diesem Modulverzeichnis Modulbeschreibungen der Universität Göttingen in englischer Sprache veröffentlicht werden, gilt für die verwendeten Prüfungsformen nachfolgende Zuordnung:

written exam - Klausur

oral presentation - Präsentation

oral presentation with written outline - Präsentation mit schriftlicher Ausarbeitung

oral exam - mündliche Prüfung

term paper - Hausarbeit

practical exam - praktische Prüfung

internship report - Praktikumsbericht

2. Angebote der Lincoln University

Die Modulbeschreibungen zu den Modulen M.INC.*.* entsprechen dem Angebot der Lincoln University und dienen der Orientierung. Kurzfristige Änderungen sind gegebenenfalls nicht berücksichtigt; maßgeblich sind jeweils die aktuellen Angebotsbeschreibungen der Lincoln University; es gilt ausschließlich das Prüfungsrecht der Lincoln University.

1. Modulprüfungen

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Georg-August-Universität Göttingen		6 C
Module M.Agr.0009: Biological Control and Biodiversity		6 WLH
Learning outcome, core skills: Gain an understanding of what biological control is and how it can be used effectively as part of an IPM system and how biodiversity contributes to control of pest populations and other ecosystem services.		Workload: Attendance time: 84 h Self-study time: 96 h
Course: Biological Control and Biodiversity (Lecture, Exercise, Seminar) <i>Contents:</i> • Theoretical foundations of biological control • Natural enemy behaviour and biological control success • Biodiversity and ecosystem services in agroecosystems • Practical examples of biological control projects • Plant-herbivore-predator-interactions Principles of population dynamics • Biological weed control		6 WLH
Examination: Written exam (70%; 45 minutes) and presentation (30%; approx. 20 minutes) Examination prerequisites: Regular attendance at seminar and exercise and presentation of a seminar talk. Examination requirements: Basic knowledge of the mechanisms of biological control of herbivorous insects; methodological approaches based on case examples; role of biodiversity for ecosystem processes and the population dynamic of herbivorous insects, multitrophic interactions between plants, herbivorous insects and their natural enemies; biodiversity and services of ecosystems.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Michael Georg Rostás	
Course frequency: each winter semester; Göttingen	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 12		
Additional notes and regulations: Lecture based materials; details provided during lectures.		

Georg-August-Universität Göttingen Modul M.Agr.0022: Honigbienen und Wildbienen in der Agrarlandschaft <i>English title: Honey Bees and Wild Bees in the Agricultural Landscape</i>		6 C 4 SWS
Lernziele/Kompetenzen: Die Studierenden sollen die Biologie von Honigbienen und Wildbienen kennenlernen, um die große Bedeutung dieser Bestäuber von Kultur- und Wildpflanzen besser einschätzen und nutzen zu können. Die praktische Einführung in die Imkerei erlaubt einen ersten Einstieg in dieses traditionelle landwirtschaftliche Gebiet. Bienenartenkenntnisse und praktische Erfahrungen bei der Pollenanalyse und Anfertigung von Nisthilfen stellen wichtige methodische Grundlagen dar.		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Honigbienen und Wildbienen in der Agrarlandschaft (Vorlesung, Übung) <i>Inhalte:</i> Einführung in die Lebensweise von Honigbienen und Wildbienen, Grundlagen und Techniken der Imkerei (Völkerführung, Trachtnutzung), Ressourcennutzung von Honigbienen und Wildbienen (Bientänze, Blütenbesuch, Pollenanalyse), Taxonomie von Wildbienen, Krankheiten und Gegenspieler von Bienen, Wildbienen in unterschiedlichen Lebensräume.		4 SWS
Prüfung: Referat (ca. 20 Minuten, 50%) und Protokoll (max. 40 Seiten, 50%) Prüfungsanforderungen: Im Rahmen des Moduls Honigbienen und Wildbienen in der Agrarlandschaft werden Kenntnisse der Biologie von Wild- und Honigbienen, Grundlagenwissen zur Imkerei und zur Bestäubung von Kultur- und Nutzpflanzen, methodische Grundkenntnisse zur Erfassung von Wild- und Honigbienen abgefragt. Referat: eigenständige Ausarbeitung zu einem Thema, 20 Minuten, Vortrag auf deutsch oder englisch; Protokoll: zusammenfassende Darstellung der einzelnen Kurstage, Umfang je nach Kurstag 1-5 Seiten, insgesamt 20-40 Seiten.		6 C
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Catrin Westphal	
Angebotshäufigkeit: jedes Sommersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 20		

Georg-August-Universität Göttingen Modul M.Agr.0058: Plant herbivore interactions <i>English title: Plant-Herbivore Interactions</i>		6 C 4 SWS
Lernziele/Kompetenzen: Kenntnisse komplexer Wechselwirkungen zwischen Pflanzen und herbivoren Insekten. Ableitung wissenschaftlicher Fragestellungen und kritische Bewertung von angewendeten Methoden durch Erarbeitung eines eigenen Seminarbeitrages zu aktuellen Forschungsergebnissen.		Arbeitsaufwand: Präsenzzeit: 60 Stunden Selbststudium: 120 Stunden
Lehrveranstaltung: Plant herbivore interactions (Vorlesung, Seminar) <i>Inhalte:</i> Das Modul beschäftigt sich mit der Wechselwirkung zwischen Pflanzen und herbivoren Insekten. Die Diversität der beteiligten Organismen und der Lebensgemeinschaften werden dargestellt. Auf der Seite der Pflanzen werden die verschiedenen Abwehrstrategien unter Einschluss der Resistenzmechanismen gegenüber Fraßfeinden exemplarisch vorgestellt. Die sensorischen Ausstattungen der herbivoren Insekten zur Erkennung der Pflanzen werden beschrieben. Multiple Interaktionen zwischen Pflanzen, Fraßfeinden und natürlichen Gegenspielern sowie die Anwendungsmöglichkeiten werden diskutiert. Schließlich werden die Wechselbeziehungen zwischen Pflanzen und blütenbestäubenden bzw. blütenbesuchenden Insekten behandelt. Im Rahmen des Semiarbeits werden von den Studierenden jeweils aktuelle Forschungsergebnisse vorgestellt und im Zusammenhang mit den in den Vorlesungen behandelten Themen diskutiert.		4 SWS
Prüfung: Klausur (Gewicht: 67%, Dauer: 45 Minuten) und Präsentation, Referat oder Korreferat (Gewicht: 33%, Dauer: ca. 20 Minuten) Prüfungsvorleistungen: Teilnahme an den Seminaren und Bearbeitung und Vorstellung eines Seminarbeitrages. Prüfungsanforderungen: Umfassende Kenntnisse der wesentlichen Faktoren der Wirtspflanzenwahl herbivorer Insekten, Abwehrstrategien der Pflanzen, Determinanten für herbivore Lebensgemeinschaften an spezifischen Pflanzen, multitrophische Interaktionen zwischen Pflanzen, herbivoren Insekten und Gegenspielern; Wechselbeziehungen zwischen Pflanzen und Bestäubern. Beide Teilprüfungen müssen erfolgreich absolviert und bestanden werden.		6 C
Zugangsvoraussetzungen: keine		Empfohlene Vorkenntnisse: keine
Sprache: Englisch		Modulverantwortliche[r]: Prof. Dr. Michael Georg Rostás
Angebotshäufigkeit: jedes Wintersemester		Dauer: 1 Semester
Wiederholbarkeit: zweimalig		Empfohlenes Fachsemester:

Maximale Studierendenzahl:	
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Georg-August-Universität Göttingen Modul M.Agr.0061: Projektpraktikum Naturschutz in der Agrarlandschaft <i>English title: Practical Course Nature Conservation in Agricultural Landscapes</i>		6 C 4 SWS
Lernziele/Kompetenzen: Die Studierenden sollen lernen, wie man sich selbständig eine innovative Fragestellung erarbeitet und wie ein Versuchsdesign ausschauen kann, das zur Beantwortung dieser Frage geeignet ist. Die Erfahrung mit selbständiger Anlage und Auswertung von Experimenten ist eine elementare Grundlage für wissenschaftliches Arbeiten, wie es letztlich bei der Masterarbeit gefordert ist. Zudem erlaubt die kritische Diskussion der Vorgehensweise, die Glaubwürdigkeit von wissenschaftlichen Arbeiten und Gutachten besser zu beurteilen.		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Projektpraktikum Naturschutz in der Agrarlandschaft (Praktikum, Seminar) <i>Inhalte:</i> Selbständige Erarbeitung von Problemstellungen und Versuchen zur Fragen des Naturschutzes in der Agrarlandschaft. Die Studierenden erarbeiten eine innovative Fragestellung und ein zum Testen der jeweiligen Hypothesen geeignetes Versuchsdesign. Der Versuchsplan wird im Plenum vorgestellt und diskutiert. Die Feld- und Laborexperimente finden danach weitgehend selbständig statt. Die statistische Auswertung der Ergebnisse wird Teil eines Protokolls, das wie eine wissenschaftliche Arbeit aufgebaut sein soll (Einleitung, Methoden, Ergebnisse, Diskussion). Bei allen Schritten findet eine intensive Betreuung und Anleitung statt.		4 SWS
Prüfung: Hausarbeit (max. 20 Seiten, 70%) und Präsentation, Referat oder Korreferat (ca. 15 Minuten, 30%) Prüfungsanforderungen: Erfahrung mit selbständiger Anlage und Auswertung von Experimenten. Kenntnisse zur statistischen Auswertung der gewonnen Ergebnisse. Referat: In einem 12-minütigen Referat werden die Ergebnisse der Felduntersuchungen präsentiert und kritisch diskutiert. Dies beinhaltet neben einer kurzen Einleitung die Darstellung der Untersuchungshypothesen, Feld-/Labormethoden, statistische Datenauswertung und eine Diskussion der Ergebnisse unter Einbeziehung von Sekundärliteratur, wie z.B. wissenschaftlichen Fachpublikationen (30% der Modulnote). Hausarbeit: In einer schriftlichen Hausarbeit (Umfang max. 20 Seiten) werden die Versuche im Stil einer wissenschaftlichen Veröffentlichung dargelegt. Die Hausarbeit wird hierbei gegliedert in: Zusammenfassung, Einleitung, Hypothesen, Methoden, Resultate, Diskussion und Quellen. Neben formalen Aspekten (z.B. Darstellung der Ergebnisse, Orthografie, korrekte Zitierweise) steht insbesondere die Diskussion der eigenen Ergebnisse unter Berücksichtigung der wissenschaftlichen Fachliteratur im Fokus der Prüfungsanforderungen (70% der Modulnote).		6 C
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	

Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Catrin Westphal
Angebotshäufigkeit: jedes Sommersemester	Dauer: 1 Semester
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:
Maximale Studierendenzahl: 20	

Georg-August-Universität Göttingen Modul M.Agr.0089: Ökologisches Seminar <i>English title: Ecology Seminar</i>		3 C 2 SWS
Lernziele/Kompetenzen: Die Studierenden sollen sich mit der aktuellen Literatur befassen und lernen, welche Stärken und Schwächen die vorgestellten Arbeiten haben. Zudem sollen sie mit eigenen Vorträgen und in der Diskussion lernen, ihre Ansichten argumentativ zu vertreten und sich mit kontroversen Haltungen auseinanderzusetzen. Darüber soll ein tieferes Verständnis und eine größere inhaltliche Sicherheit bei aktuellen ökologischen Themen erreicht werden.		Arbeitsaufwand: Präsenzzeit: 28 Stunden Selbststudium: 62 Stunden
Lehrveranstaltung: Ökologisches Seminar (Seminar) Inhalte: In diesem Seminar werden aktuell Themen der Ökologie und Biodiversitätsforschung durch die TeilnehmerInnen vorgestellt und diskutiert. Dazu gehören zum einen kontroverse Diskussionen in der aktuellen Literatur zu Fragen wie dem Zusammenhang von Biodiversität und Ökosystemfunktionen in Agrarsystemen oder zur Bedeutung des Globalen Wandels für Ökosysteme. Zum anderen werden anhand aktueller Forschungsarbeiten Problem des Versuchsdesigns und der statistischen Auswertung diskutiert. In regelmässigen Abständen gibt es auch Vorträge von eingeladenen Gästen aus dem In- und Ausland.		2 SWS
Prüfung: Hausarbeit (max. 15 Seiten) Prüfungsanforderungen: Erarbeitung von Hintergrundwissen zu verschiedenen Themen der Ökologie und der Biodiversitätsforschung, die Fähigkeit, eigene Ansichten argumentativ zu vertreten und Hintergrundwissen zu Versuchsdesign und statistischer Auswertung zu erlangen. Hausarbeit: Teilnahme an mind. 10 Seminarterminen und Protokoll von mind. 5 Seminarthemen von max. 15 Seiten Gesamtlänge.		3 C
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Catrin Westphal	
Angebotshäufigkeit: jedes Semester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 30		

Georg-August-Universität Göttingen Module M.Agr.0197: Sustainability – Basics and Application		6 C
Learning outcome, core skills: In this course, students will learn about the fundamental concepts and ideas that underpin sustainability on a global level. It aims at creating a deeper understanding of the fair use of resources and its challenges on local and global scale. Sustainable development is not only a difficult practical challenge but also a conceptual, political and moral problem. How can an understanding of the complexities help to shape approaches to solutions? Students will acquire discursive and reflective competencies. Students will work with local stakeholders and acquire practical insights for implementing sustainability in real-life applications.		Workload: Attendance time: 66 h Self-study time: 114 h
Course: Sustainability – basics and application (Internship, Lecture, Seminar,) Course: Part 1 Sustainability basics (Lectures and self-study) The first module part introduces students to sustainability concepts (environmental, social and economic), and sustainable development (SDGs). Building on these foundations, the main part of the module is practical. Part 2 Sustainability application (seminar, practical work and self-study) Students can choose one topic and work on a sustainability-related task in either interdisciplinary teams or local companies, NGOs and university projects. What is a particular sustainability challenge? What measures can help to realize sustainability goals and what trade-offs hinder the success of implementation. A seminar will be organized to present, discuss and reflect the practical work.		
Examination: oral presentation in the seminar (ca. 10min, 30%) and written report for practical part 2 (max. 10 pages, 70%) Examination prerequisites: Seminar attendance		6 C
Admission requirements: open for all faculties	Recommended previous knowledge: none	
Language: English, German	Person responsible for module: Dr. Simone Pfeiffer (CBL, Centre of Biodiversity and Sustainable Land Use) Dr. Michaela Dölle (Faculty of Forest Sciences and Forest Ecology)	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 35		

Georg-August-Universität Göttingen Modul M.Bio-NF.401: International Nature Conservation at the Federal Agency for Nature Conservation, Vilm <i>English title: International Nature Conservation at the Federal Agency for Nature Conservation, Vilm</i>		3 C 2 SWS
Lernziele/Kompetenzen: The course will contribute to qualify Biodiversity and Nature Conservation Master-degree students for future work in international conservation organizations and for scientific tasks related to international nature conservation. With the four-day-course at the Isle of Vilm, the students will be given the opportunity • To broaden their knowledge about international nature conservation issues • To receive first-hand information on international conventions and discussions from those actively involved, and • To create a platform for networking and information exchange. It will cover the following topics: • Global conventions on Biodiversity • Climate change and conservation • Protected areas and the UNESCO World Heritage Convention • Issues and approaches of sustainable use incl. certification • Financing conservation • Conservation in the marine Environment The course will be a combination of lectures, interactive discussions and working groups.		Arbeitsaufwand: Präsenzzeit: 28 Stunden Selbststudium: 62 Stunden
Lehrveranstaltung: International Nature Conservation at the Federal Agency for Nature Conservation, Vilm (Blockveranstaltung) <i>Inhalte:</i> 4-day seminar		2 SWS
Prüfung: Präsentation (ca. 30 Minuten), unbenotet		3 C
Prüfungsanforderungen: Research on the required topic		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Englisch	Modulverantwortliche[r]: Prof. Dr. rer. nat. Matthias Waltert	
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 25		

Georg-August-Universität Göttingen Module M.Bio.001: Statistics for Biology using R	6 C 4 WLH
Learning outcome, core skills: Students understand the concept of a random variable and its relation to empirical research in the bio-sciences. They understand probability distributions, distribution parameters like mean and variance and the difference between true values of these parameters and their estimates from samples. They understand the logic behind null-hypothesis tests. They understand the difference between parametric and non-parametric tests. They are able to select a suitable test for two-sample problems concerning the mean and the median, and to solve linear and multilinear regression problems. They are able to perform these analyses in R. Contents: 1. why statistics is necessary in bio-sciences 2. random variables, random variates (realizations), sampling 3. probability distributions and probability density functions, cumulative probability functions 4. descriptive statistics: measures of central tendencies, i.e. mean, mode(s), median; measures of variance; true values the difference between distribution parameters and their sample-based estimates 5. confidence intervals based on the bootstrap 6. statistical hypotheses, the corresponding null-hypotheses, the logic of null-hypothesis significance tests (NHSTs). 7. permutation testing for comparing means – unpaired tests 8. permutation testing for comparing means – paired tests. 9. correlation and univariate (linear) regression, resampling tests for univariate regression 10. the logic of parametric null hypothesis testing 11. parametric tests for multivariate regression 12. parametric tests for analysis of variance (ANOVA) parametric tests	Workload: Attendance time: 56 h Self-study time: 124 h
Course: Statistics for Biology using R (Lecture)	2 WLH
Examination: Written E-examination in ILIAS (90 minutes) Examination prerequisites: Regular participation in the tutorial sessions	6 C
Course: Statistics for Biology using R (Tutorial)	2 WLH
Examination requirements: • Formulating nullhypotheses and alternative hypotheses and understanding their meaning • Loading and selecting data for analysis in R • running multiple regression in R • being able to interpret the output of lm() in R • Interpreting p-values, regression coefficients, R and F-values correctly	

• Transferring the outcomes of an analysis in R into a written text describing the statistical findings	
Admission requirements: For master students only. The modules M.Bio.001 and B.Bio.107 are mutually exclusive.	Recommended previous knowledge: none
Language: English	Person responsible for module: Prof. Dr. Michael Wibrat
Course frequency: each winter semester	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: from 1
Maximum number of students: 65	

Georg-August-Universität Göttingen Module M.Bio.366: Introduction to Behavioral Biology		3 C 3 WLH
Learning outcome, core skills: Students are able to explain and contextualise fundamental concepts in behavioural biology - particularly in the fields of behavioural ecology, sociobiology, and cognition - with special attention to the quantitative aspects of behavioural research. They describe core methods in behavioural biology, analyse their application in research practice, and evaluate their advantages and limitations in relation to scientific questions. They present scientific content in a structured, scientifically sound manner - particularly in writing - and are able to clearly and precisely communicate complex relationships. They integrate current research findings into their arguments and can contribute meaningfully to scientific discussions.		Workload: Attendance time: 42 h Self-study time: 48 h
Course: Introduction to Behavioral Biology (Lecture)		3 WLH
Examination: Written examination (90 minutes)		3 C
Examination requirements: Students demonstrate their knowledge through a written examination assessing theoretical foundations, methodological approaches, and applications in behavioural biology. The exam evaluates the ability to analyse complex biological processes, integrate concepts from behavioural ecology, sociobiology, and cognition, and engage in scientific reasoning. It is designed to assess factual accuracy, logical structure of arguments, and clarity of presentation.		
Admission requirements: cannot be combined with M.Bio.306 or M.Bio.346	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. Oliver Schülke	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 4		

Georg-August-Universität Göttingen Module M.Biodiv.402: Plant ecology and ecosystems research		6 C 4 WLH
Learning outcome, core skills: The students • acquire an overview of the most important habitats all over the world and their respective vegetation and ecology • acquire profound knowledge of the habitats of exemplarily selected climate zones and their ecology • know basic correlations between climate, soil and vegetation on different continents • acquire a global overview of the anthropogenous causes of ecosystem burdens and biodiversity loss		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Vegetation and ecology of the world (Lecture)		2 WLH
Examination: Written examination (90 minutes) Examination prerequisites: Participation in seminar and seminar talk (max. 25 minutes)		6 C
Course: Current topics in plant ecology and nature conservation (Seminar)		2 WLH
Examination requirements: Understanding of the ecosystems' and global perspectives of plant ecology and of consequences of anthropogenic impacts on ecosystems' biodiversity and conservation issues.		
Admission requirements:	Recommended previous knowledge: none	
Language: English, German	Person responsible for module: Dr. Dietrich Hertel	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 20		

Georg-August-Universität Göttingen Module M.Biodiv.403: Vegetation ecology and vegetation history		6 C 4 WLH
Learning outcome, core skills: The students acquire knowledge and a profound understanding of temporal and spatial vegetation patterns; one focus lies on biomes, climate zones and other large-scale vegetation areas, another focus lies on biological and geobotanical principles and basics on different scale levels and in different natural environments. Perception and knowledge in basic and applied fields of advanced vegetation ecology, vegetation history, sociology and chorology of plants, conception and reception of scientific papers; presentation skills.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: General vegetation history of the earth (Lecture)		2 WLH
Course: Anthropogenic impacts on biodiversity loss (Seminar)		2 WLH
Examination: Seminar talk (30 minutes)		6 C
Examination requirements: Knowledge of temporal and spatial vegetation patterns with focus on biomes, climate zones and other large-scale vegetation areas.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Hermann Friedrich Behling	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 16		

Georg-August-Universität Göttingen Module M.Biodiv.404: Animal ecology		6 C 4 WLH
Learning outcome, core skills: The lecture presents principles and theories of ecology and introduces current topics of ecological research. Topics include population ecology, interactions in animal communities, food webs, biodiversity and ecological theories. The seminar covers current topics of ecological and evolutionary research. In the seminar the students acquire advanced knowledge of methods and strategies to analyze ecological communities. Knowledge of ecological theories and modelling. Principles of animal populations and food webs. Experimental and statistical methods for the analysis of animal communities. Knowledge of current topics of animal ecological and evolutionary biology research.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Topics of animal ecology and evolution (Seminar)		2 WLH
Course: Animal Ecology (Lecture)		2 WLH
Examination: Written examination (90 minutes) Examination prerequisites: Seminar talk (approx. 20 Minutes) Examination requirements: Knowledge of ecological principles and theories, population models. Functional responses, analysis and modelling of biotic interactions and food webs. Biodiversity and ecosystem functioning.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Stefan Scheu	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 40		

Georg-August-Universität Göttingen Module M.Biodiv.412: Conservation biology		6 C 4 WLH
Learning outcome, core skills: In 412-1, we provide a comprehensive overview of the foundation and history of conservation science, including underlying theories and principles in ecology and biodiversity research. In 412-2, we cover an introduction to trends in biodiversity and illustrate drivers of biodiversity decline such as habitat loss, fragmentation and degradation, overexploitation, climate change, and invasive species. We introduce methods to monitor biodiversity and ecosystem services. We conclude with international approaches to counteract biodiversity loss and critically discuss the role of protected areas, conservation management and ecosystem restoration. The seminars complement the lecture topics and cover recent debates in conservation biology, conservation in agricultural landscapes and global policies in environmental protection and conservation. Core skills acquired: By the end of the lecture, students will have understood the state of global biodiversity, major threats and mitigation measures. They will be able to develop conservation strategies, to critically judge conservation initiatives, and to advise decision makers.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Conservation biology (Lecture) One lecture from the following options: • M.Biodiv.412-1: Origins of Conservation Biology (Waltert) • M.Biodiv.412-2: International Nature Conservation (Kamp)		2 WLH
Examination: Written examination, M.Biodiv.412-1 or M.Biodiv.412-2 (90 minutes) Examination prerequisites: Seminar talk (approx. 20 minutes)		6 C
Course: Conservation biology (Seminar) One seminar from the following options: • M.Biodiv.412-3: Current topics in Conservation Biology (Kamp) • M.Agr.0089: Ecological Seminar (Westphal)		2 WLH
Examination requirements: Participants understand the state of biodiversity, drivers of declines and mitigation measures in various habitats, globally. They have a comprehensive understanding of the methods used in conservation science, both for the natural and social science. They are able to make informed judgements on conservation management, actions and policies. They are able to connect different topical areas of conservation conceptually.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Johannes Kamp	

Course frequency: each winter semester	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester:
Maximum number of students: not limited	
Additional notes and regulations: The seminar M.Agr.0089 in M.Biodiv.412 and module M.Agr.0089 are mutually exclusive.	

Georg-August-Universität Göttingen Module M.Biodiv.423: Plant ecology: Study of habitats		6 C 8 WLH
Learning outcome, core skills: In this module students • learn about theoretical and methodological basics of modern plant ecological site description • gain an overview of the most prominent European beech forest communities and their prevalent soil and microclimate site conditions • learn modern methods in examining microclimate variables of different forest sites • learn modern methods for the analyses of physical-chemical soil variables (incl. pH value, C and N contents, plant available nutrient contents) • practice scientific standards in presenting the study results in oral and written form		Workload: Attendance time: 112 h Self-study time: 68 h
Course: Basics of the essential aspects of ecological studies on forest ecosystems (Lecture)		2 WLH
Course: Ecological studies of forest ecosystems near Göttingen (Exercise)		6 WLH
Examination: Lab report (max. 20 pages) Examination requirements: Knowledge of the essential aspects of ecological studies on forest ecosystems		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English, German	Person responsible for module: Dr. Dietrich Hertel	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 20		

Georg-August-Universität Göttingen Module M.Biodiv.424: Field studies of plant ecology, phytodiversity, and ecosystems research		6 C 8 WLH
Learning outcome, core skills: In this module the students learn about • ecosystems in selected habitats in Germany as well alternatively in European or non-European regions (e.g. the Tropics/Subtropics) • principal causal connections between vegetation, climate, soil conditions, as well as land-use effects on ecosystem processes in the region • identification of characteristic plant species in the respective research region • insights of practical assessment of ecological research in the field • application and usage of respective scientific literature for oral and written presentation of the adopted study results		Workload: Attendance time: 112 h Self-study time: 68 h
Course: National and international field studies (Exercise) Excursion region vary between years		6 WLH
Course: Ecosystems and field studies (Seminar)		2 WLH
Examination: Report (max. 10 pages)		6 C
Examination requirements: Knowledge of various ecosystems in Germany and abroad, including the tropics, based on practical on-site observation. Knowledge of biodiversity in these ecosystems and their existence or endangerment due to anthropogenic influence. Knowledge of sustainable management and the effects of anthropogenic overuse on ecosystems.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English, German	Person responsible for module: Dr. Dietrich Hertel	
Course frequency: on demand in summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 12		

Georg-August-Universität Göttingen Module M.Biodiv.426: Reproduction and evolution of flowering plants		6 C 4 WLH
Learning outcome, core skills: Students gain detailed knowledge of the reproductive strategies and developmental biology of flowering plants. They develop a broad understanding of the relevance of reproductive biology to the evolution and ecology of plants, to general evolutionary biology issues (e.g. the paradox of gender) and to areas of application in plant breeding. Specific methodological skills for active research are learned through experimental work, karyological and embryological analyses (microscopic observation, seed flow cytometry) and statistical analyses. Students can answer questions on the reproductive and developmental biology of plants and on evolutionary biology hypotheses, and know about practical areas of application. They are capable of planning, conducting and presenting scientific studies in the area of reproductive plant biology.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Developmental and reproductive biology of flowering plants (Practical course)		3 WLH
Course: Reproductive strategies of flowering plants (Lecture)		1 WLH
Examination: Oral examination on lecture material (approx. 15 min.) Examination prerequisites: Protocol of the practical course (max. 12 pages) Examination requirements: In the oral examination students demonstrate their skills in the reproductive and developmental biology of flowering plants, in evolutionary biology hypotheses and in practical areas of application. The result shows their skills in planning, conducting and presenting a scientific study in the area of reproductive plant biology.		6 C
Admission requirements: none	Recommended previous knowledge: M.Biodiv.425	
Language: English	Person responsible for module: Prof. Dr. Elvira Hörandl	
Course frequency: every second summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 12		

Georg-August-Universität Göttingen Module M.Biodiv.428: Biodiversity and biogeography of embryophyta		6 C 4 WLH
Learning outcome, core skills: Students are familiarised with the biodiversity of land plants in floristic areas outside Germany and learn the principles of geobotanics, ecology and evolutionary history in selected areas (Alps / Mediterranean-Makaronesien area / Tropics). They gain an overview of the biodiversity, distribution, adaptations (e.g. flower biology, life forms) and ecological niches (e.g. altitudinal layers) in the relevant habitats. They develop skills in planning and conducting field trips, in the techniques of collecting and preparation, use of identification tools and documentation techniques (e.g. geo-referencing).		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Introduction to Tropical, Mediterranean-Makaronesien or Alpine Floras (Seminar)		1 WLH
Course: Field trip, alternately to the Tropics, Mediterranean-Makaronesien area or the Alps (Excursion)		3 WLH
Examination: Report of the field trip (max. 15 pages) Examination prerequisites: Seminar talk (approx. 30 min.) Examination requirements: Knowledge of the geobotanics, ecology, biodiversity and evolution of land plants in the floral area visited. Botanical fieldwork skills: documentation of geo-referenced habitats, observation data, identification results and where relevant collected plant material.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Elvira Hörandl	
Course frequency: Biennial; alternately in the regions	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 12		

Georg-August-Universität Göttingen Module M.Biodiv.431: Applied vegetation ecology and multivariate analysis		6 C 8 WLH
Learning outcome, core skills: After successfully completing the module, students have acquired the following skills: • Problem-oriented implementation of a research project • Field sampling methods of vegetation ecology including vegetation sampling in various types of grassland • Identification in both flowering and vegetative plant stage • Experience in current topics on the diversity, dynamics, management and conservation of grassland ecosystems • Evaluation and interpretation of multivariate data, Software applications for entering vegetation data, data processing and ordination analyses using R • Production and presentation of posters, Presentation of scientific research questions and results in written form.		Workload: Attendance time: 112 h Self-study time: 68 h
Course: Basics and methods of vegetation ecological data collection and multivariate analysis (Lecture)		2 WLH
Course: Grassland vegetation and multivariate data analysis (Exercise)		6 WLH
Examination: Portfolio: Lab report (approx. 15 pages) and poster presentation (approx. 15 minutes)		6 C
Examination requirements: Proven knowledge of field sampling and multivariate analysis in vegetation science. Assessment of local grassland vegetation types. Knowledge in current topics on the diversity, dynamics, management and conservation of grassland ecosystems. Reporting along the standards of a scientific publication.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Friedemann von Lampe	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 16		

Georg-August-Universität Göttingen Module M.Biodiv.435: Field studies in phytodiversity, vegetation ecology and palaeoecology		6 C 8 WLH
Learning outcome, core skills: Familiarisation with vegetation types in initially unknown natural areas including their temporal development and dynamics, methods of vegetation analysis, methods of palaeoecology vegetation analysis, methods of palaeoecology, exercises to identify plants, exercises to collect samples and vouchers, familiarisation with scientific collections and environmental archives, experience with field studies abroad, familiarisation with topics of phytodiversity, vegetation ecology and palaeoecology. Independent collection of vegetation and environmental data, use of non-German floras and identification keys, implementation and organisation of field studies abroad, scientific data collection during field studies, presentation of results on vegetation ecology, phytodiversity and palaeoecology.		Workload: Attendance time: 112 h Self-study time: 68 h
Course: Phytodiversity and palaeoecology of a natural and cultural area (Seminar)		2 WLH
Course: International field studies (Exercise)		6 WLH
Examination: Minutes / Lab report (max. 20 pages) Examination requirements: Knowledge of different types of vegetation including their temporal dynamics in Central European and non-European natural areas. Knowledge of the working methods of scientific collections and environmental archives. Methods of palaeoecology.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Hermann Friedrich Behling	
Course frequency: on demand	Duration: 1 semester[s]	
Number of repeat examinations permitted: once	Recommended semester:	
Maximum number of students: 12		

Georg-August-Universität Göttingen Modul M.Biodiv.443: Field studies in animal ecology and zoological biodiversity <i>English title: Field studies in animal ecology and zoological biodiversity</i>		6 C 8 SWS
Lernziele/Kompetenzen: Students learn in-depth analysis of animal communities in the Mediterranean region. The communities studied are analyzed taxonomically and the data collected are evaluated using experimental-statistical methods and ordination procedures. Existing knowledge of the diversity of animals and plants in different ecosystems is deepened. For this purpose, gradients are sampled in terrestrial or marine habitats of the Mediterranean region (e.g. altitudinal gradients, light gradients, temperature gradients, disturbance gradients). The animals occurring there are counted, identified and assigned to trophic groups. Furthermore, possible environmental factors that could be responsible for the composition of the respective animal communities are investigated. The results are analyzed using statistical programs such as R and Canoco. Basic knowledge of statistics and knowledge of the organismic diversity of marine and terrestrial ecosystems are desirable. Students acquire specialist skills in terrestrial and marine animal communities of Mediterranean regions.		Arbeitsaufwand: Präsenzzeit: 112 Stunden Selbststudium: 68 Stunden
Lehrveranstaltung: Field research in animal ecology and zoological biodiversity (Seminar)		2 SWS
Lehrveranstaltung: Field studies of Mediterranean systems (Übung)		6 SWS
Prüfung: Protokoll (max. 20 Seiten) Prüfungsvorleistungen: Seminar talk (approx. 20 minutes) Prüfungsanforderungen: Qualitative and quantitative knowledge of terrestrial and marine animal communities of the Mediterranean region; knowledge of biodiversity levels and assignment to trophic animal groups. Knowledge of the influence of environmental factors on these animal communities.		6 C
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Englisch	Modulverantwortliche[r]: Prof. Dr. Stefan Scheu	
Angebotshäufigkeit: jedes Sommersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 18		

Georg-August-Universität Göttingen Modul M.Biodiv.450: Impact of global climate change on plant communities and their functional traits <i>English title: Impact of global climate change on plant communities and their functional traits</i>		6 C 8 SWS
Lernziele/Kompetenzen: The students • have profound knowledge of interactions between plants • have an overview of completion research • understand the concept of “functional traits” of species and communities • are able to analyze the reaction of plants to the main factors of global climate change experimentally • have profound knowledge of the design and statistical (variance analytical) analysis of ecological experiments • are able to present the results of ecological experiments in accordance with scientific standards in written and oral form.		Arbeitsaufwand: Präsenzzeit: 112 Stunden Selbststudium: 68 Stunden
Lehrveranstaltung: Impact of Global Climate Change on Plant Communities (Vorlesung)		2 SWS
Lehrveranstaltung: Impact of Global Climate Change on Plant Communities (Übung)		6 SWS
Prüfung: Protokoll (max. 10 Seiten)		6 C
Prüfungsanforderungen: Knowledge of plant interactions and of the concept of “functional traits”. Knowledge of experimental methods and statistical procedures in botanical (population) ecology. Knowledge of strategies for the adaption of plants to climate change.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Englisch	Modulverantwortliche[r]: Dr. Dietrich Hertel	
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 12		

Georg-August-Universität Göttingen Modul M.Biodiv.478: Field studies in systematics, biodiversity and ecology of marine invertebrates <i>English title: Field studies in systematics, biodiversity and ecology of marine invertebrates</i>		6 C 8 SWS
Lernziele/Kompetenzen: Students acquire in-depth knowledge of zoological systematics, biology, ecology and biodiversity of marine invertebrates. In particular communities of rocky shores and sandy beaches are analysed and compared. This includes the identification of marine invertebrates, the ecological characteristics of the different habitats and the systematics of various animal groups, e.g., Annelida, Plathelminthes or Cnidaria. One focus is on the demonstration and realisation of various methods for collecting marine animals. Field work takes place during low tide or is carried out with the help of a research vessel. After an introduction to the diversity of marine invertebrates, students will carry out their own field or laboratory experiments on given questions. The practical course takes place at the marine biology station "Estación de Biología Marina de A Graña" in Galicia, Spain. Alternatively, it can also be carried out at stations in other European countries or in Germany.		Arbeitsaufwand: Präsenzzeit: 112 Stunden Selbststudium: 68 Stunden
Lehrveranstaltung: Introduction to marine biology (Vorlesung)		2 SWS
Lehrveranstaltung: Field studies in systematics, biodiversity and ecology of marine invertebrates (Übung, Seminar)		6 SWS
Prüfung: Präsentation (ca. 15 Minuten)		6 C
Prüfungsanforderungen: Knowledge of different marine invertebrates and their systematics, biology and ecology. Knowledge of marine habitats.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Englisch	Modulverantwortliche[r]: Prof. Dr. Christoph Bleidorn	
Angebotshäufigkeit: jedes Sommersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 12		

Georg-August-Universität Göttingen Modul M.Biodiv.482: Field studies in conservation biology <i>English title: Field studies in conservation biology</i>		6 C 4 SWS
Lernziele/Kompetenzen: M.Biodiv.482 is a flexible module that allows for targeted ECTS credit collection. Credits will be awarded for one of the following activities: • An individual student research project, practical or internship, e.g. with a conservation NGO, in conservation administration or at a research institution. The project needs to be agreed with staff of the Conservation Biology department beforehand. • A tailored research project offered by members of the Conservation Biology Department, e.g. via https://uni-goettingen.de/en/join+us/129605.html. Students will acquire knowledge of ecosystems, species, conservation approaches, they will be involved in practical work of conservation practitioners (individual student project), or they will be trained individually in data collection, analysis and publication (internal research project).		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Field studies in conservation biology (Übung) <i>Inhalte:</i> One of the following options: • Self-organized internship • Individual research project		4 SWS
Prüfung: Written protocol, internship report or research project report (max. 20 Seiten)		6 C
Prüfungsanforderungen: Students are able to plan an internship or a research project. They are familiar with data collection and analysis protocols and understand the presentation of data. They are able to comprehensively summarize the outcome of an internship, or an individual research project. For research internships and individual research projects, reports can be submitted in the form of a peer-review paper.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Englisch	Modulverantwortliche[r]: Prof. Dr. Johannes Kamp	
Angebotshäufigkeit: jedes Semester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl:		

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Georg-August-Universität Göttingen Modul M.Biodiv.488: Conservation biology: Ornithology <i>English title: Conservation biology: Ornithology</i>		6 C 8 SWS
Lernziele/Kompetenzen: Students acquire knowledge on the recording and biology of native bird species. This includes knowledge of species characteristics (optical, acoustic), habitat requirements, food, breeding biology, wintering, population trends and causes of endangerment. An overview of bird orders, special sensory abilities of birds and a first insight into their social systems are also part of this. The nationwide and Europe-wide monitoring of breeding birds is taught. Students learn the visual and acoustic identification of bird species in the field and mapping methods. The method of territory mapping is deepened in the exercises and includes field surveys, data evaluation and presentation of the results on maps. The use of a digital tool for recording is taught. The students acquire knowledge to compare different habitats with regard to their avifauna. Competences: Knowledge of the biodiversity of the native avifauna and its ecology as well as field methods for its quantitative survey.		Arbeitsaufwand: Präsenzzeit: 112 Stunden Selbststudium: 68 Stunden
Lehrveranstaltung: Biology of selected bird species (Vorlesung)		2 SWS
Lehrveranstaltung: Identification of birds in the field and methods in ornithology (Übung)		6 SWS
Prüfung: Protokoll (max. 20 Seiten)		6 C
Prüfungsanforderungen: Biodiversity of the indigenous avifauna as well as of field methods for its identification and evaluation of the endangerment potential on species and population level.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: Knowledge of the songs of the most common bird species	
Sprache: Englisch	Modulverantwortliche[r]: Dr. Eckhard Gottschalk	
Angebotshäufigkeit: jedes Sommersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 18		

Georg-August-Universität Göttingen Module M.Biodiv.605: Project studies in animal evolution and biodiversity		6 C 4 WLH
Learning outcome, core skills: Consolidation of morphological and molecular approaches for evolutionary biology research in zoology. Introduction to the daily routine of work in a scientific laboratory with research questions, and their planning and conceptualization. Insights into the planning and writing of scientific publications. The scientific work might be carried out in the laboratory, outdoor and/or in research stations. Independent execution and planning of research studies. Interpretation, visualization and presentation of scientific results. Scientific discussion of current topics in animal evolution and biodiversity.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Research project (Exercise)		3 WLH
Course: Current topics in animal evolution and biodiversity (Seminar)		1 WLH
Examination: Presentation (approx. 15-20 min.) and protocol in the form of a scientific publication (max. 15 pages)		6 C
Examination requirements: Elaboration and design of a scientific project and its implementation.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Christoph Bleidorn Prof. Dr. Maria Teresa Aguado	
Course frequency: each semester; after consultation	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 4		

Georg-August-Universität Göttingen Module M.FES.111: Introduction to Ecological Modelling		6 C 4 WLH
Learning outcome, core skills: Basic knowledge of classic and modern approaches for modelling dynamics of populations and communities. Skilled in analytical thinking, independent application of models for practical research questions, development of simple models, and critical assessment of the possibilities and limitations of different modeling approaches. Ability to develop an effective model concept.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Introduction to ecological modelling (Lecture,Exercise) <i>Contents:</i> Using examples from ecology in general and forest ecology in specific, we will cover the following modelling approaches and types: population growth (considering demographic and environmental noise, scramble and contest competition), metapopulation models, predator-prey models, forest growth models, patterns and dynamics of biodiversity, island biogeography, life tables, matrix models, individual-based models, and spatial models. We will also address how to develop a model concept. The course will consist of a mixture of lectures and hands-on work on the computer.		4 WLH
Examination: Term paper (max. 3 pages, 50%) and written examination (45 minutes, 50%)		6 C
Examination requirements: Term paper: Ability to develop an effective model concept. Written examination: Knowledge and understanding of essential characteristics of the modelling approaches covered in class. Ability to interpret model results. Knowledge of possibilities and limitations of the models.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Kerstin Wiegand	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 20		

Georg-August-Universität Göttingen Module M.FES.112: Biodiversity Measurement	6 C 4 WLH
Learning outcome, core skills: Genetics of populations This course will teach fundamental and applied genetic principles that are essential for the management of forest and other ecosystems to maintain their long-term health and sustainability. The course explores how genetic variation and its loss affect the ability of natural populations to adapt to changing environments. The class will focus on the interrelationship between human impact and evolutionary factors acting on genetic variation patterns in natural populations. Basic principles in population genetics (e.g. measurements of genetic variation, molecular markers techniques, the Hardy Weinberg model, changes in genetic variation by mutation, gene flow, genetic drift, selection) will be presented. Biodiversity of fungi The fungal kingdom consists of possibly up to 5.2 million distinct species of diverse ecological functions. Species biodiversity, evolution and modern taxonomy are defined in bar-coding projects by molecular markers (ITS sequences). Fungi with saprotrophic, symbiotic or pathogenic life styles differ much in their genomes by loss, gain, multiplication and diversification of genes for proteins providing important functions to deal with their specific habitats and substrates. Students will be introduced into computorial programs and DNA and protein databases to analyse fungal molecular markers, gene structures (introns, exons) and protein products (Fasta files, Clustal, MEGA, phylogenetic trees, Blast searches, Signal P) Biodiversity of communities and ecosystems The students learn about fundamental concepts how communities are structured and how their diversity and composition can be analyzed. Basic concepts of community structure (abundance, evenness, rarity), of different scales of diversity (alpha, beta, gamma) as well as of the different dimension of diversity (taxonomic, functional, phylogenetic) will be introduced. Students learn how to perform basic analyses of species diversity in the software package R.	Workload: Attendance time: 56 h Self-study time: 124 h
Course: Genetics of populations (Lecture,Exercise)	2 WLH
Course: Biodiversity of fungi (Lecture,Exercise)	1 WLH
Course: Biodiversity of communities and ecosystems (Lecture,Exercise)	1 WLH
Examination: Term Paper (max. 20 pages)	6 C
Examination requirements: Students should demonstrate sound knowledge of basic concepts in population genetics and community structure, genetic diversity parameters, different scales and dimensions of diversity , methods of fungal biodiversity assessment and of basic analysis tools for biodiversity assessment.	
Admission requirements:	Recommended previous knowledge:

none	none
Language: English	Person responsible for module: Prof. Dr. Oliver Gailing
Course frequency: each winter semester	Duration: 1 semester[s]
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:
Maximum number of students: not limited	

Georg-August-Universität Göttingen Module M.FES.113: Soil Hydrology		6 C 4 WLH
Learning outcome, core skills: The course consists of three interconnected parts. The theoretical background (1) describes the fundamental static and dynamic principles of soil water, starting with the special physical properties of water molecules continuing with the basic static traits of soil water, e.g. water content and the energy state. The latter is important for the understanding and calculation of soil water flow under saturated and unsaturated conditions. The water balance of the soils will be completed by the potential sinks of soil water in ecosystems, like e.g. drainage, evaporation, root water uptake, and transpiration. The theoretical lectures will be accompanied by experimental exercises (2): lab measurements of bulk density, water content, water potential, conductivity, pF-curve are important parameters describing the state of soil water. Additionally, automated soil lysimeters with or without plants will be provided to the students for self-initiated experiments. The self-measured hydrological and meteorological time series data are the basis for the third part (3), the modelling of soil water cycles. Based on the learned experimental and theoretical skills, the basic principles of soil water modelling are explained and practiced.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Soil Hydrology (Lecture,Exercise,Practical course)		4 WLH
Examination: Term Paper (max. 20 pages)		6 C
Examination requirements: Theoretical and experimental skills of soil hydrology		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Claudia Teutschbein	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: not limited		

Georg-August-Universität Göttingen		6 C
Module M.FES.115: Statistical Data Analysis with R		4 WLH
Learning outcome, core skills: Introduction to R as programming language for beginners, statistical data analysis including explorative data analysis, plotting, basic tests (t, F, non-parametric), ANOVA, simple linear regression, multiple regression, analysis of residuals, ANCOVA, non-linear regression, glms with focus on logistic regression, short introduction to tidyverse and ggplot; always including introduction to theory and to practical implementation in R.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Statistical Data Analysis with R (Lecture,Exercise)		4 WLH
Examination: Presentation (approx. 15 min.) with written outline (max. 10 pages)		6 C
Examination requirements: • Import data into a statistics software and perform an explorative data analysis • Display data graphically • Select appropriate statistical approaches or models for data analysis • Discuss the advantages and disadvantages of statistical approaches or models • Apply statistical approaches or models to given data • Explain and test assumptions of statistical approaches or models • Interpret the results of the data analysis • Suggest meaningful follow-up analyses • Present and explain the procedures involved in a statistical data analysis		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. Katrin Mareike Meyer	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 30		
Additional notes and regulations: 30 students are only possible if a corresponding number of computers is available		

Georg-August-Universität Göttingen		6 C
Module M.FES.122: Ecological Simulation Modelling		4 WLH
Learning outcome, core skills: • Knowledge of the modelling techniques covered; • Ability to find a suitable modeling technique for a given problem in the area of ecology and to apply it independently; • Knowledge of the current state of research in ecological modelling; • Critical appreciation and discussion of research results; • Refined presentation techniques; • Knowledge of constructive feedback techniques.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Simulation Modelling (Lecture,Exercise)		3 WLH
Course: Current Topics in Ecological Modelling (Seminar)		1 WLH
Examination: Presentation (approx. 15 min) with written outline (max. 10 pages) Examination prerequisites: Presentation (approx. 15 Minutes), ungraded		6 C
Examination requirements: • Know, explain, apply, analyse and assess model types that are applied in ecology • Know, explain, apply, analyse and assess the stages of model development along the modeling cycle • Present, explain and critically reflect a self developed simulation model • Understand and summarize published model studies and point out and discuss their possibilities and limitations		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Kerstin Wiegand	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 20		
Additional notes and regulations: 20 students are only possible if a corresponding number of computers is available. Module is also applicable for other study programs, such as MSc "Biological Diversity and Ecology", MSc "Agriculture" (specialization Ressourcenmanagement).		

Georg-August-Universität Göttingen Module M.FES.124: Modern Concepts and Methods in Macroecology and Biogeography		6 C 4 WLH
Learning outcome, core skills: The course will introduce students to the principles and modern methods in macroecology and biogeography. Students will gain a comprehensive understanding of the physical and biological processes influencing species distributions and diversity patterns worldwide. Additionally, students will be introduced to modern environmental and biodiversity modelling methods in R, which are important for analyzing and understanding the consequences of global change on species distributions. In self-directed projects, students will work with real data to solve modern macroecological problems. Through these theoretical and practical classes, students will gain a profound understanding of modern macroecological and biogeographical concepts, including threats to biodiversity and conservation prioritization.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Modern Concepts and Methods in Macroecology and Biogeography (Lecture, Exercise) <i>Contents:</i> Exercise = Computer course (3 WHL) and Lectures (1 WHL)		4 WLH
Examination: Term Paper (max. 20 pages)		6 C
Examination requirements: Students can apply knowledge about modern concepts and methods in macroecology and biogeography. They demonstrate knowledge on how to plan, conduct and report on a macroecological analysis using modern computer software.		
Admission requirements: none	Recommended previous knowledge: Basic knowledge in R is a central pre-requisite to attend this module	
Language: English	Person responsible for module: Prof. Dr. Holger Kreft	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 20		

Georg-August-Universität Göttingen Module M.FES.221: Modern Methods in Ecology		6 C 4 WLH
Learning outcome, core skills: Ecophysiology Students learn how to assess the vigor of plants by analyzing different ecophysiological parameters like photosynthesis and transpiration rate, stomatal conductance, leaf water potential and chlorophyll fluorescence. The practical course comprises an introduction into measurement technologies and conduction of an outdoor experiment to analyze the diurnal variations of those parameters. The practical course is accompanied by lectures in which the theoretical background of these parameters will be explained. Diversity Students learn about the use of biodiversity estimates in assessing different forest ecosystem functions and about mycorrhiza symbiosis. The practical part includes an individual project assessing the diversity of ectomycorrhizal fungal communities in different habitats (soil samples). The students identify fungi by both microscopic methods as well as DNA sequencing. The students calculate community diversity indices using R programming, compare the different fungal communities, and discuss possible implications for forest ecosystems.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Ecophysiology (Lecture,Exercise)		2 WLH
Course: Diversity (Lecture,Exercise)		2 WLH
Examination: 2 protocols (each max. 10 pages, each 50%)		6 C
Examination requirements: Knowledge of important ecophysiological parameters, self-reliant determination of ecophysiological parameter using suitable measurement devices, precise documentation of data and interpretation of this data in the scientific context.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. Ines Teichert	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 24		

Georg-August-Universität Göttingen Module M.FES.311: Tropical Forest Ecology and Silviculture		6 C 4 WLH
Learning outcome, core skills: General understanding of ecological concepts regarding tropical forests and their characteristics. Critically analyse silvicultural systems considering their advantages and drawbacks.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Tropical forest ecology and silviculture (Lecture) <i>Contents:</i> This course focuses on the ecology of tropical rain forests, threats to forests and options for ecologically sound land use. Lectures on forest ecology include characteristics of different tropical forest types such as lowland forest, montane forest, mangrove forest, and additionally the biodiversity of the forest, the role of fire, and the carbon balance of forests. More applied topics address silvicultural systems such as polycyclic and monocyclic management systems.		4 WLH
Examination: Oral examination (approx. 20 minutes)		6 C
Examination requirements: Emphasis lies on the ecology of tropical rain forests and options for ecologically sound management. Students shall know e.g. characteristics of different forest types, features of management systems and discuss land use options.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Dirk Hölscher	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: not limited		

Georg-August-Universität Göttingen Module M.FES.321: Ecopedology of the Tropics and Subtropics		6 C 4 WLH
Learning outcome, core skills: General understanding of the most important aspects of tropical and subtropical soils, their occurrence, genesis, geography, properties and use. Understanding the principles of the international FAO soil profile description and classification.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Ecopedology of the Tropics and Subtropics (Lecture) <i>Contents:</i> Part I: General introduction in soils of the tropics and subtropics, their functions, genesis, geography and properties. Objective: general understanding of the most important aspects of tropical soils, their occurrence, genesis, properties and use. The following topics will be discussed: Introduction; Climate, water and vegetation; Weathering and weathering products, clay minerals; Soil organic matter, C and N dynamic; Soil chemical reactions, variable charge; Soil forming processes and development of soils; Water and nutrient cycling of land use systems; Tropical shield areas (example: Amazon basin); Arid shields and platforms (example: West Africa); Tropical mountain areas (example: Andes); Fluvial and coastal areas in the tropics (example: coastal areas in Asia). Part II: Introduction in the description and classification of soils, using in international system (FAO). Objective: understanding the principles of the FAO soil profile description and classification. The course consists of introductory lectures in which the principles of the FAO soil description and classification will be explained. This knowledge will be practiced using examples of soil profiles from different tropical countries. The second part consists of a practical week during which soil profile descriptions and evaluations will be exercised in the field. We will visit three contrasting sites around Göttingen where a site and soil description will be made. The work will be done in small groups. Students discuss their results in a report.		4 WLH
Examination: Term paper (10 pages max.) and written exam (2 hours)		6 C
Examination requirements: Being able to describe, classify and evaluate soils for forestry applications in (sub)tropical regions. Understand most relevant biogeochemical processes and function of (sub)tropical soils. Calculate water and nutrient stocks in soils. Explain differences between soils in different (sub)tropical regions.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Edzo Veldkamp	
Course frequency: each summer semester	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.FES.713: Forestry in Germany		6 C 4 WLH
Learning outcome, core skills: Understanding of forestry and related industries in Germany.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Forestry in Germany (Excursion, Seminar) <i>Contents:</i> 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 utilization, labor 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) The module provides a basic understanding of the forest management in Germany including actual trends and perspectives. It is strongly suggested for foreign students who are going to undertake their project in Germany (Project: 70130 "Managing sustainable forestry systems in Germany"). The module includes various excursions.		4 WLH
Examination: Oral presentation (approx. 15 minutes, 20%) with written outline (max. 1 page, 80%)		6 C
Examination requirements: The students should know and manage and understand the topics that were covered during the field trip that AWF (Forest Inventory and Remote Sensing) offers. This includes forest mensuration, forest monitoring and forest planning. Show familiarity with current approaches, trends and future challenges in forestry and the wood-processing industry in Germany Show understanding of the overall structure of forestry and forest research in Germany and the connection between the sub disciplines Be able to communicate and critically analyse a selected aspect of German forestry in a coherent way. The written outline is a poster.		
Admission requirements: none	Recommended previous knowledge: Basic knowledge in forest management, forest planning, forest monitoring.	
Language: English	Person responsible for module: Prof. Dr. Oliver Gailing	
Course frequency: each summer semester	Duration: 1 semester[s]	

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

Georg-August-Universität Göttingen Module M.FES.718: Botanical/Biogeographical Excursion		6 C 4 WLH
Learning outcome, core skills: The students have a broad and comprehensive overview of the biotic and abiotic characteristics at the excursion destination including flora, vegetation, land-use, topography, geology and climate. They have familiarized with the flora of a foreign biogeographic region and are able to identify local plant species using identification literature. In addition, they are able to plan and perform different kinds of vegetation sampling methods in the field. In the seminar, the students have prepared themselves under guidance for exploring the nature of a foreign place and are able to plan future scientific expeditions. They have gained a profound understanding of biogeographical as well as plant and vegetation ecological principles related to both general theories and the excursion destination.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Preparation Seminar for Botanical/Biogeographical Excursion (Exercise, Seminar)		1 WLH
Examination: Presentation (approx. 20 minutes, 50%) and term paper [exkursion protokoll] (max. 10 pages, 50%)		6 C
Examination requirements: Floristic, vegetation ecological and geographical characteristics at the excursion destination; basic vegetation sampling methods; alpha, beta, & gamma diversity; plant community composition and its dependence on abiotic site conditions; biogeographic concepts.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Holger Kreft	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 15		

Georg-August-Universität Göttingen Module M.FES.721: Ecological Functions of Wildlife: Implications for Conservation and Management		6 C 4 WLH
Learning outcome, core skills: Animals fulfill various ecological roles within ecosystems. For example, many vertebrate species act as 'mobile links' and transport genetic material or organic matter across large spatial extends. Similarly, the presence or absence of large carnivores, or the abundance of large herbivores in an ecosystem can substantially impact its properties. While the reciprocal relationships between animals and the environment have long been recognized in ecology, we are only now realizing how important anthropogenic activities are for the functions that animals have in ecosystems. The aim of the course is to provide students with an overview of the ecological functions of vertebrate animals and why considering human influences on vertebrate species can be crucial for ecosystem management and biodiversity conservation. In addition, the course will also provide students with a basic understanding on how to investigate these functions and their consequences for ecosystem functions and services		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Ecological functions of wildlife: implications for conservation and management (Lecture,Seminar)		4 WLH
Examination: Oral Presentation (approx. 20 minutes) Examination prerequisites: Written exam (30 minutes)		6 C
Examination requirements: To successfully complete the course, students have to demonstrate a general understanding of 1. functions fulfilled by vertebrates within ecosystems; 2. human impacts on these ecosystem functions; 3. how to analyze animal-ecosystem relationships; 4. the implications of animal-ecosystem relationships for management and conservation The written exam (examination prerequisite) will take place in the first half of the semester.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Niko Balkenhol	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students:		

40	
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Georg-August-Universität Göttingen Module M.FES.729: Biodiversity and Ecosystem Functioning		6 C 4 WLH
Learning outcome, core skills: In this course, students will learn and discuss concepts related to the relationship between biodiversity and ecosystem functioning, how this field has been developing and potential implications for the management of natural resources and conservation. Moreover, we will explore theoretical basis of biodiversity-ecosystem functioning relationships and the underlying mechanisms as well as the influence of interactions between organisms of multiple trophic levels, contrasting facets of biodiversity, and multifunctionality. Students will also be introduced to various empirical approaches used to assess the relationship between biodiversity and ecosystem functioning, from the use of experimental assemblages to monitoring studies. To become familiar with the different experimental approaches, we will visit some of the current plant biodiversity experiments in Germany.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Biodiversity and ecosystem functioning (Lecture,Excursion,Seminar)		4 WLH
Examination: Presentation (approx. 20 minutes, 40%) and project report (max. 15 pages, 60%)		6 C
Examination requirements: In self-directed projects, students are expected to develop research questions in the biodiversity-ecosystem functioning framework using their knowledge on concepts and theoretical basis of biodiversity and ecosystem functioning and design a methodological approach to assess it. Moreover, students are expected to lead discussions on biodiversity and ecosystem functioning related topics and develop their critical thinking.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. Nathaly Guerrero	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: cf. examination regulations	Recommended semester:	
Maximum number of students: 20		

Georg-August-Universität Göttingen Modul M.Forst.212: Ökologische und politische Grundlagen des Waldnaturschutzes <i>English title: Ecology and Politics of Forest Nature Conservation</i>		6 C 4 SWS
Lernziele/Kompetenzen: Ziel ist der Erwerb vertiefter Kenntnisse zu naturschutzpolitischen Instrumenten und ökologischen Grundlagen, welche Konzepte und aktive Umsetzung von Naturschutz im Wald beeinflussen. Die Studierenden erkennen die Bedeutung waldökologischer Beziehungen auf stofflicher und organischer Ebene für die Entwicklung eines wirkungsvollen Naturschutzes und können diese in bestehende Naturschutzstrategien einordnen. Die Studierenden erwerben zudem vertiefte Kenntnisse zu gesellschaftlichen und staatlichen Akteuren der Naturschutzpolitik sowie zu ausgewählten Steuerungsinstrumenten.		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Ökologische und politische Grundlagen des Waldnaturschutzes (Seminar) <i>Inhalte:</i> • Zielgerichteter Umgang mit Originalliteratur zu den Themenfeldern Ökosystemforschung, Waldökologie und Stoffhaushalt, Diversität von Tieren und Pflanzen sowie Waldnaturschutz und Naturschutzpolitik • Umsetzung ökologischer Kenntnisse in Waldnaturschutzkonzepte • Handlungspotentiale der Akteure und die Potentiale der Instrumente für die Lösung von Konflikten im Waldnaturschutz		4 SWS
Prüfung: Referat (ca. 20 Minuten) mit schriftl. Ausarbeitung (max. 10 Seiten) Prüfungsvorleistungen: Regelmäßige Teilnahme		6 C
Prüfungsanforderungen: • Kenntnisse und Verständnis ökologischer Grundlagen und der sich daraus ergebenden gesellschaftlichen Konfliktfelder im Waldnaturschutz • Kenntnisse und Verständnis der Rolle politischer Akteure und der Steuerungspotentiale politischer Instrumente. • Entwicklung von Präsentations- und Diskussions-Kompetenz		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Andreas Schuldt	
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester	
Wiederholbarkeit: gemäß Prüfungs- und Studienordnung	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: nicht begrenzt		

Georg-August-Universität Göttingen Modul M.Forst.214: Biodiversität <i>English title: Biodiversity</i>		6 C 4 SWS
Lernziele/Kompetenzen: Die Studierenden kennen Konzepte und Inhalte moderner Biodiversitätsforschung. Sie haben theoretisches Wissen darüber erworben, welche Funktionen Biodiversität z.B. im Zusammenhang mit der Stabilität und Funktionalität von Ökosystemen erfüllt. Sie kennen methodische Ansätze und Indizes, um die Biodiversität auf unterschiedlichen Ebenen biologischer Organisation (molekular, organismisch, ökosystemar) und räumlicher Skala (lokal, regional, global) zu quantifizieren, zu analysieren und zu bewerten. Die Studierenden erwerben Kenntnisse zur prozess-basierten Modellierung und zur fortgeschrittenen statistischen Analyse von Biodiversitätsmustern.		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Biodiversitätstheorien (Seminar)		1 SWS
Lehrveranstaltung: Funktionelle Biodiversität (Vorlesung, Exkursion)		1 SWS
Lehrveranstaltung: Quantifizierung und Analyse von Biodiversität (Übung, Seminar)		2 SWS
Prüfung: Klausur (120 Minuten) und unbenotete Präsentation (ca. 15 Minuten) Prüfungsanforderungen: • Moderne Konzepte, Verfahren und Methoden der Quantifizierung und Analyse von Biodiversität kennen und anwenden • Diversitätsaufnahmen planen und analysieren • Lebensweisen von Pilzen und ihre Funktionen in ihren Biotopen kennen und ableiten • Beziehungen zu anderen Organismen und Einflüsse von Pilzen auf Biodiversität erkennen und ableiten • Methoden zur Bestimmung von Pilzarten und zur genetischen Biodiversität kennen • Biodiversitätstheorien und verwandte Konzepte kennen, erläutern, anwenden und analysieren • Biodiversitätstheorien in einer Debatte erörtern • Naturschutzrelevanz von Biodiversitätstheorien kritisch beurteilen		6 C
Prüfungsanforderungen: Kenntnisse über Konzepte und Inhalte moderner Biodiversitätsforschung und über Funktionen von Biodiversität im Zusammenhang mit der Stabilität und Funktionalität von Ökosystemen; Moderne Verfahren und Methoden der Quantifizierung und Analyse von Biodiversität.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Holger Kreft	
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester	

Wiederholbarkeit: gemäß Prüfungs- und Studienordnung	Empfohlenes Fachsemester:
Maximale Studierendenzahl: 15	

Georg-August-Universität Göttingen Modul M.Forst.222: Klima- und Bodenschutz <i>English title: Climate and Soil Protection</i>		6 C 4 SWS
Lernziele/Kompetenzen: Die Studierenden werden die wichtigsten Prozesse im Klimasystem und insbesondere deren Wechselwirkungen mit Landökosystemen verstehen. Wissen zur Rolle von Wäldern im Klimaschutz, zum Kohlenstoffkreislauf auf lokaler und globaler Ebene sowie zu den wichtigsten Messverfahren zum Kohlenstoffkreislauf und zur Meteorologie wird vermittelt. Die Studierenden werden die Fähigkeit zur Interpretation von Messgrößen und der entsprechenden Prozesse sowie Fähigkeit zur Anwendung von Konzepten und Formeln zur quantitativen und qualitativen Beschreibung der Prozesse erlangen. Zudem werden sie die aktuellen Fragestellungen im Bereich Klimawandel, Boden und Wald (z.B. Kohlenstoffsенke, Messungen) verstehen und bewerten können.		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Klima- und Bodenschutz (Vorlesung, Übung) <i>Inhalte:</i> Waldökosysteme agieren als Quellen und Senken für CO ₂ in der Atmosphäre und sind somit wichtige Komponenten des globalen Klimasystems. Dabei wird CO ₂ durch die Assimilation der Vegetation aufgenommen und durch die Respiration von Böden und Vegetation abgegeben. Ihr Verhältnis bestimmt den Netto-CO ₂ -Fluss eines Waldgebietes und die Schutzfunktion des Ökosystems Wald auf das Klima. Identifizierung, Erhalt und Schutz der Klimaschutzfunktion von Landökosystemen sind wichtige Aufgaben im Bereich Waldnaturschutz. Ziel dieses Methodenpraktikums ist es, die Kohlenstoffspeicherung in Böden und im Gesamtökosystem zu quantifizieren und ihre Einflussfaktoren zu identifizieren. Dazu werden die Studierenden unter anderem die Eddy-Kovarianz Methode kennenlernen und Messungen an einem Wald- und an einem Wiesen-Standort durchführen. Somit können beide Ökosysteme verglichen werden. Des Weiteren werden direkte CO ₂ -Flussmessungen aus dem Boden in die Atmosphäre mit Bodenhauben durchgeführt und Methoden zur Quantifizierung von Bodenkohlenstoff vermittelt.		4 SWS
Prüfung: Hausarbeit (max. 10 Seiten, 60%) und Präsentation (ca. 20 Minuten, 40%)		6 C
Prüfungsanforderungen: Verständnis der Rolle von Wäldern im Klimaschutz, des Kohlenstoffkreislaufs auf lokaler und globaler Ebene sowie der wichtigsten Messverfahren zur Meteorologie und zum Kohlenstoffkreislauf in Waldökosystemen. Fähigkeit zur Interpretation von Messgrößen und der entsprechenden Prozesse sowie Fähigkeit zur Anwendung von Konzepten und Formeln zur quantitativen und qualitativen Beschreibung der Prozesse.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Alexander Nils Knohl	

Angebotshäufigkeit: jedes Sommersemester	Dauer: 1 Semester
Wiederholbarkeit: gemäß Prüfungs- und Studienordnung	Empfohlenes Fachsemester:
Maximale Studierendenzahl: nicht begrenzt	

Georg-August-Universität Göttingen Modul M.Forst.739: Grundlagen und Anwendung Geografischer Informationssysteme in den Lebenswissenschaften <i>English title: Basics and application of Geographic Information Systems in life sciences</i>		6 C 2 SWS
Lernziele/Kompetenzen: Nach erfolgreichem Abschluss des Moduls sind die Studierenden in der Lage selbständig QGIS-Projekte und die zugehörigen Geodaten zu erstellen und zu verwalten, räumliche Analysen für Vektor- und Rasterdaten durchzuführen und wissenschaftliche Kartenlayouts anzufertigen.		Arbeitsaufwand: Präsenzzeit: 6 Stunden Selbststudium: 174 Stunden
Lehrveranstaltung: Grundlagen und Anwendung Geografischer Informationssysteme in den Lebenswissenschaften (Übung) <i>Inhalte:</i> Die Übung vermittelt grundlegende Kenntnisse zu Geographischen Informationssystemen (GIS; im Kurs QGIS) und wird als ILIAS-Selbstlernmodul angeboten. Das Lernmodul umfasst Hintergrundinformationen, Übungsaufgaben sowie Wissen zur praktischen Durchführung der Übungen in QGIS. Die Wissensvermittlung erfolgt mittels erläuternder Texte sowie kurzer Videosequenzen. Die Studierenden erwerben Kenntnisse und Kompetenzen • zur Anlage und Administration von GIS-Projekten, • zu Datenformaten und -management (Raster-/Vektordaten) • zu Datenquellen und -generierung (Digitalisierung, mobiles GIS, Online-Quellen wie WMS-/WFS-Dienste, etc.), • zum Umgang und der Arbeit mit Vektorattributdaten, • zur räumlichen Analyse von Vektor- und Rasterdaten, • zu Koordinatenbezugssystemen, • zu Symbologie-Optionen von Vektor- und Rasterdaten, sowie • zur Erstellung wissenschaftlicher Karten.		2 SWS
Prüfung: Klausur (90 Minuten)		6 C
Prüfungsanforderungen: Nachweis von Hintergrund- sowie Praxiswissen zu Geografischen Informationssystemen (QGIS): Projekterstellung und -verwaltung, Datenformate, -quellen und -generierung, <i>Handling</i> von Vektorattributdaten, räumliche Analysen von Vektor- und Rasterdaten, Koordinatenbezugssysteme, <i>Layout</i> -Optionen		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch, Englisch	Modulverantwortliche[r]: Dr. Inga Schmiedel	
Angebotshäufigkeit: jedes Semester	Dauer: 1 Semester	
Wiederholbarkeit: gemäß Prüfungs- und Studienordnung	Empfohlenes Fachsemester:	

Maximale Studierendenzahl:	
40	
Bemerkungen: Dieses Modul kann nicht von Studierenden des Schwerpunktes "Waldnaturschutz" belegt werden. Sobald das Modul M.Forst.739 erfolgreich absolviert wurde, kann das Modul M.Forst.221 nicht mehr belegt werden.	

Georg-August-Universität Göttingen Modul M.Forst.786: Wald-Wild-Seminar <i>English title: Forest-Game-Seminar</i>		6 C 4 SWS
Lernziele/Kompetenzen: Fähigkeit zur sicheren Anwendung waldbaulicher, wildbiologischer und jagdkundlicher Methoden im Umgang mit Schalenwild unter ökologischen und ökonomischen Aspekten.		Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Wald-Wild-Seminar (Übung,Seminar) <i>Inhalte:</i> Das Seminar beleuchtet den Wald-Wild-Konflikt aus verschiedenen Perspektiven. Dabei wird der Wald-Wild-Konflikt aus Sicht der Forstwirtschaft, des Naturschutzes, der Wildtierbiologie und der Jagd beleuchtet. Die Studierenden erarbeiten in Kleingruppen vorgegebene Themen zum Wald-Wild-Konflikt (z. B. Einfluss von Wildtieren auf Vegetation, Wilddichten und Wildschäden, Störungen durch Menschen oder die Rückkehr von Großprädatoren und der Wald-Wald-Konflikt). Neben der Präsentation bilden fachliche Diskussionen nach den Präsentationen einen wesentlichen Bestandteil des Seminars.		4 SWS
Prüfung: Präsentation (ca. 30 Minuten)		6 C
Prüfungsanforderungen: Sachliche und objektive Präsentation eines vorgegebenen Themas des Wald-Wild-Konfliktes unter der Berücksichtigung der aktuellen wissenschaftlichen Primärliteratur. Aktive Teilnahme an Diskussionen.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine	
Sprache: Deutsch	Modulverantwortliche[r]: Maximilian Hohm	
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester	
Wiederholbarkeit: gemäß Prüfungs- und Studienordnung	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 16		

Georg-August-Universität Göttingen Modul M.Geg.03: Globaler Umweltwandel / Landnutzungs- / Landbedeckungsänderung <i>English title: Global Environmental Change / Land Use Change / Land Cover Change</i>	6 C 4 SWS
Lernziele/Kompetenzen: Die Studierenden verfügen über ein Überblickswissen zur Forschung über Klimawandel und Global Change. Die Studierenden sind in der Lage: • Veränderungen der Umwelt unter dem Einfluss des Menschen zu analysieren, • typische Syndrome und Syndromkomplexe zu erkennen und zu verstehen, • Global Change als zentrales Thema der Geographie an der Schnittstelle von Natur- und Gesellschaftswissenschaften zu erkennen, • Adaptation- und Mitigation-Ansätze zu bewerten. Modulinhalte der Vorlesung: Das Modul bearbeitet in der Vorlesung folgende Themen: • Basiswissen Klimawandel – Summary der IPCC Reports, • Industrielle Revolution und ihre anhaltende Raumwirksamkeit, • Kippelemente mit direkter und indirekter Wirkung auf die zukünftige Menschheitsentwicklung, • Bevölkerungsentwicklung und Ernährungssicherung, • Globale und regionale Wasserressourcen, • Globaler Umweltwandel und Gesundheit der Menschheit (Global Health - One Health Ansatz), • Energieversorgung der Menschheit - Transformation der Energiesysteme. Modulinhalte des Seminars: Das Seminar nimmt aktuelle Themen des Globalen Umweltwandels auf. Die Studierenden sind in der Lage, Diskurse zu Klimawandel, Umweltveränderungen und Ressourcenverknappung, Entwaldung und Fragmentierung der Landschaft anhand von Fallbeispielen zu verstehen.	Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Globaler Umweltwandel (Global Change) (Vorlesung)	1 SWS
Lehrveranstaltung: Spezielle Fallbeispiele des Globalen Umweltwandels (Seminar)	3 SWS
Prüfung: Referat mit Ausarbeitung (ca. 30 Min., max. 20 S.) oder Projektbericht (max. 20 S.) mit Projektpräsentation (ca. 30 Min.) Prüfungsvorleistungen: Regelmäßige Teilnahme am Seminar	6 C
Prüfungsanforderungen: Die Studierenden erbringen den Nachweis, dass sie das Grundlagenwissen im Bereich des globalen Klima- und Umweltwandels beherrschen und den Forschungsstand zu Klimawandel und Global Change überblicken. Ferner erbringen sie den Nachweis, dass sie die Veränderungen der Umwelt unter anthropogenen Einfluss analysieren,	

typische Syndrome und Syndromkomplexe erkennen und verstehen sowie Adaptions- und Mitigationsansätze bewerten können. Darüber hinaus erbringen die Studierendenden den Nachweis, dass sie Diskurse zu Klimawandel, Umweltveränderungen und Ressourcenverknappung, Entwaldung und Fragmentierung der Landschaft, anhand von Fallbeispielen zu verstehen können.

Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine
Sprache: Deutsch	Modulverantwortliche[r]: Prof. Dr. Martin Kappas
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:
Maximale Studierendenzahl: 40	

Georg-August-Universität Göttingen Module M.INC.1001: International Nature Conservation		6 C 4 WLH
Learning outcome, core skills: In the seminar the following topics will be discussed: International Conventions (CBD, CMS, CITES, RAMSAR, UNCCD, UNFFCCC, MAB), International Agencies (IUCN, UNEP, WCMC, IPBES, Development Organisations), North-South Issues (Ecological Footprint, Land Grabbing, Management and Research Capacities, Biodiversity Governance), Protected Area Management (Theoretical Base, CBD working programme PoWPA, UNESCO, Adaptive Management), Communication and Education, Sustainable Financing of Conservation - Basics and Instruments (Carbon & Biodiversity, REDD+, CDM, PES), Valuing Biodiversity (TEEB), Business and Management plans (long-term financial planning, new revenues, Strategic Environmental Assessment (SEA)/Environmental and Social Impact Assessment (ESIA), Certification Schemes (FSC, MSC, RSPO) and how to deal with them.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: International Nature Conservation (Lecture)		2 WLH
Course: International Nature Conservation (Seminar)		2 WLH
Examination: Written examination (90 minutes) Examination prerequisites: Presentation (Approx. 30 min. in the seminar, or term paper, max. 10 pages, ungraded)		6 C
Examination requirements: The students understand the principles and concepts of international nature conservation, and they are able to apply this knowledge to conservation projects of different focuses. They are familiar with the various approaches in the field of applied conservation, and they can plan the steps necessary to implement an applied conservation project. In the seminar, the students focus on one of the topics mentioned above. They are able to apply theoretical knowledge to regional problems, and they can represent relevant cases of studies in a presentation or an assignment according to scientific standards.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Johannes Kamp	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1	
Maximum number of students: 15		

Georg-August-Universität Göttingen Module M.INC.1003: Animal Conservation		6 C 4 WLH
Learning outcome, core skills: In the lecture "Animal ecology" students will learn about advanced principles and theories of ecology and will be introduced to current topics of ecological research. Focus in this lecture are e.g. models of populations, functional reactions, experimental analyses and modelling of interactions and food webs, macro-ecological correlations and theories. The module part "Origins of Conservation Biology" addresses the development of Conservation Biology as scientific field. It shows how important findings from Animal Ecology and Biogeography have shaped our understanding of human impact on animal communities and populations.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Animal Ecology (Lecture)		2 WLH
Examination: Written examination (90 minutes)		3 C
Course: Origins of Conservation Biology (Lecture)		2 WLH
Examination: Written examination (90 minutes)		3 C
Examination requirements: Knowledge of basic principles and theories of ecology, population models, functional reactions, analyses and modelling of organismic interactions and food webs as well as macro-ecological correlations. Understanding of Animal Ecology and Biogeography as basis for the development of Conservation Biology, knowledge on results of major studies carried out at community and population level.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. rer. nat. Matthias Waltert	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 10		

Georg-August-Universität Göttingen		6 C
Module M.INC.1004: Protected Areas		10 WLH
Learning outcome, core skills: This module offers insights into the physical conditions, human use history and management options of Central European protected areas. During a set of single- or two-day excursions students will learn to know conservation objectives for protected areas of different legal status and deal with issues of ownership and relationships between actors involved in the management. At least one excursion will deal with the cultural landscape. The module also allows to deepen faunistic-ecological knowledge relevant for conservation practice, e.g. the assessment of conservation indicator groups.		Workload: Attendance time: 140 h Self-study time: 40 h
Course: Nature Conservation (Lecture)		2 WLH
Course: Biodiversity and Conservation (Excursion)		8 WLH
Examination: Assignment (max. 25 pages)		6 C
Examination requirements: Written paper describing the concrete case of a conservation site visited, with emphasis on the options and challenges to manage its biodiversity.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. rer. nat. Matthias Waltert	
Course frequency: each summer semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 2	
Maximum number of students: 2		
Additional notes and regulations: Can´t be combined with B.Biodiv.340: Naturschutzbiologie		

Georg-August-Universität Göttingen Module M.INC.1005: Population biology in nature conservation		6 C 8 WLH
Learning outcome, core skills: Study of the methodology of an endangerment analysis (population viability analysis, PVA) of an animal species (case study partridge). The students determine causes of endangerment and develop options for the nature conservation in the cultural landscape. The students transfer empirically collected own data and data from the literature to a population model and develop a modeling of an endangered animal population. Core skills: collection and analysis of field data; use of population models; development of management options for an endangered animal species; knowledge of the telemetry as an important method for the registration of movement patterns of vertebrates.		Workload: Attendance time: 112 h Self-study time: 68 h
Course: Population viability analysis (Lecture)		
Course: Population viability analysis (Exercise)		
Examination: Assignment (max. 20 pages) Examination prerequisites: Presentation (15 min)		6 C
Examination requirements: Knowledge of the potential endangerment of specific animal species and measures for their protection in the cultural landscape. Modeling of endangered animal populations.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. Eckhard Gottschalk	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1	
Maximum number of students: 12		

Georg-August-Universität Göttingen Module M.INC.1006: Data analysis for field biologists		6 C 8 WLH
Learning outcome, core skills: In this module, we provide an introduction to data analysis in the R programming environment. We cover data collection and organization, sampling designs in observational studies and statistics. We will work with a collection of field datasets, while also introducing how to find and work with open-access ecological and environmental data. We visualize our data throughout and develop skills in reproducible coding and version control. The course participants will learn how to use classical hypothesis testing, linear regression and Generalized (mixed) linear models. If progress allows, we will introduce models that can be used to correct for varying detection probability and approaches to extract, analyses and visualize spatial data. Students will learn how to use data science tools to address research questions, implement version control to back up work, code collaboratively and write reproducible workflow reports. Core skills acquired: Ability to organize, transform and process data in R, ability to critically judge sources of bias resulting from data collection and analysis, ability to choose appropriate tools for the analysis of different types of data (e.g., categorical vs. continuous variables), skills to graphically present key messages, ability to report and interpret statistical results.		Workload: Attendance time: 112 h Self-study time: 68 h
Course: Data analysis for field biologists (Lecture)		5 WLH
Course: Data analysis for field biologists (Exercise)		3 WLH
Examination: Assignments (max. 25 pages)		6 C
Examination requirements: Participants understand data structures and are able to organize, visualize and summarize data. They can judge on the quality of sampling designs, can apply statistical models, can use the R language to create and execute reproducible workflows, are able to troubleshoot code errors and write efficient and well-annotated code. They can visualize data and models, and are able interpret and report statistical results.		
Admission requirements: none	Recommended previous knowledge: No previous knowledge of R and R Studio is required. Basic skills of organizing and processing data in spreadsheet programs such as Excel are useful.	
Language: English	Person responsible for module: Prof. Dr. Johannes Kamp Dr. Gergana Daskalova	
Course frequency: each winter semester; (Block course)	Duration: 1 semester[s]	
Number of repeat examinations permitted:	Recommended semester:	

twice	1
Maximum number of students: 15	

Georg-August-Universität Göttingen Module M.INC.1007: Assessment of wildlife species for nature conservation		6 C 8 WLH
Learning outcome, core skills: Population monitoring of endangered species is an essential component of adaptive conservation management. Therefore, students need to acquire basic theoretical and practical knowledge of population assessment and monitoring of animal populations. Graduates of the course will be able to design, conduct and analyze surveys that allow precise and defensible population estimates. In the module, the theoretical basics for quantitative surveys are taught, and practical experience in designing and conducting wildlife surveys is presented. The understanding of concepts such as strip width, cluster size, encounter rate, detection probability, as well as the influence of these variables on the estimation of population density/abundance and their variance will be taught. In the exercise part, concrete data will be analyzed using the Distance Sampling framework (e.g. Buckland et al. 2001). Line transect data of vertebrates (birds, primates, other large mammals) from tropical habitats (savannah and forest) are made available.		Workload: Attendance time: 112 h Self-study time: 68 h
Course: Theoretical background of population assessment (Lecture)		2 WLH
Course: Analysis, interpretation and communication of population data (Exercise)		6 WLH
Examination: Minutes / Lab report Minutes / Lab report (max. 20 pages) Examination prerequisites: Oral presentation (ca. 15 minutes)		6 C
Examination requirements: Basics of adaptive conservation management and knowledge of the realization of wildlife surveys. Basics on survey design and practice-oriented estimation of wildlife populations.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. rer. nat. Matthias Waltert	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 20		

Georg-August-Universität Göttingen Module M.INC.2001: Internship semester		30 C
Learning outcome, core skills: The students absolve a 12-week internship at either one or two organizations of nature conservation, preferably abroad. The aim of the internship semester is to acquire hands-on experience in nature conservation alongside experienced practitioners. Conservation scientific assignments can also be accredited. The internship will broaden knowledge and provide experience by working intensively on a specific conservation topic and will add focus to their expertise.		Workload: Attendance time: 0 h Self-study time: 900 h
Course: Internship-Semester (Internship) <i>Contents:</i> Internship at a body involved with conservation practice (min. 12 weeks duration). The topic of the internship needs to be permitted by the module coordinator.		
Examination: Internship report in English (max. 25 pages) Examination prerequisites: Completion of an internship for at least 12 weeks in a full-time position; Handing in an original letter of the internship organization confirming the completion of the internship including duration, time, place and tasks.		30 C
Examination requirements: The students have worked successfully in a conservation project of their own choice. They achieved the knowledge necessary to assist in this project, and are able to present evidence for the success of conservation interventions. They are also able to critically evaluate interventions and make recommendations for eventual improvement. In this way, they contribute to the implementation of contemporary standards of conservation work.		
Admission requirements: One completed study semester at either Goettingen or Lincoln University	Recommended previous knowledge: None	
Language: English	Person responsible for module: Prof. Dr. rer. nat. Matthias Waltert	
Course frequency: each semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 2 - 3	
Maximum number of students: not limited		

Georg-August-Universität Göttingen Module M.INC.ECOL.608: Research Methods in Ecology	10 C 13 WLH
Learning outcome, core skills: On completion of this course, students should be able to: Explain and use basic biometric techniques Develop a client-based research project structured using the principles of scientific method Communicate research findings to clients and peers using effective written and oral presentation styles Discuss the theory of research programme development and evaluation. Construct a scientific blog entry Discuss the philosophy of biology Obtain information from library databases Topics · Science method · Communicating science · Statistical methods · Science and Maori · Science and the public · Science and ethics · Grant writing	Workload: Attendance time: 182 h Self-study time: 118 h
Course: 1. Web of Science report	
Examination: Written report (max 4 p)	
Course: 2. Practical course: Research Methods in Ecology	
Examination: Oral presentation (ca 10 min)	
Course: 3. Practical course: Preparing Grant Application	
Examination: Written assignment (max 3 p)	
Course: 4. Blog article	
Examination: Electronic file prepared (max 1 p)	
Course: 5. Statistics report	
Examination: Written assignment and analyses (max 10 p)	
Examination requirements: There is no exam for this course	

Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: Adrian Paterson
Course frequency: each winter semester	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.ECOL.609: Conservation Biology		10 C 13 WLH
Learning outcome, core skills: An advanced study of the ecological, genetic and biogeographical principles underlying conservation biology and their application to conservation management issues. Conservation Biology aims to provide students with an understanding of the ecological principles of conservation biology and nature conservation, and the application of these principles to conservation management. This is achieved by the production of a scientific paper, a popular article and scientific reviews and discussions of conservation issues.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: 1. Seminar: Conservation Biology (Seminar)		2 WLH
Examination: Presentation (ca 20 min)		2 C
Course: 2. Practical course: Production of a scientific paper		3 WLH
Examination: Scientific paper (max 15-20 p)		4 C
Course: 3. Practical course: Production of a popular article		3 WLH
Examination: Popular article (max 10 p)		4 C
Examination requirements: Students have the opportunity to analyze scientific data and write a scientific journal article and also practice writing for the "public" by preparing a "popular article" for a newspaper or magazine. Critiquing skills are also taught by reviewing scientific journal articles.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. G. Stewart	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.ECOL.612: Wildlife Management		10 C 13 WLH
Learning outcome, core skills: Study of the principles and techniques involved in the manipulation of populations, habitats and people in order to manage wild animal populations. Detailed investigations of selected case studies. Wildlife management involves conservation of threatened species, control of unwanted pests, and sustainable use of harvested species. This course traverses these three topics through weekly 2-hour seminar discussions of selected New Zealand and international wildlife case studies. The biology of various wildlife species is considered, together with the social, political and economic factors that influence their management.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: 1. Seminar: Wildlife Management (Seminar)		2 WLH
Course: 2. Practical course: Wildlife Management		4 WLH
Examination: Written exam (180 min)		6 C
Examination requirements: During the course students are required to present four selected scientific papers to the other students in the class. During these presentations students learn what is required when writing scientific papers (i.e. presentation of results) and this leads onto the Final Exam where students are required to convert a research report in a document suitable for publication in an international journal.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. James Ross	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.ECOL.631: Animal Behaviour		10 C 13 WLH
Learning outcome, core skills: This course prepares students for advanced study of the behaviour of animals. The course provides an understanding of the role that behaviour plays in the life histories and evolution of birds. On completion of this course you should understand how to measure behaviour, the evolution of behaviour, communication, learning aversions, and its origin and present functions, and implications of optimality models. Students should have a strong interest in animal behaviour (including human behaviour), the scientific method and field work.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture <i>Contents:</i> Topics • Behavioural methodology • Optimality • Levels of analysis • Bird vocalisations • Learning aversion • Behaviour and conservation • Comparative approaches • Communication.		2 WLH
Examination: Written summary of a recent research paper Examination requirements: Required tasks for exams: Take home exam – preparation of written summary of a current research paper. After attending this course, the students are able to critically discuss current research on: breeding strategies and helping behaviour, handicap principle of communication, optimality theory, learning aversions, vocalisations of birds, the comparative approach to behaviour, the methodological and logistical requirements of behavioural fieldwork, the use of applied behaviour, in addition they will obtain experience in: communicating ideas on behaviour, observing behaviours, using relevant tools for recording and analysing behaviour.		10 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Adrian Paterson	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen	10 C
Module M.INC.ECON.615: Applied Research Methods	13 WLH

Learning outcome, core skills: Applied research is of interest to academics and practitioners alike. It involves looking at organisations and their activities from the viewpoint of any or, indeed, all of the stakeholders. It can be conducted in both commercial enterprises and non-profit organisations. The purpose of this course is to develop effective research skills in graduate students in commerce. The course examines the analytical procedures that underlie the methods researchers use to acquire, verify and validate data and information in applied research. Emphasis throughout the course is placed on understanding the necessary research concepts and procedures (not recipes). Special attention is given to the application of statistical procedures and techniques using actual data. This entails learning how to use a computer package, interpret the output and take decisions in view of the results. Topics - Part I. Introduction and scientific approach to research - Part II. Design of research - Part III. Qualitative versus quantitative business research - Part IV. Analysis of data - Part V. Research reporting	Workload: Attendance time: 182 h Self-study time: 118 h
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Course: 1. Lecture: Applied Research methods	2 WLH
Examination: Written exam	6 C

Course: 2. Practical course: Applied Research methods	3 WLH
Examination: Oral presentation (ca 20 min)	4 C

Examination requirements: It is expected that, at the end of the course, students will have substantive knowledge on data analysis, statistical techniques, result interpretation and report writing skills to successfully pass the mid term and final exams	
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Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: Christopher Gan
Course frequency: each winter semester	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students:	

10	
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Georg-August-Universität Göttingen Module M.INC.ERST.601: Advanced Theory in Resource Studies		10 C 13 WLH
Learning outcome, core skills: Resource studies' encompasses a wide range of disciplines or knowledge areas such as ecology, economics, land and water management, resource management, plant protection, M?ori studies, forestry, political science, sociology, planning, human ecology, environmental education, community development and cultural studies. There is no single theory for resource studies, and no unified 'advanced theory'; it is more useful to talk of an 'interdisciplinary framework' which mediates between disciplines or fields such as those mentioned above. However, the pursuit of an interdisciplinary framework by necessity places social practices more in the foreground. The more one tries to understand different disciplinary approaches and traditions, the more this requires either direct or indirect interactions between people, who are ultimately the transmitters of these forms of knowledge. The emphasis in this subject is less on the theory methodology of the pure or applied sciences that inform resource studies, although this is due given scrutiny. Instead, the focus in this course is more on sociologically-related perspectives that can help us to understand why resources are defined, shared, allocated and otherwise contested in the ways that they presently appear to us. A co-teaching/learning, discussion-based approach underscores this course. A number of thematic lectures will be presented by the examiner, some by other staff contributors, and there will be occasions when joint presentations/ discussions are presented by staff and examiner. Field trips and subsequent role play exercises form an important element of the teaching style.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: 1. Lecture: Advanced Theory in Resource Studies		
Examination: Readings analysis, theory review assignment		
Course: 2. Seminar: Advanced Theory in Resource Studies (Seminar)		
Examination: Written assignment, oral presentation (ca 45 min)		
Course: 3. Practical Course: Advanced Theory in Resource Studies		
Examination: Written paper, oral presentation (ca 45 min)		
Examination requirements: Students need to be able to critically evaluate the knowledge and authority claims of various parties to environmental management decision-making contexts as reflected in pieces of written text and/or evidence		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Roy Montgomery	
Course frequency:	Duration:	

each winter semester	1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.ERST.606: Advanced Geographic Information Systems A	10 C 13 WLH
Learning outcome, core skills: ERST 606 examines Geographic Information Systems in the modelling and analysis of spatial problems. It looks at data quality and collection issues, and techniques of spatial analysis for both the raster and vector models emphasising natural resource based applications. The aim of ERST 606 is to introduce students to the advanced capabilities and limitations of geographic information systems with a special emphasis on resource analysis and including the technologies of remote sensing and GPS. Topics · Introduction/What is GIS? · Maps and Cartography · Spatial Thinking · Data Issues · Vector GIS · Vector Topology · Spatial Analysis · Aerial photos as basemaps · Raster GIS · Boolean Operation · Combining Overlays · DEMs/Neighbourhood Analysis · Viewshed Analysis · GPS and GIS · Remote Sensing and GIS.	Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture <i>Course frequency:</i> once a year	
Examination: Vector Project Report (25 %), Raster Project Report (25 %), Independent Project Report (40 %), Project Presentation (10 %)	10 C
Examination requirements: On successful completion of the subject, the student will be able to: 1. Distinguish between raster and vector data models in GIS 2. Critically select available spatial analysis techniques to the raster and vector models and justify their use	

3. Critically apply data quality principles to GIS analysis		
4. Demonstrate proficiency with ArcGIS software through successful analysis and map production		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Alle Crile Doscher	
Course frequency: 1	Duration:	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.ERST.607: Advanced Geographic Information Systems B		10 C 13 WLH
Learning outcome, core skills: Advanced use of GIS and spatial analysis tools for resource applications, problem-solving, decision-making and planning for environmental issues and sustainable management of natural resources. The aim is to train students in the critical analysis of GIS-based problems, the advanced use of GIS, including spatial analysis, modeling and mapping the integration of GIS and GPS and Remote Sensing the professional communication of GIS concepts, methods and results.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture		
Examination: Assignment 1 (10%), Individual project proposal (15%), Assignment 2 (10%), Assignment 3 (10%), Individual project report (20%), Individual project presentation (5%), student-led class lecture (30%)		10 C
Examination requirements: After successfully completing this course the students will be able to: - Understand, discuss and critically evaluate core GIS data management, spatial analysis, and spatial modeling concepts and tool - Understand and discuss basic concepts and methods in Remote Sensing and Geographic Positioning systems - Understand and discuss basic concepts related to cartography and mapping - Discuss the relevance of GIS and spatial sciences for solving real-world-problems		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Alle Crile Doscher	
Course frequency: once a year ¹	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.ERST.620: Advanced Environmental Management Systems	10 C 13 WLH
Learning outcome, core skills: Businesses and associated organisations contribute to a wide range of major environmental problems. Regulation has to date had limited success in reversing some of the major adverse environmental trends. Increasingly businesses are using a wide range of voluntary approaches to accepting their own responsibility for these problems. In this paper we look at the basis of environmental management systems, contexts for development and application, types, uses and limitations of EMS and applications of EMS in New Zealand and elsewhere.	Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture <i>Contents:</i> Section 1: The Big Picture – organisations and the environment • Global environmental changes • Impacts on business and other organisations • Organisational responses. Section 2: Implementing environmental management systems • Setting directions • Taking stock – where are you at now? • Risk assessment and management • Where to and how? Section 3: The organisation and the community • Managing stakeholder relationships Section 4: The government response: Carrots and Sticks • The government toolkit • NZ Environmental legislation. Section 5: The future Sustainable environmental management in the 21st century. <i>Course frequency:</i> each winter semester	
Examination: Individual assignments (reports & presentations) (60 %), Major Group Project (30 %), Participation and Feedback (10%)	10 C
Examination requirements: To give students the knowledge , skills and critical appraisal to be able to contextualise and apply EMS to any organisation within variety of management and policy contexts. This course examines a wide range of types of EMS, from sector specific EMS focused in a few aspects of environmental impact, to broader approaches aimed at creating sustainable organisations, and will include assessing why they are needed, what they achieve and how to get buy-in.	

Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: Lin Roberts
Course frequency: once a year ¹	Duration:
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.ERST.630: Environmental Policy and Planning		10 C 13 WLH
Learning outcome, core skills: Learning goals / skills: History of policy analysis and planning; theoretical perspectives on policy and planning and their application to environmental policy and planning; issues in environmental policy analysis. The subject aims: • To advance knowledge and understanding of concepts, perspectives and theories in the fields of public policy and environmental policy and planning • To advance knowledge and understanding of important issues in the development of environmental policy and planning • To advance knowledge and understanding of environmental policy and planning processes and institutions in New Zealand		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture		
Examination: Essay I, Essay II, Final Exam		10 C
Examination requirements: After successful completion of this subject, students should be able to: • Identify, explain and critique a variety of concepts, perspectives and theories in the fields of public policy and environmental policy and planning • Identify and discuss important issues in the development of environmental policy and planning, including the role of science/experts, public participation, and issues related to strategic policy and planning • Describe and assess critically institutions and processes relevant to the development of environmental policy and planning in New Zealand		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Alle Ton Buhrs	
Course frequency: once a year1	Duration:	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.ERST.632: Economics in Environmental Policy		10 C 13 WLH
Learning outcome, core skills: Prescription: Economic models of environmental decisions. Applied cost-benefit analysis. Economic analysis of policy instruments. Co-dependency of economics, ecology, and human behaviour. Aim: This subject aims to develop the ability to apply economic analysis to: • Identify efficient resource use • Model dynamic interactions between economic, natural and social aspects of the environment • Aid in the development of environmental policy instruments • Critically evaluate environmental policies		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture		
Examination: Assignments & Projects, Final Exam		10 C
Examination requirements: After successful completion of this subject participants will be able to: · Design, analyse and evaluate cost-benefit analyses · Develop theoretical bio-economic models · Develop simple computer based applications of bio-economic models · Use models to identify the implications of alternative environmental policies		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Alle Geoffrey Kerr	
Course frequency: once a year ¹	Duration:	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.ERST.636: Aspects of Sustainability: an international perspective		10 C 13 WLH
Learning outcome, core skills: The subject is taught in an interactive and discursive way from a range of discipline perspectives, covering the philosophy and history of sustainability, 'conventional' and organic agriculture, tourism, urban sustainability, economics of sustainability (including the concept of a country's 'Ecological Footprint') etc. At the end of the course students should be able to: * explain and criticise the key theories and concepts in sustainability * analyse one selected sector of topic and produce a detailed critique of the extent to which it is currently sustainable (sector) or logically argued * be able to report orally in a seminar, and in a written report * have an understanding of the range of international laws, agreements, conventions, and leading international and national organisations working towards sustainable development and resource conservation.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Seminar: Aspects of Sustainability (Seminar)		
Examination: Written exam (180 min)		10 C
Examination requirements: 1. Critical analysis of the concept of sustainability in both national and international contexts 2. active and facilitated comparison, analysis, synthesis and evaluation of sustainability issues 3. international context: international approaches to conservation and to sustainable and equitable use of natural resources; international laws, multilateral agreements, conventions and organisations		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. I.F. Spellerberg	
Course frequency: once a year	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.MGMT.611: Management Research Methods		10 C 13 WLH
Learning outcome, core skills: Prescription: Management research methods with an emphasis on applications in primary production, independent research into problems. Aims: To introduce postgraduate students with a desire to carry out research in farm, horticultural or viticulture management, or international rural development, to the research process and the range of research methods available to researchers. It is not intended that this course will provide any participant with all they need to know on any specific research technique. For that they are recommended to take the postgraduate paper dealing with that specific methodology. Further, it is intended to bring together all the students starting research in the Ag Management Department to establish a peer group which will be aware of a range of research projects, approaches and methods, not just their own. The ultimate outcome of the course will be a viable research proposal for each student. It is also desired to build up an <i>esprit de corps</i> among the class which encourages class members to help and support each other during what is often a very lonely and difficult period while producing the dissertation or thesis required for their degree.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture		
Examination: Subject Journal		10 C
Examination requirements: By the completion of MGMT 611 class members will have: 1. Encountered a range of research methodologies and techniques, and their advantages and disadvantages, which will permit selection of an appropriate research strategy for a specific research question. 2. Prepared a viable research proposal to meet the requirements of the programme that each individual class member is taking. 3. Presented to their colleagues and staff a seminar embodying the research proposal to facilitate a rigorous critique before the actual research commences, with the objective of improving the proposed research. 4. Developed a sound grasp of ethical research procedures and practice. 5. Been introduced to the issues likely to be encountered in cross-cultural research.		
Admission requirements: none		Recommended previous knowledge: none
Language: English		Person responsible for module: Rupert Tipples
Course frequency: once a year ¹		Duration:
Number of repeat examinations permitted:		Recommended semester:

twice	1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.MGMT.615: Planning and Assessing International Development Projects		10 C 13 WLH
Learning outcome, core skills: Prescription: An applied course critically investigating the range of mechanisms by which international rural development assistance is delivered. Identification, preparation, design and planning of development interventions. Factors influencing the sustainability and success of rural development assistance. Aims: To introduce and critically analyse concepts and techniques used in the identification, planning and design of rural development assistance. It is intended that students will gain a theoretical understanding of why projects and programmes are used as a mechanism for the delivery of rural development. They will also gain practical skills in the planning and design of development assistance.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture		
Examination: Assignment 1 (20%), Assignment 2 (20%), Assignment 3 (60%)		10 C
Examination requirements: On completion of MGMT 615, students will have: 1. An understanding of approaches used to deliver development assistance. 2. Used the 'Project Cycle' to illustrate the various phases of development projects. 3. Examined and critically appraised the identification, design and review phases of development projects. 4. Considered a range of techniques used in the design of rural development projects. 5. Been introduced to the process of financial and economic appraisal of development projects. 6. An introduction to methods used in implementing and managing development projects. 7. Considered different approaches, data and methods used to monitor and evaluate rural development projects. 8. Used the Statistical Package for Social Sciences (SPSS) to analyse quantitative and qualitative information gathered in a household survey.		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Michael Lyne	
Course frequency: once a year ¹	Duration:	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	

Maximum number of students:	
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Georg-August-Universität Göttingen Module M.INC.RECN.626: Natural Resource Recreation & Tourism	10 C 13 WLH
Learning outcome, core skills: Natural and resource-based recreation refers to recreation that occurs in environments that are, to a large extent, unmodified by humans. This includes recreation and tourism in physical settings (such as mountains, rivers, and lakes and along coastlines) where reliance on built environments is minimised. Natural resource recreationists and tourists pursue activities in a range of management settings too, including national parks and reserves, and regional or peri-urban park areas. RECN 626 aims to facilitate advanced study of the theoretical, philosophical and applied issues relating to recreation and tourism in nature-based settings. The course enables students to explore the sociological, geographical, and psychological dimensions of natural resource recreation participation and management, including issues of equity in opportunity provision, experiential aspects of participation, the influence of values, relationships with land and place, balancing preservation and use, commercial uses of protected natural areas, and understanding visitor behaviour. Natural Resource Recreation and Tourism is an extension of courses offered at the undergraduate level (especially RECN 341 Recreation and Tourism in Protected Areas, RECN 215 Recreation, Sport and Adventure in Outdoor Environments, and RECN 209 Nature and Heritage Interpretation), and helps prepare students for professional careers within recreation and tourism management, policy and planning.	Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture <i>Contents:</i> Topics · Introduction to natural resource recreation and tourism: the estate and the dilemma · The history and development of New Zealand's Protected Areas · The natural resource recreationists: sociological and social demographic dimensions · The natural resource recreationists: experiential dimensions · Impacts of natural resource recreation (bio-physical and social) · Management of natural heritage: assumptions, values and practice · Managing visitor safety: moral and legal responsibilities for natural resource recreation and tourism · Risk and responsibility in natural resource recreation and tourism · Understanding visitor behaviour in natural resource settings: communication, persuasion and modification. <i>Course frequency:</i> each winter semester	
Examination: Short Essay, Journal Article	10 C

Examination requirements: Through their study of this subject, students should develop the ability to: · situate New Zealand's protected areas system within an historical context, and understand its significance for conservation, recreation and tourism · provide a critical overview of the characteristics of natural resource recreationists, the expectations of nature-based tourists, and their impacts on the resource estate; · analyse natural resource recreation in terms of ethnicity, culture, history, personal values, and experiential dimensions of recreation; · understand and appraise strategies for addressing conflict arising from management of natural resource recreation and tourism; · identify and critically discuss the range of current visitor management issues affecting participation in and management of natural resource recreation and tourism; · examine the unique challenges of effective communication with visitors to natural resource settings, including knowledge of the theory and strategies associated with modifying visitor behaviour; and · critically appraise management practice, theoretical frameworks, and research findings within the context of natural resource recreation and tourism.	
Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: Stephen Espiner
Course frequency: once a year ¹	Duration:
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.SOCI.601: Social Science Research Methods (Quantitative)	10 C 13 WLH
Learning outcome, core skills: The primary objective of this course is to have the student gain competence in conducting a statistical social science research study. Students will learn about the abilities necessary to design, implement, analyse, and critically discuss quantitative research up to the level of univariate (parametric and non-parametric) analysis. These abilities will be acquired and sharpened in a 'hands-on' manner throughout the semester. The main workload for this class comes from the semester-long, empirical study undertaken by each student. The topic for this project is up to the each student but must be approved by the examiner of the paper; the topic must also have a social science component (i.e., it must involve people as respondents or research subjects). The studies may be pilot projects for intended thesis work, but they may not be a replication of work undertaken for other current or past classes. A key component in research is the presentation of results to the 'wider world'. To this end, each student will be required to orally present the results of his or her study during an in-class conference, which is held at the end of the semester. Each student will also be required to write up her or his study in journal article form. Topics • Planning research • Literature reviews • Ethics in social science research • Data files; data transformation • Modes of observation • Probabilities and frequencies • Instruments • Descriptive statistics and graphs • Sampling • Causation, validity, and correlation • General linear model tests • Nonparametric tests • Professional writing • Presenting results 'live'	Workload: Attendance time: 182 h Self-study time: 118 h
Course: 1. Lecture: Social Science Research Methods (Quantitative)	3 WLH
Examination: Written Exam	4 C
Course: 2. Seminar: Social Science Research Methods (Quantitative) (Seminar)	4 WLH
Examination: Written assignment (max 15-20 p)	6 C
Examination requirements:	

Because this course does not have a final examination, there are no required tasks. However, in order to complete the mandatory research project, students will need to provide a research plan, obtain ethical approval for the research project, conduct the project and then present it in two formats (a conference presentation and a draft journal article).

Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: Gary Steel
Course frequency: each winter semester	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.SOCI.602: Social Science Research Methods (Qualitative)		10 C 13 WLH
Learning outcome, core skills: The course will allow the student to examine critically and engage in a variety of qualitative methods of data collection and analysis used to conduct social research. You will learn these methods by doing a field study of one group or setting for the duration of the subject. We shall focus on the theory and techniques of intensive interviewing and participant observation by discussing students' field notes in class, doing exercises in class, reading and discussing literature on qualitative methodology, and examining exemplars of qualitative research. In addition, we shall discuss the process of writing a social scientific report based on qualitative research. Anyone wishing to use qualitative social research methods in his or her thesis research should take this subject. Prescription: A study of the theory and practice of qualitative social scientific research. Special attention will be given to the theory and practice of participant observation, intensive interviewing, life histories, and document analysis.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: 1. Lecture: Social Science Research Methods (Qualitative)		3 WLH
Examination: Oral exam (ca 45 min) or written exam (180 min)		4 C
Course: 2. Seminar: Social Science Research Methods (Qualitative) (Seminar)		4 WLH
Examination: Written Essay (max 15-20 p)		6 C
Examination requirements: · Theory and practice of qualitative social scientific research · theory and practice of participant observation · intensive interviewing · life histories · document analysis		
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: L. Hunt	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 10		

Georg-August-Universität Göttingen Module M.INC.TOUR.603: Tourism Management	10 C 13 WLH
Learning outcome, core skills: Prescription: This course first examines the need for, and scope of, tourism planning and management. Particular attention is paid to the nature of tourism 'products', and market systems failure, which indicate management interventions. Because tourism destinations evolve over time, particular analysis is undertaken on economic, environmental and socio-cultural models and processes of change. Various methods and models for tourism planning are then set against this systems based context. These are evaluated for their strengths and weakness, scale of application and relevance for developed or developing economies. Within the course scope exists for the presentation of individual topics of interest such as sustainable tourism, eco-tourism, cultural and alternative tourism, or other specialised forms of tourism.	Workload: Attendance time: 182 h Self-study time: 118 h
Course: Lecture <i>Contents:</i> • Tourism Systems and Planning Imperatives • The evolution of tourism planning thought • Marketing, economic planning or resource management • The need for and scope of Tourism Planning • Assessing Tourism's Impacts: processes of change • Economic impacts • Physical impacts • Socio-cultural impacts • Methods and models for Tourism Planning • Marketing Perspectives • Public participation and community based approaches • Land-Use approaches (including GIS) • Tourism and Development • Sustainable Tourism Development	
Examination: Essay, Presentation, Formal Paper, Final Exam	10 C
Examination requirements: As a result of their exposure to lecture, reading and assignment material students will be able to: 1. Explain the nature of tourism systems and their requirements for integrated planning. 2. Describe the major forces that impel evolution of tourism destination areas and understand models that describe their evolution. 3. Relate visitor, industry and destination resource characteristics to tourism management models. 4. Critique in detail, various views about, and options for, sustainable tourism development.	

5. Present written reports on contemporary tourism issues as potential tourism researchers, advisors or business operators.

Admission requirements: none	Recommended previous knowledge: none
Language: English	Person responsible for module: David Simmons
Course frequency: once a year ¹	Duration:
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3
Maximum number of students: 10	

Georg-August-Universität Göttingen Module M.INC.TOUR.604: Tourist Behaviour		10 C 13 WLH
Learning outcome, core skills: An advanced study of human behaviour and its management in relation to tourism. The cross-cultural nature of international tourism. An evaluation of the methods used to manage tourist behaviour. Students will be able to apply a diverse range of theoretical approaches to tourist behaviour and the management of that behaviour. They will understand fundamental concepts of tourist behaviour and be able to critically discuss the behavioural, social and economic nature of tourism.		Workload: Attendance time: 182 h Self-study time: 118 h
Course: Tourist Behaviour (Lecture)		
Course: Tourist Behaviour (Exercise)		
Examination: Assignment (max. 5000 words)		10 C
Examination requirements: Students are required to submit a term paper designed to be a first draft of a journal article. The best/most suitable papers will be prepared for submission to a tourism journal. Students select a topic of their choice and apply an existing theory of human behaviour to a tourism context. During the course they give two presentations to the class and write these up as literature reviews. At the end of the semester they give a public, conference style, presentation on their topic. Marks are awarded for presentations and all written work.		
Admission requirements: None but students are expected to attend a workshop on writing a literature review organized by the LU Library Teaching and Learning services.	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. David Fisher	
Course frequency: Lincoln semester II	Duration: 1 semester[s]	
Number of repeat examinations permitted: none	Recommended semester: 2 - 3	
Maximum number of students: 10		

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Modul M.SIA.A11: Tropical animal husbandry systems <i>English title: Tropical animal husbandry systems</i>	6 C 4 SWS
Lernziele/Kompetenzen: Studierende sind in der Lage • den Einfluss von Umweltfaktoren und sozio-ökonomischen Bedingungen auf die Entstehung und Weiterentwicklung verschiedener Tierhaltungssysteme in den (sub)Tropen zu verstehen. • den Einfluss der genannten Variablen auf die Ausrichtung und Intensität der tierischen Produktion zu erklären • die Kenngrößen zu identifizieren, die bei einer ganzheitlichen Analyse eines Tierhaltungssystems berücksichtigt werden müssen eigenständig ein spezifisches Tierhaltungssystem vorzustellen und seine Vorzüge und Nachteile in ökologischer und ökonomischer Hinsicht zu diskutieren	Arbeitsaufwand: Präsenzzeit: 60 Stunden Selbststudium: 120 Stunden
Lehrveranstaltung: Tropical animal husbandry systems (Vorlesung, Seminar) Inhalte: Das Modul vermittelt einen detaillierten Überblick über die in den (sub)Kontinenten Afrika, Asien und Mittel-/Südamerika anzutreffenden Tierhaltungssysteme. Dabei werden traditionelle nomadische Systeme genauso analysiert und diskutiert wie moderne Milch- und Fleischerzeugungsbetriebe, wobei der Fokus auf kleinbäuerlichen und mittelständischen Betrieben liegt. Angesprochen werden jeweils die Haltungssysteme an sich sowie deren ökonomische und ökologische Vorzüge und/oder Probleme. Der Einfluss von kulturellen, sozialen und politischen Faktoren auf die Tierhaltungssysteme wird diskutiert. Delgado, C., Rosegrant, M., Steinfeld, H., Ehui, S., Courbois, C. 1999: Livestock to 2020. The next food revolution. FAO Discussion Paper 28, FAO Rome, Italy; Devendra, C., Thomas, D., Jabbar, M.A. and Zerbini, E., 2000: Improvement of Livestock Production in Crop-Animal Systems in Agro-ecological Zones of South Asia. ILRI, Nairobi, Kenya; Falvey, L., Chantalakhana, C. (eds) 1999: Smallholder Dairying in the Tropics. ILRI, Nairobi, Kenya	4 SWS
Prüfung: Klausur (90 Minuten, Gewicht: 75%) und Präsentation, Referat oder Korreferat (ca. 15 Minuten, Gewicht: 25%) Prüfungsanforderungen: Schlecht: abiotische und biotische Rahmenbedingungen für Tierhaltungssysteme in den (Sub-)Tropen; Charakteristika, Vorteile/Probleme agro-pastoraler, industrieller und urbaner Systeme; tierartspezifische Haltungs- und -produktionsformen (Rind, Schaf, Ziege, Yak, Schwein, Huhn). Schiborra: Charakteristika, Vorteile/Probleme pastoraler, silvo-pastoraler und aquatischer Systeme; tierartspezifische Haltungs- und -produktionsformen (Cameliden).	6 C
Zugangsvoraussetzungen:	Empfohlene Vorkenntnisse:

keine	Grundlagenwissen (BSc Niveau) in den Boden-, Pflanzen-, und Tierwissenschaften
Sprache: Englisch	Modulverantwortliche[r]: Prof. Dr. Eva Schlecht
Angebotshäufigkeit: jedes Wintersemester; Göttingen	Dauer: 1 Semester
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:
Maximale Studierendenzahl: nicht begrenzt	

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.E11: Socioeconomics of rural development and food security		6 C 4 WLH
Learning outcome, core skills: Students learn concepts of development and problem-oriented thinking in a development and food security policy context. The identification of interdisciplinary linkages is trained. Building on case-study analyses, course participants can pinpoint appropriate economic and social policies and assess their impacts. These qualifications can also be transferred to unfamiliar situations.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Socioeconomics of rural development and food security (Lecture) <i>Contents:</i> This module provides students with an overview of socioeconomic aspects of hunger, malnutrition, and poverty in developing countries. Apart from more conceptual issues and development theories, policy strategies for sustainable rural development and poverty alleviation are discussed and analyzed. Special emphasis is put on problems in the small farm sector. Empirical examples are used to illustrate the main topics.		4 WLH
Examination: Written examination (90 minutes) Examination requirements: Concepts and measurement of hunger, malnutrition, and poverty; classification and evaluation of rural development policies		6 C
Admission requirements: none	Recommended previous knowledge: Prior knowledge of microeconomics at the BSc level is useful	
Language: English	Person responsible for module: Prof. Dr. Liesbeth Colen	
Course frequency: each winter semester; Göttingen	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: until 1	
Maximum number of students: 120		
Additional notes and regulations: Literature: Text books, research articles and lecture notes.		

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.E12M: Quantitative research methods in rural development economics		6 C 4 WLH
Learning outcome, core skills: Students are familiar with empirical, quantitative methods in rural development economics. They understand the basic elements of research-study design, data collection, and data analysis. Thus, they are able to initiate, develop, and implement their own research projects.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Quantitative research methods in rural development economics (Lecture) <i>Contents:</i> This module teaches the design of quantitative research in rural development economics, starting from formulating research questions and developing a research proposal to undertaking analysis. It trains methodological skills for the analysis of micro data in rural development economics. In particular, farm and household level data are used. Apart from statistical and econometric techniques, approaches of primary data collection are covered (questionnaire development, sampling design, and implementation of household surveys). Aspects of using secondary data are also covered. The statistical and econometric methods are used for concrete examples in the computer lab.		4 WLH
Examination: Written exam (90 Minutes) (60%) and continuous assignments (40%) Examination requirements: Types of research designs; use and interpretation of descriptive statistics and standard econometric methods; hypothesis testing; data management; sampling design.		6 C
Admission requirements: Familiarity with the contents of the module "Socioeconomics of Rural Development and Food Security" is assumed.	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Doris Läßle	
Course frequency: each summer semester; Göttingen	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 40		
Additional notes and regulations: Literature: Text books, research articles and lecture notes.		

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.E14: Evaluation of rural development projects and policies		6 C 4 WLH
Learning outcome, core skills: Students understand the standard methods in the economic analysis and evaluation of development projects and policies. They are able to design and perform cost-benefit analyses as well as project evaluations independently.		Workload: Attendance time: 40 h Self-study time: 140 h
Course: Evaluation of rural development projects and policies (Lecture) <i>Contents:</i> This module teaches standard methods in the economic analysis and evaluation of development projects and policies. It covers the economic and financial assessment of rural development projects (in particular cost-benefit analysis), as well as experimental and quasi-experimental impact evaluation methods. These methods are illustrated with examples and students learn to apply these methods in different exercises.		4 WLH
Examination: Written exam (90 minutes, 70%) and presentation (ca. 25 minutes, 30%) Examination requirements: Cost-benefit analysis; impact evaluation		6 C
Admission requirements: none	Recommended previous knowledge: Knowledge of the content of the module "Socioeconomics of Rural Development and Food Security" and "Econometrics I" is required.	
Language: English	Person responsible for module: Ph.D. Bethelhem Legesse Debela	
Course frequency: each summer semester; Göttingen	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 45		
Additional notes and regulations: Literature: Text books, research articles and lecture notes.		

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.E24: Topics in rural development economics I		6 C 4 WLH
Learning outcome, core skills: The objective of this course is to acquaint Master students with the reading and understanding of scientific journal articles on relevant topics of rural development economics. Student should learn how to develop a scientific research question, choose appropriate research methods and structure a scientific article.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Topics in Rural Development Economics I (Lecture) <i>Contents:</i> This course will provide Master Students with an overview of relevant topics in rural development economics, which will also enable them to develop own research questions and study approaches in this field. The module is structured as a reading course, building on selected articles from relevant international journals. Students are required to read announced articles before the classroom sessions, in order to enable a critical debate in class. The articles selected for the course are clustered around key topics relevant to rural development economics, such as listed below. Tentative Topics 1. The food system transformation and smallholder farmers 2. Rural livelihood strategies and income diversification 3. Adoption and impact of modern agricultural technology 4. Economics of nutrition and health 5. Gender and intra-household resource allocation Master students will have to write a summary of a selected journal article. Furthermore, the course should enable them to develop own research questions and study approaches in the field of rural development economics. Literature: Selected articles from academic journals and book chapters		4 WLH
Examination: Presentation (approx. 20 Min, 40%), written exam (approx 3 hours, max. 4 Pages, 60%) Examination requirements: Constructive participation in the discussion during the lectures, which requires the reading of the articles indicated. In both the written and the oral assignments, students are supposed to demonstrate that they are able to identify the most relevant aspects of the articles and to critically evaluate the research questions, the methods and the results of the studies.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Meike Wollni	

Course frequency: each summer semester; Göttingen	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester:
Maximum number of students: not limited	
Additional notes and regulations: Literature: Selected articles from academic journals and book chapters	

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.E37: Agricultural policy analysis	6 C 6 WLH
Learning outcome, core skills: • Students get an overview on EU institutions and the history of the EU's common agricultural policy (CAP) • Students learn different theories and methods for the analysis of agricultural policies • Students learn how to analyse different policy measures and instruments and evaluate them	Workload: Attendance time: 56 h Self-study time: 124 h
Course: Agricultural policy analysis (Lecture) <i>Contents:</i> 1. Introduction into Economic Policy and Economic Theory Definition of agricultural policy, Analytical framework of economic analysis, Objectives, measures, institutions, The coordination process, a model for the economic process 2. Market Failure Public Goods & externalities, Market power & monopolistic behavior, State intervention due to Instability of markets, State intervention & government failure, principal-agent theory 3. The European Union – A short introduction History of the EU, the importance of the agricultural sector in the EU, institutions and political structure of the EU, decision-process in the EU, 4. The EU's common agricultural policy: Description and Analysis The history and analysis of the Common Agricultural Policy (CAP) of the EU 5. Introduction into Environmental policy Objectives, measures and analysis and interaction with agricultural policy Literatur: B. Hill (2013): Understanding the Common Agricultural Policy, Earthscan A. Cunha & A. Swinbank (2011): An Inside View of the CAP Reform Process, Oxford University Press A. Oskam, G. Meester & H. Silvis (2011): EU policy for agriculture, food and rural areas, Wageningen, University Press Swinnen, Johan F.M. (2008): The Perfect Storm – the political Economy of the Fischler Reforms of the Common Agricultural Policy, Centre for European Policy Studies, Brussels Krugman, P.R., M. Obstfeld & M.J. Melitz (2011), International Economics (9.Ed.), Pearson B. Hill (2013): Understanding the Common Agricultural Policy, Earthscan	6 WLH

A. Cunha & A. Swinbank (2011): An Inside View of the CAP Reform Process, Oxford University Press A. Oskam, G. Meester & H. Silvis (2011): EU policy for agriculture, food and rural areas, Wageningen, University Press Selected readings and lecture notes / slides provided by the lecturer on StudIP		
Examination: Written examination (90 minutes) Examination requirements: • Fundamental knowledge of EU institutions and the EU's common agricultural Policy (CAP) • Knowledge of different theories and methods to analyze agricultural policies • Analysis of different measures and instruments of the EU's common agricultural policy (CAP)		6 C
Admission requirements: none	Recommended previous knowledge: Basic micro- and macroeconomics	
Language: English	Person responsible for module: Prof. Dr. Stephan von Cramon-Taubadel	
Course frequency: Every second summer semester (Start: 2020)	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: from 2	
Maximum number of students: 50		

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.E40: Agriculture, Environment and Development		6 C 4 WLH
Learning outcome, core skills: This module treats the economic and political causes of environmental problems in the context of agriculture and development. Global challenges such as climate change, sustainable development and poverty are in the focus. Selected basic concepts of environmental and resource economics are addressed, followed by a deepened analysis of important aspects such as management of common pool resources, pollution control and climate protection in international agri-environmental contexts.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Agriculture, Environment and Development (Lecture,Exercise,Seminar) <i>Contents:</i> The module consists of a combination of lectures and tutorials during the first semester term. Theoretical concepts from lectures will be deepened and complemented by examples from scientific research and practical applications. During the second semester term students present an analysis of a scientific case study from selected topics in the seminar. This enables students to deepen the contents learned in an independent and targeted manner and to apply concepts in the evaluation of a case study. Contents: • Basic concepts (market failure, natural resources, natural capital) • Efficiency and sustainability: Concepts, criteria and application • Economics of common pool resources in developing countries • Economics of land use in developing countries • Economics of water use in developing countries • Poverty, development and environment • Agriculture and climate change • Global initiatives and international agreements on sustainable development and climate protection		4 WLH
Examination: Klausur (60 Minuten, 70%) und Präsentation (ca. 20 Minuten, 30%) Examination prerequisites: Regelmäßige Teilnahme am Seminar Examination requirements: Knowledge of selected basic concepts of environmental and resource economics. Understanding of important concepts such as economic efficiency and sustainability. Knowledge of important relationships between agriculture, resource use, sustainability and climate change in development contexts. Discussion of current courses of action.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Prof. Dr. Meike Wollni	

Course frequency: each summer semester; Göttingen	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester:
Maximum number of students: 40	

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Modul M.SIA.I12: Sustainable International Agriculture: basic principles and approaches <i>English title: Sustainable international agriculture: basic principles and approaches</i>	6 C 4 SWS
Lernziele/Kompetenzen: Die Studierenden: • sind in der Lage, die wichtigsten bio-physikalischen und sozio-ökonomischen Einflussfaktoren zu charakterisieren, die landwirtschaftliche Produktionssysteme und Ressourcennutzungsstrategien prägen. • kennen relevante ökologische, ökonomische und soziale Indikatoren für Nachhaltigkeit • können integrierende Verfahren zum Einsatz von Indikatoren für die Überprüfung der Nachhaltigkeit eines Systems erklären und auf Beispiele anwenden.	Arbeitsaufwand: Präsenzzeit: 56 Stunden Selbststudium: 124 Stunden
Lehrveranstaltung: Sustainable International Agriculture: basic principles and approaches (Vorlesung) <i>Inhalte:</i> Globale Veränderungen, die von Bevölkerungswachstum, Migration und Urbanisierung über Klimawandel, Landdegradierung bis zu Wasserknappheit reichen, stellen große Herausforderungen für die nachhaltige Nutzung der natürlichen Ressourcen und des Humankapitals dar. Damit müssen sich weltweit alle mit landwirtschaftlicher Produktion beschäftigten Akteure auseinandersetzen, um auch zukünftig die quantitativ und qualitativ adäquate Bereitstellung von Nahrungsmitteln sicherzustellen. Dieses Modul behandelt daher die grundlegenden Konzepte und Prinzipien der Nachhaltigkeit und nachhaltiger Landwirtschaft in ihren ökologischen, ökonomischen und sozialen Dimensionen. Methodische Ansätze zur Erfassung und Beurteilung der bio-physikalischen und sozio-ökonomischen Nachhaltigkeit eines Landnutzungssystems und agrarischer Wertschöpfungsketten werden erörtert. Möglichkeiten für ein nachhaltiges Management von Wasser, Boden, Pflanzen und Tieren, sowie den landwirtschaftlichen Erzeugnissen entlang der Wertschöpfungsketten werden diskutiert, dabei werden die jeweils relevanten zeitliche und räumlichen Skalenebenen berücksichtigt.	4 SWS
Prüfung: Klausur (90 Minuten) Prüfungsanforderungen: Barkmann (SE): Allgemeine Definitionen und Indikatoren für nachhaltigen Entwicklung; starke und schwache Nachhaltigkeit, das Substitutions-Paradigma und seine Grenzen, Tragfähigkeit und kritisches natürliches Kapitals, Wirtschaftswachstums-Modelle; ökonomische Ansätze für die Quantifizierung nachhaltiger Entwicklung; SNA / grüne Buchführung, Kosten-Nutzen-Analyse. Bürkert (NW): Konzepte der Nachhaltigkeit; Agroforst-Systeme, Wanderfeldbau; Auswirkungen auf Bodenfruchtbarkeit und Nachhaltigkeit.	6 C

Liebe (SE): Dimensionen der sozialen Nachhaltigkeit; Bewirtschaftung kommunaler Ressourcen; McDonaldisierung der Landwirtschaft; Landwirtschaft und ökologische Gerechtigkeit.

Ludwig (NW): Böden - Texturen, Mineralien, Typen, organische Substanz, Funktionen und Formen, N-Dynamik. Wassererosion, Winderosion, Prozesse und Raten, Gegenmaßnahmen. Emissionen von Treibhausgasen (THG) und Ammoniak: Quellen und Prozesse, Optionen der Emissionsminderung.

Möller (SE): Multifunktionalität und Farm-Management; Verwirklichung von Nachhaltigkeitskonzepten im Betrieb; Agri-Umwelt-Systeme und nachhaltige Betriebsführung; Indikatoren zur Bestimmung der betrieblichen Nachhaltigkeit; Controlling der Nachhaltigkeit; Wirtschaftlichkeit des ökologischen Landbaus; Gemeinschaftsformen in der Landwirtschaft.

Schlecht (NW): Nachhaltigkeit in der Tierproduktion, Umweltwirkung von Tierhaltungssystemen und ihre Vermeidung: a) THG-Emissionen, Umweltverschmutzung; b) Überweidung.

Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: keine
Sprache: Englisch	Modulverantwortliche[r]: Prof. Dr. Eva Schlecht
Angebotshäufigkeit: jedes Wintersemester; Witzenhausen	Dauer: 1 Semester
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:
Maximale Studierendenzahl: nicht begrenzt	

Georg-August-Universität Göttingen Universität Kassel/Witzenhausen Module M.SIA.I20: Agriculture and ecosystem services		6 C 4 WLH
Learning outcome, core skills: This course will introduce students into the concepts of ecosystem services and human well-being, with a particular focus on their relevance for agriculture and other land uses. It will foster the ability of students to assume an interdisciplinary research perspective (including ecological, socio-cultural, and economic approaches) and to critically discuss and analyse the concept of ecosystem services in its multiple scientific, political and practical meanings.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Agriculture and ecosystem services (Lecture,Exercise,Seminar) <i>Contents:</i> Global environmental assessments (e.g., the Intergovernmental Platform on Biodiversity and Ecosystem Services, IPBES) have highlighted that human well-being is critically dependent on ecosystem services – the benefits that nature provides to people. Depending on the particular land-use system and its social-ecological context, agriculture can either degrade or enhance such ecosystem services. This course gives an overview on the rising field of ecosystem services science. Focus will be on: • techniques for decision support, • practical applications of the approach in agriculture and other land-use sectors, and • linkages to other sustainability issues (e.g., biodiversity, climate change, water security, poverty). These topics will be outlined in lectures and deepened in seminars and field exercises, where key issues will be explored and critically discussed.		4 WLH
Examination: Presentation (approx. 30 minutes, 50%) and term paper (max. 20 pages, 50%) Examination requirements: Presentation and critical analysis of a case study that takes a particular ecosystem services problem in a land-use setting and geographic location of the participants' choice into focus.		6 C
Admission requirements: none	Recommended previous knowledge: none	
Language: English	Person responsible for module: Dr. Lukas Flinzberger	
Course frequency: each summer semester; Witzenhausen	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students:		

25	
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Georg-August-Universität Göttingen		6 C
Universität Kassel/Witzenhausen		4 WLH
Module M.SIA.P10: Tropical agro-ecosystem functions		
Learning outcome, core skills: Knowledge of the processes of soil degradation as well as of the measures for their control or prevention in selected land use systems of the tropics and subtropics; knowledge of ecological system functions and their synthesis in agronomic concepts for the adaptation to unfavourable climatic and pedological conditions in the tropics and subtropics.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Tropical agro-ecosystem functions (Lecture,Seminar) <i>Contents:</i> Introduction to and overview of agronomy-based land use systems in the tropics and subtropics taking into account ecological points of view. Analysis of the sustainability of plant production under special consideration of the physical, chemical and biological soil quality as well as the efficient water use in the seasonal tropics.		4 WLH
Examination: Präsentation, Referat oder Korreferat (ca. 30 Minuten, Gewichtung: 50%) und mündliche Prüfung (ca. 30 Minuten, Gewichtung: 50%) Examination requirements: Knowledge about the processes of soil degradation and the measures taken to control or prevent in selected land use systems in the tropics and subtropics; knowledge of ecosystem functions and their synthesis in agronomic concepts to adapt to unfavorable climatic and pedological conditions in the tropics and subtropics.		6 C
Admission requirements: none	Recommended previous knowledge: Basic knowledge (B.Sc. level) of soil and plant sciences	
Language: English	Person responsible for module: Dr. Ronald Franz Kühne	
Course frequency: each summer semester; Göttingen	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: 15		
Additional notes and regulations: Literature: Lecture notes and handouts, selected chapters from textbooks; copies of PowerPoint presentations		

Georg-August-Universität Göttingen Module M.WIWI-VWL.0008: Development Economics I: Macro Issues in Economic Development		6 C 4 WLH
Learning outcome, core skills: Expose students to macroeconomic issues in economic development, including how economic growth, trade, inequality, aid, capital flows, and population issues affect economic development. They understand historical roots of underdevelopment and acquire knowledge of current economic models and empirical approaches in these topic areas.		Workload: Attendance time: 56 h Self-study time: 124 h
Course: Development Economics I (Lecture) <i>Contents:</i> Overview of macroeconomic issues and approaches to analyzing problems of developing countries. Topics include measurement of development, historical evolution of income differences, growth theory, and linkages between globalization, aid, debt, population, the environment, and inequality and economic development.		2 WLH
Course: Development Economics I (Exercise) <i>Contents:</i> The exercise session is used to deepen understanding of concepts used in the lecture, discuss relevant literature, and apply concepts and methods developed in the lecture.		2 WLH
Examination: Written examination (90 minutes) Examination prerequisites: Examination prerequisites: Successful completion of 6 short quizzes (minimum passing score: at least 60% of the total points), administered at the beginning of each exercise session. The quizzes are based on problem set exercises that deepen the understanding of concepts and empirical methods taught in the lecture and apply them to specific cases.		6 C
Examination requirements: The students demonstrate a good understanding of key theories and models of economic development. They are able to critically present these theories and models, are able to interpret empirical results that relate to these models, and are able to crucially draw relevant policy conclusions coming out of these models and empirical assessments.		
Admission requirements: None	Recommended previous knowledge: Knowledge of macroeconomics and econometrics at BA level is highly desirable.	
Language: English	Person responsible for module: Prof. Dr. Andreas Fuchs	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 1 - 3	

Maximum number of students:	
not limited	

Georg-August-Universität Göttingen Module M.WIWI-VWL.0055: Globalization and Development	6 C 2 WLH
Learning outcome, core skills: After successful completion of the course students will be able to: • understand how globalization can contribute to economic development in developing economies and which risks it entails, • understand not only the growth effects of trade and trade liberalization, but also on inequality, and poverty in developing countries, • understand the analytical – both theoretical and empirical – tools and models to assess the transmission channels of globalization, • critically evaluate the potential development impacts of policies related to globalization, in particular trade and investment policies.	Workload: Attendance time: 28 h Self-study time: 152 h
Course: Globalization and Development (Seminar) <i>Contents:</i> The following list of issues and questions are exemplary of issues and questions covered by the seminar. This list is subject to change, as new aspects of globalization become relevant: • Defining and measuring globalization • Does trade lead to higher growth? • Capital account liberalization, financial globalization and development • Competing concepts of inequality in the Globalization Debate • Does globalization make the poor poorer and the rich richer? Inequality trends within developing countries • The links between trade liberalization and poverty • Do agricultural subsidies in rich countries really hurt the poor? • Agricultural high value products: Pathway out of poverty? • Manufacturing in poor countries: Yet another form of exploitation? • Rising food prices and the poor • Land grab or beneficial investment? Large-scale agricultural investments in developing countries • Migration, trade and development • Globalization, Patents, and health	2 WLH
Examination: Presentation (approx. 15 minutes) with written elaboration (max. 20 pages) Examination prerequisites: Regular attendance	6 C
Examination requirements: In the paper, students demonstrate their ability to critically review academic studies on a particular topic, show their ability to synthesize the results and develop a clear argument backed by the evidence in the literature. They also demonstrate their ability to judge the quality and relevance of research on the topic, structure the theoretical and empirical insights from the literature, and, accordingly, write an own scientific paper	

that comprises policy implications. In the presentation, they demonstrate their ability to present key insights from complex theoretical and empirical papers, and to present and defend their own argument on the chosen topic/question.

Admission requirements: none	Recommended previous knowledge: Basic knowledge in macroeconomics, microeconomics and economic growth and development
Language: English	Person responsible for module: apl. Prof. Dr. Jann Lay
Course frequency: irregular	Duration: 1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: 1 - 4
Maximum number of students: 20	

Georg-August-Universität Göttingen		3 C
Modul SK.Bio.311: Ethnobotanik		2 SWS
<i>English title: Ethnobotany</i>		
Lernziele/Kompetenzen: Vermittlung und Veranschaulichung ethnobotanischer Grundlagen und Anwendungen in historischer Zeit und Gegenwart; Einblicke in die Nutzung von Pflanzen in den hauptsächlichen Bereichen Medizin, sowie Land- und Forstwirtschaft; Kenntnis ausgewählter Nutzpflanzen (Holz, Fasern, Farbstoffe, Duftstoffe, Rauschmittel, Gifte, Arzneipflanzen); Vergleich von Traditionen der Phytomedizin in Europa und Ostasien; Wissenschaftliche Grundlagen der Phytotherapie; Essbare Wildpflanzen und ihre Habitate und Verbreitung; Kulturpflanzen und Crop Wild Relatives.		Arbeitsaufwand: Präsenzzeit: 28 Stunden Selbststudium: 62 Stunden
Lehrveranstaltung: Ethnobotanik (Vorlesung)		2 SWS
Prüfung: Klausur (90 Minuten)		3 C
Prüfungsanforderungen: Kenntnisse ethnobotanischer Grundlagen und der Nutzung von Pflanzen in Medizin sowie Land- und Forstwirtschaft; Kenntnis ausgewählter Nutzpflanzen (Holz, Fasern, Farbstoffe, Duftstoffe, Rauschmittel, Gifte, Arzneipflanzen); Kenntnisse der Traditionen der Phytomedizin in Europa und Ostasien; Wissenschaftliche Grundlagen der Phytotherapie; Essbare Wildpflanzen und ihre Habitate und Verbreitung; Kulturpflanzen und Crop Wild Relatives.		
Zugangsvoraussetzungen: keine	Empfohlene Vorkenntnisse: botanische Grundlagenvorlesungen und Übungen, botanischen Exkursionen und Bestimmungsübungen	
Sprache: Deutsch, Englisch	Modulverantwortliche[r]: Dr. rer. nat. Kenny Kuchta Prof. Dr. Erwin Bergmeier	
Angebotshäufigkeit: jedes Wintersemester	Dauer: 1 Semester	
Wiederholbarkeit: zweimalig	Empfohlenes Fachsemester:	
Maximale Studierendenzahl: 75		
Bemerkungen: Das Modul wird nach Absprache in deutscher oder englischer Sprache gehalten.		

Georg-August-Universität Göttingen Module SK.Bio.329: Research internship (4 weeks)		6 C
Learning outcome, core skills: After successful completion of the module, the student can... • demonstrate in-depth knowledge of current topics and research focuses in biology at an institution (MPI, institute abroad, etc.) with special consideration of modern methods • carry out the work carried out independently in connection with current research projects • document and record experiments and theoretical work related to current research projects in accordance with the usual standards.		Workload: Attendance time: 160 h Self-study time: 20 h
Course: Forschungspraktikum		
Examination: Ergebnisprotokoll in Form eines wissenschaftlichen Fachartikels (max. 5 Seiten), not graded Examination prerequisites: Erfolgreiche Teilnahme an einem mindestens 4-wöchigen Praktikum (160 Std.), Vortrag an der aufnehmenden Institution (entspr. den Gepflogenheiten vor Ort, mind. aber 20 min).		6 C
Examination requirements: Competent presentation of the research approach, the state of research, the methodology used and the results, discussion skills and critical thinking beyond one's own field of work		
Admission requirements: none	Recommended previous knowledge: none	
Language: German, English	Person responsible for module: Dean of studies	
Course frequency: each semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: not limited		

Georg-August-Universität Göttingen Module SK.Bio.331: Research internship (8 weeks)		12 C
Learning outcome, core skills: After successful completion of the module, the student can... • demonstrate in-depth knowledge of current topics and research focuses in biology at an institution (MPI, institute abroad, etc.) with special consideration of modern methods • carry out the work carried out independently in connection with current research projects • document and record experiments and theoretical work related to current research projects in accordance with the usual standards.		Workload: Attendance time: 320 h Self-study time: 40 h
Course: Forschungspraktikum		
Examination: Ergebnisprotokoll in Form eines wissenschaftlichen Fachartikels (max. 5 Seiten), not graded Examination prerequisites: Erfolgreiche Teilnahme an einem mindestens 8-wöchigen Praktikum (320 Std.), Vortrag an der aufnehmenden Institution (entspr. den Gepflogenheiten vor Ort, mind. aber 20 min).		12 C
Examination requirements: Competent presentation of the research approach, the state of research, the methodology used and the results, discussion skills and critical thinking beyond one's own field of work		
Admission requirements: none	Recommended previous knowledge: none	
Language: German, English	Person responsible for module: Studiendekanin / Studiendekan	
Course frequency: each semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester:	
Maximum number of students: not limited		

Georg-August-Universität Göttingen Module SK.Bio.332: Internship for master degree students		8 C
Learning outcome, core skills: After successful completion of the module ... - the student will have gained insights into the professional practice of biologists and experience in the practical application of methods and techniques as well as the practical implementation of theoretical knowledge in operational processes. - the student is familiar with the interrelationships and interactions of a company with authorities, suppliers, customers, marketing, sales, logistics, administration and research (external and internal) and can reflect on these. - the student is able to establish a connection to his/her previous studies and further study intentions.		Workload: Attendance time: 0 h Self-study time: 240 h
Course: Internship (240 hours) <i>Contents:</i> The work placement must be completed during the course of study at a facility, institution or company outside the University of Göttingen as described above. The contents are therefore largely determined by the same and in consultation with the student.		
Examination: Internship report (max. 15 pages), not graded		8 C
Examination requirements: The report contains information on the objectives, structure, range of activities, etc., of the institution at which the work placement was carried out as well as information on the activities carried out during the work placement. The report concludes with a critical review and reflection on the activities carried out and the host institution.		
Admission requirements: none	Recommended previous knowledge: none	
Language: German, English	Person responsible for module: Alle Dean of studies	
Course frequency: each semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 2 - 4	
Maximum number of students: not limited		

Georg-August-Universität Göttingen Module SK.Biodiv.337: Citizen Science for Biodiversity		3 C 2 WLH
Learning outcome, core skills: Citizen science plays an increasing role in the biological sciences. The large amounts of data contributed by citizen scientists allow to examine patterns and processes at large scales that are difficult or impossible to cover with traditional field or experimental methods. In this lecture, university staff and invited guest lecturers provide an overview of current topics in citizen science for ecology, biodiversity and conservation. We cover the past and present of biological citizen science, volunteer recruitment and management, bias and accuracy in citizen science data, online databases for species recording incl. AI-based species identification, museums and collections, participatory and democratic citizen science and science communication. At the end of the course the participants will have understood opportunities and challenges of citizen science data and methods, assessed the contribution citizens can make to research and have an overview of the diversity of citizen science projects. This lecture complements the field studies in SK.Biodiv.338 (Biodiversity recording in a digital citizen-science era).		Workload: Attendance time: 28 h Self-study time: 62 h
Course: Citizen Science for Biodiversity (Lecture)		2 WLH
Examination: Written examination (90 minutes)		3 C
Examination requirements: Participants will need to have a good overview of the principles, theories and initiatives that link citizen science and biodiversity.		
Admission requirements: none	Recommended previous knowledge: none	
Language: German, English	Person responsible for module: Dr. Florian Goedecke Prof. Dr. Johannes Kamp	
Course frequency: each winter semester	Duration: 1 semester[s]	
Number of repeat examinations permitted: twice	Recommended semester: 3 - 5	
Maximum number of students: 100		

Georg-August-Universität Göttingen Module SK.Biodiv.338: Know your species! Biodiversity recording in a digital citizen-science era		3 C 3 WLH
Learning outcome, core skills: Species identification skills are a cornerstone of ecology and conservation. Survey approaches are changing rapidly: AI-based methods in combination with citizen-science online databases gain importance, but classical approaches remain indispensable for most taxonomic groups. This course offers an in-depth introduction to the identification and ecology of selected taxa, complementary to B.Biodiv.331. It combines fieldwork, data-based work and collection techniques. It will focus on the opportunities and limits of identification via citizen-science online tools such as iNaturalist or observation.org, and will introduce students to collection and preparation techniques. At the end of the course the participants will be able to critically judge the use of AI tools, will have acquired skills to catch, handle and prepare voucher specimens in some groups, and will be ready to continue species surveys independently.		Workload: Attendance time: 42 h Self-study time: 48 h
Course: Know your species! <i>Contents:</i> After an introductory event about species collections in the zoological collection (Biodiversity Museum) or the herbarium GOET each student need to select and pass two of the identification and ecology practices (each running for ca. 4 days) from the following: • Selected plant families • Land snails (Gastropoda) • Spiders (Araneae) • Bees and wasps (Aculeata) • Butterflies and moths (Lepidoptera) • Crickets and grasshoppers (Orthoptera) • Leafhoppers and allies (Auchenorrhyncha) • True bugs (Heteroptera) • Other taxa and species groups depending on lecturer availability		3 WLH
Examination: Portfolio: Database file evidencing the successful identification of a minimum number of specimens/individuals and flawless data entry, not graded		3 C
Examination requirements: Participants will need to be familiar with key identification features and will need to understand how to use field guides, taxonomic keys and online AI tools for identification.		
Admission requirements: none	Recommended previous knowledge: SK.Biodiv.337	
Language: German, English	Person responsible for module: Dr. Florian Goedecke Prof. Dr. Johannes Kamp	
Course frequency:	Duration:	

each summer semester	1 semester[s]
Number of repeat examinations permitted: twice	Recommended semester: 4 - 6
Maximum number of students: 40	