

Environmental Studies Certificate Program



Course Catalogue Winter Term 2022/23

Please register for courses as soon as possible instead of waiting until October 10th.

Important note for exams: **ALWAYS REGISTER FOR EXAMS VIA LSF** (even if lecturers have additional lists or tell you otherwise).

P 1 International and Interdisciplinary Perspectives on Environment and Society (Mandatory Module)

DR. ARIELLE HELMICK

Lunchtime Colloquium: Current Perspectives on Environment and Society

The Lunchtime Colloquium series consists of short, 20–30 minute presentations by RCC fellows. The talks are based on the fellow's own research. Designed to stimulate discussion, the presentations are accessible and are aimed at a non-specialist audience. All talks are free and open to the public. The talks may be of interest to undergraduate and graduate students, or to anyone with an interest in environmental issues.

- **Language:** English
- **ECTS:** 2 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Thursday, 12:30 pm - 2 pm
- **Start date:** 20.10.2022 **End date:** 09.02.2023
- **Location:** Katholische Hochschulgemeinde (KHG) Leopoldstr. 11, 1. OG.
- **Work format:** presentations
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 13166

DR. GESA LÜDECKE

Reading Course: International Perspectives

The Reading Course makes up the second part of the basic mandatory module of the Certificate Program. It is designed to give an overview and serve as an introduction to the different fields and disciplines related to Environmental Studies. Students must attend this course over two semesters and are welcome to actively shape both structure and content. Lively discussions are the core of the course, based on weekly presentations by the course participants.

- **Language:** English
- **ECTS:** 1 ECTS Point
- **SWS:** 2 hours per week
- **Dates:** Thursday, 2 pm - 4 pm
- **Start date:** 20.10.2022 **End date:** 09.02.2023
- **Location:** Katholische Hochschulgemeinde (KHG) Leopoldstr. 11, 1. OG.
- **Work format:** reading course
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 14790

WP 1 – WP 37: Elective Modules (Wahlpflichtveranstaltungen)

Humans in the Environment

WP 1 Topics and Themes in Environment and Society

JENS BENÖHR, ELISA BALMACEDA, KARA VIRIK

Visionary Ecologies

“We cannot build, what we cannot imagine. So, we absolutely need [visionary] spaces. Once the imagination is unshackled, liberation is limitless.” - Walidah Imarisha

This seminar aims to dive into visionary ecologies that we can inhabit in a critically damaged planet. Here, we bring together thinkers and makers from the fields of the arts, the technologies, and the social and natural sciences, to generate an experimental, creative and speculative learning platform. This seminar opens up a space of encounter and exchange between different visions, epistemologies and worldviews on the environment and liberation. Queer, sentient, and decolonial ecologies are some of the multiple lenses we will investigate together. How can we think and envision multiple natures and futures to come? We will collectively explore these issues through weekly virtual gatherings with guests, reading sessions and experimental workshops.

Key concepts: Ecology / Art & Science / Queer / Utopia / Visionary Fiction / Ecofeminism / Decolonialism / Post-Natural / Intersectionality / Multispecies / Non-binary / Empathy / Planetary / Worldbuilding / Futurism / Future Change.

- **Language:** English
 - **ECTS:** 6 ECTS Points
 - **SWS:** 2h per week
 - **Dates:** Wednesdays, 4pm – 6pm
 - **Start Date:** 19.10.2022 **End date:** 08.02.2023
 - **Location:** Online
 - **Work format:** Block seminar
 - **Registration online:** 26.09.2022 **until** 10.10.2022
 - **Belegnummer:** 14832
-

WP 30 Basic Theories and Concepts in Historiography

DR. ANDREAS ETGES

America's National Park System

In 1916 the National Park Service (NPS) was founded "to conserve the scenery and the natural and historic objects and the wild life" of the United States. While the original focus was on protecting natural treasures – often by driving out Native Americans – the NPS mandate grew over time by also incorporating Civil War battlefields, historic sites and buildings. The seminar will take a look at the creation of the NPS and selected parks and sites as well as the many controversies to change the celebratory national narrative in order to include more critical perspectives (e.g. slavery in the explanation of the Civil War) and places, like the Sand Creek Massacre National Historic Site in Colorado. An attempt will be made to bring in current and former park rangers via Zoom

- **Language:** English
 - **ECTS:** 3 ECTS Points
 - **SWS:** 2h per week
 - **Dates:** Tuesdays, 4:15 pm - 5:45 pm
 - **Start Date:** 18.10.2022 **End date:** 07.02.2023
 - **Location:** Schellingstr. 3 (R) - R 052
 - **Work format:** Seminar
 - **Registration online:** 26.09.2022 **until** 10.10.2022
 - **Belegnummer:** 14787
-

WP 3 Sociological Fields

Please note that both courses offered in this module must be visited together (lecture & tutorial).

PROF. DR. BERNHARD GILL

Einführung in die Umweltsoziologie (Lecture)

Wie entwickeln sich Gesellschaften in Abhängigkeit von ihrer physischen Umwelt? Wie ist es möglich, dass Industriegesellschaften aktuell mehr physische Umwelt verbrauchen, als – langfristig und global betrachtet – vorhanden ist? Wie lässt sich die Überlastung der globalen Umwelt durch verbesserte Technologien und vernünftigeren Lebensweisen ändern? Wie lässt es sich verstehen, dass Wahrnehmung und Interpretation des Umweltzustands nicht einfach "der Wissenschaft" folgen, sondern gesellschaftlich umstritten sind? Die Vorlesung wird diesen Fragen nachgehen. Aus aktuellem Anlass gibt es außerdem einen Schwerpunkt zu infektionsbiologischen Problemen und Problemwahrnehmungen. Die Vorlesung ist aufgezeichnet und wird über die [Website](#) der Veranstaltung abgerufen.

- **Language:** German
- **ECTS:** 4 ECTS Points
- **SWS:** 2h per week
- **Start Date:** 17.10.2022 **End date:** 06.02.2023
- **Location:** Online (Recorded Lectures)
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 15255

PROF. DR. BERNHARD GILL

Übung zur Vorlesung Einführung in die Umweltsoziologie (Tutorial)

In der Tafelübung - am 8. Nov / 13. Dez / 24. Jan - werden zuvor verschickte Single- Choice-Fragen diskutiert. Die Tafelübung dient insoweit der Klausurvorbereitung. Die Tafelübung findet in Präsenz statt und wird per Video aufgezeichnet (und ist dann ebenfalls über die [Website](#) abrufbar).

- **Language:** German
- **ECTS:** 2 ECTS Points
- **SWS:** 2h per week
- **Dates:** Tuesdays, 10 am - 12 pm, 09.11.2022, 14.12.2022, 25.01.2023
- **Start Date:** 09.11.2022 **End date:** 25.01.2023
- **Location:** Geschw.-Scholl-Pl. 1 (M) - M 105
- **Work format:** Tutorial
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 15256

WP 4 Environmental Anthropology I

DR. WOLFGANG KAPFHAMMER

Das eigentlich ganz gute Leben. Ethnologische Perspektiven auf die Degrowth-Debatte

Selbst in Krisenzeiten wie diesen, wenn die Infrastrukturen des fossilen Zeitalters unmittelbar gefährdet erscheinen, kommen Rufe nach Reduktion und Verzicht nach wie vor politischem Selbstmord gleich. Die Steigerungslogik des globalen Wirtschaftssystems sitzt zu tief in unseren „mental Infrastrukturen“ (Harald Welzer) verankert, als dass die Kassandrarufer nach Degrowth von Klima- und Umweltschützer*innen allzu großflächig durchdringen würden. Und dennoch finden alternative Entwürfe, die gemeinsame Zukunft zu gestalten, immer mehr Zulauf und Unterstützung, darunter Denk- und Praxisanstöße, welche oftmals von Konzepten aus dem Globalen Süden inspiriert scheinen. Wie steht es also um die „Indigenialität“, von der der Biologe Andreas Weber neuerdings (2018) als probatem Transformationsdesign schwärmt?

Im Seminar werden wir uns umsehen, wo möglicherweise jene „Suffizienz“ (Wolfgang Sachs) zum Grundanliegen eines Lebens ohne Exzesse wird (the good enough life, Viveiros de Castro): in einem Leben vor dem „Fall“ der neolithischen Revolution (James C. Scott), oder gerade in den ruhigen Kreisläufen einer sich selbst beschränkenden (the limited good) Landwirtschaft vorindustrieller Prägung, oder doch erst in jüngeren Initiativen einer in die Praxis umgesetzten Wachstumskritik (Via Campesina, Nyéléni, Terra Madre u.v.a.)?

Please note the course starts in the second week of the semester.

- **Language:** German
- **ECTS:** 6 ECTS Points
- **SWS:** 2h per week
- **Dates:** Thursdays, 4 pm - 6 pm
- **Start Date:** 24.10.2022 **End date:** 06.02.2023
- **Location:** Oettingenstr. 67 - 027
- **Work format:** Seminar
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 12414

Environmental Practice

WP 5 Academic Practice in Environmental Studies

DR. GESA LÜDECKE

Tuesday Discussion

This course introduces students to a wide variety of fields, both academic and beyond, in which environmental practitioners are active. Each session will provide participants with the opportunity to meet speakers who function as heads of environmental foundations, as members of environmental research institutions, green businesses, environmental non-governmental organizations (ENGOS), or as representatives of the Ministry of Environment. The course is discussion-based and requires students to actively participate in each class. International fellows and staff from the Rachel Carson Center for Environment and Society will also be invited to join the discussion with the students.

- **Language:** English
- **ECTS:** 3 ECTS Points
- **SWS:** 2h per week
- **Dates:** Tuesdays, 4:15 pm - 5:15 pm
- **Start Date:** 17.10.2022 **End date:** 06.02.2023
- **Location:** 4th-floor conference room RCC, Leopoldstrasse 11a
- **Work format:** Seminar
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 14791

Environment and Responsibility

WP 7: Climate Change and Society

DR. KATIE RITSON

Petrocultures in Europe & Beyond (Seminar)

In Petrocultures in Europe & Beyond we will explore the cultural implications of our dependency on oil. Modern culture is petroculture: oil is ubiquitous in the modern world but the infrastructures and technologies (drilling platforms, pipelines, tankers) that bring it to us are largely removed from our everyday experience. By tracing the ways in which oil has seeped into literary texts, films, TV, visual art and museums across Europe and beyond we can see the extent to which modern life is shaped by energy use, and how shared imaginations of past, present and future energy regimes shape our attitudes to the current energy crisis.

- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Tuesdays, 12 pm - 4 pm
- **Start date:** 18.10.2022 **End date:** 08.02.2023
- **Location:** RCC, Leopoldstr. 11A, 2nd floor conference room, R244
- **Work format:** Seminar
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 14830

WP 8 Foundation Course: Communication Science

DR. CORINNA LAUERER, PD DR. RIESMEYER-LORENZ

Einführung in die Kommunikationswissenschaft I (Lecture)

Die Vorlesung für Studierende des ersten Fachsemesters führt in die Grundlagen der Kommunikationswissenschaft ein und stellt ausgewählte Fachgebiete mit zentralen Fragen, Theorien und Befunden vor. Der erste Teil der zweisemestrigen Vorlesung beschäftigt sich mit dem Selbstverständnis und der Struktur des Fachs, seinen Grundbegriffen (u.a. Kommunikation, Medien, Massenkommunikation, Öffentlichkeit), dem Mediensystem (Presse, Rundfunk, Online-Medien) sowie verschiedenen Arten von Medieninhalten und ihrer Entstehung.

- **Language:** German
- **ECTS:** 3 ECTS Points
- **SWS:** 2h per week
- **Dates:** Monday, 10 am – 12 pm
- **Start date:** 17.10.2022 **End date:** 06.02.2023
- **Location:** Oettingenstr. 67 (B) - B 001
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 15001

DR. CORINNA LAUERER, PD DR. RIESMEYER-LORENZ
Kommunikationsberufe I (Lecture)

Im Rahmen der Vortragsreihe Kommunikationsberufe stellen berufserfahrene Praktiker aus den zentralen Feldern der Medien- und Kommunikationsberufe verschiedene Berufsbilder vor und diskutieren Voraussetzungen und Eintrittschancen in das Berufsleben sowie die Aussichten und Karrieremöglichkeiten. Studierende im BA-Hauptfach-Studiengang Kommunikationswissenschaft müssen im Laufe ihrer ersten beiden Fachsemester 30 Punkte für den Besuch von Veranstaltungen aus dieser Reihe sammeln. Dabei erhalten sie für jede besuchte Veranstaltung einen Punkt.

Mehr Informationen zu den einzelnen Veranstaltungen und die verbindliche Anmeldung zu den Veranstaltungen erfolgt über <https://webservices.ifkw.lmu.de/kobe>
Die Playlist der Veranstaltung ist unter <https://cast.itunes.uni-muenchen.de/#/clip-list/bnHbEdBAzi> verfügbar, allerdings werden die Veranstaltungen im aktuellen Semester ganz überwiegend in Präsenz abgehalten. Sollte es Schwierigkeiten geben mit dem persönlichen Besuch der Veranstaltung, dann wenden Sie sich bitte an kommunikationsberufe@ifkw.lmu.de

- **Language:** German
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Tuesdays, 4 pm - 6 pm, and Wednesdays, 12 pm - 2 pm
- **Start date:** 18.10.2022 **End date:** 08.02.2023
- **Location:** Oettingenstr. 67 (B) – B 001
- **Work format:** Seminar
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 15430

WP 33 Environments, Planning and Policy

PROF. DR. GREGG MITMAN, DR. EMMA ROTH
Hotspots, Spillovers, and Resource Extraction: Critical Approaches from the Environmental Humanities

Mass extinctions. Firestorms. Pandemics. How do we make sense of a planet on which warming temperatures, rising seas, viral spillovers, toxic exposures, and species loss, propelled by capitalism's demand for cheap nature, differentially impact people and other beings? In this seminar, we draw upon work in the environmental humanities, and fields such as anthropology, Black studies, history, Indigenous studies, literary studies, philosophy, political ecology, and science & technology studies, to explore how planetary-scale environmental crises are reshaping past and present relations among people and other beings in different parts of the globe. We also seek to interrogate the formation of scientific and popular understandings, representations, and affects in the making of, and solutions to, such crises. We will focus on three key areas of intervention —resource extraction, conservation, and health—to recontextualize ecological crises within histories of colonialism, capitalism, and racism, and to attend to issues of socioeconomic inequality and the divergent ethics and politics that animate environmental contestations.

- **Language:** English
- **ECTS:** 6 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Thursdays, 14:30 – 16:00
- **Location:** RCC, Leopoldstr. 11b, 2.0. OG, 244
- **Work format:** Seminar
- **Belegnummer:** 14831

Sustainability and Natural Sciences

WP 9 Geographical Sustainability

PROF. DR. MATTHIAS GARSCHAGEN, PROF. DR. HENRIKE RAU, PROF. DR. GORDON WINDER

Geography and Sustainability (Lecture)

Plants as sessile organisms respond to adverse environmental conditions by a diversity of physiological acclimations. This lecture covers the basics in the interaction of plants with the environment and the specific responses to different kinds of stimuli and stresses. Acclimation mechanisms will be reviewed in depth to be able to teach biochemical and molecular mechanisms in more detail and to reinforce recurring mechanisms. The students will be able to integrate knowledge and deal with the complexity of plant acclimation and to apply these capabilities to more specialized courses. Interaction with the environment becomes an even more important topic in an era of climate changes. Understanding these impacts is one of the goals of this lecture.

- **Language:** English
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Tuesdays, 2 pm – 4 pm
- **Start date:** 18.10.2022 **End date:** 07.02.2023
- **Location:** Richard-Wagner-Str. 10 - D 118
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 20178

WP 10 Marine Biology

PROF. DR. GERT WÖRTHEIDE

Marine Biology (Lecture)

The lecture introduces the following content: Basic oceanography (geography, geomorphology, plate tectonics and water circulation systems of oceans) - Physical and chemical factors in marine ecosystems - Adaptations of marine organisms - Geobiology of marine communities - Interaction of abiotic and biotic factors in different marine ecosystems - Marine biomes and marine biogeography.

- **Language:** English
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Tuesday, 2 pm – 4 pm
- **Start date:** 18.10.2022 **End date:** 07.02.2023
- **Location:** Richard-Wagner-Str. 10 - D 016
- **Work format:** Lecture

- **Registration online:** 26.09.2022 until 10.10.2022
 - **Belegnummer:** 20403
-

WP 11 Foundations Course: Organismic Biology

FRANK, GEIGENBERGER, KLINGL, GOTTSCHLING

Vielfalt des Lebens (Lecture)

Die Vorlesung Vielfalt des Lebens - Tree of life findet via Moodle statt. Die Kursseite kann [hier](#) erreicht werden. Der Einschreibschlüssel zu der o.g. Vorlesungsseite lautet: Art und Formenvielfalt

Die Videos zur jeweiligen Vorlesung werden 1 Woche vor dem jeweiligen Termin in Moodle verfügbar sein. Am eigentlichen Vorlesungstag wird es dann ein 45-minütiges Zoom-Meeting geben, in dem Fragen zur Vorlesung beantwortet werden. Bitte halten Sie sich zudem auch bei den aktuellen Ankündigungen auf der Vorlesungsseite in Moodle auf dem Laufenden.

Die Vorlesung vermittelt einen Eindruck über die komplette organismische Vielfalt und erläutert die Evolution, die zu dieser geführt hat. Organismengruppen, die in der Vorlesung besprochen werden, umfassen diverse Einzeller, Pilze, Pflanzen und Tiere, inklusive einer kurzen Einführung in die Evolution des Menschen. Für die jeweiligen Organismen werden die morphologischen Merkmale besprochen, u.a. die intrazellulären Besonderheiten, der Aufbau der Gewebe und Organe sowie die Individualentwicklung (Ontogenese), und in einen evolutionären Zusammenhang gestellt. Wo angebracht, werden auch Fossilbefunde erläutert. Anhand der vorgestellten Merkmale wird im Rahmen der Phylogenetik die Merkmalsevolution entlang verschiedener evolutionärer Linien rekonstruiert. Dadurch wird ein Gesamtbild der Evolution der Organismen erzeugt, welches als Grundlage für Kurse in den weiteren Semestern dient.

- **Language:** German
 - **ECTS:** 6 ECTS Points
 - **SWS:** 4 hours per week
 - **Dates:** Thursday, 10:30 am – 12 pm, Fridays, 12:15 pm - 1:45 pm
 - **Start date:** 20.10.2022 **End date:** 10.02.2023
 - **Location:** Online
 - **Work format:** Lecture
 - **Registration online:** 26.09.2022 until 10.10.2022
 - **Belegnummer:** 19163
-

WP 12 Foundations Course: Ecology, Behavioral and Evolutionary Biology

PROFS DR. DINGEMANSE, GOMPEL, HAUG, STIBOR, & WOLF

Grundlagen der Ökologie, Verhaltensbiologie und Evolutionsbiologie (Lecture)

Dieses Modul präsentiert und veranschaulicht grundlegende Konzepte in Ökologie und Evolutionsbiologie. Es beleuchtet und integriert die Prozesse, über verschiedene Organisationsebenen: Individuen, Populationen, Arten und Gemeinschaften. In der Vorlesung werden die Zusammenhänge zwischen diesen Ebenen der biologischen Komplexität untersucht. Die Studierenden lernen, wie die jeweiligen Stufen von der Umwelt beeinflusst werden (Ökologie) und im Laufe der Zeit erbliche Veränderungen erfahren (Evolution).

- **Language:** German
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Friday, 08:30 am – 10 am
- **Start date:** 21.10.2022 **End date:** 10.02.2023
- **Location:** Großhad. Str. 2 (B) - Gr. Biologie B00.019
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 19169

WP 13 Environmental Geobiology

PROF. DR. WILLIAM ORSI

Global Cycles: Lecture (Lecture)

Introduction to biogeochemical global cycles and methods to acquire and analyze geobiological data in this context. In detail, the module includes WP14.1 Global Cycles: Lecture and WP 14.2 Global Cycles: Tutorial. The lecture imparts theoretical background on biogeochemical global cycles of relevant elements like carbon, nitrogen, phosphorous, iron, and sulfur. In each tutorial session, one student gives a 15-minute presentation on either a review article or an original research article dealing with one of the biogeochemical processes discussed in class the week before, followed by a group discussion. Articles are assigned by the instructor but can also be suggested by the students.

NB: This module consists of TWO parts (WP 13.1 and WP 13.2), both of which need to be taken to gain the full amount of ECTS points.

- **Language:** English
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Monday, 2 pm – 4 pm
- **Start date:** 17.10.2022 **End date:** 06.02.2023
- **Location:** Richard-Wagner-Str. 10 - D 016
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 20396

PROF. DR. WILLIAM ORSI

Global Cycles: Tutorial (Tutorial)

- **Language:** English
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Monday, 4 pm – 6 pm
- **Start date:** 17.10.2022 **End date:** 06.02.2023
- **Location:** Richard-Wagner-Str. 10 - D 016
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 20397

WP 14 Global Change and the Earth System

PROF. DR. JULIA PONGRATZ

Klimawandel und das Erdsystem (Lecture)

Covered topics: - Scientific state of the art on climate change and climate impacts - Climate history (paleoclimate), causes of natural and anthropogenic climate change - Functionality and application of micrometeorological measurement techniques - Major consequences of climate change in the Earth system and in the human-Earth system: atmosphere, oceans, coasts, cryosphere, hydrometeorological extremes, agriculture, economy, bioclimate - Inventory of current research fields: Consequences and impairments of the natural, economic and cultural environment; region-specific vulnerabilities and resilience, - Essentials of national and international climate policy; Legal basis, directives & laws; Technical, economic and political options for climate protection; Working methods of the IPCC - Introduction to the basics of climate modeling - Physical and technical foundations, scales and scaling: AOGCM & RCM, nesting, downscaling, uncertainties and errors - Scenarios and scenario development.

- **Language:** German
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Tuesday, 10 am – 12 pm
- **Start date:** 18.10.2022 **End date:** 07.02.2023
- **Location:** Richard-Wagner-Str. 10 - D 116
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 20160

WP 34 Sustainability, Infrastructure and Technology

PROF. DR. CHRISTOF MAUCH

Environments of Sufficiency: Transatlantic Perspectives on Society, Culture, Ecology and Architecture (Lecture)

This multidisciplinary seminar asks how we can live a good life without rapidly destroying the planet. In a dialogue with architects and civil engineers from the Technical University of Munich, humanities scholars from the Amerika-Institut and the Rachel Carson Center will discuss how green technologies, innovative infrastructures, social practices and lifestyles can contribute to new economic patterns and philosophies that will help to slow down the global ecological crisis. Overall, this seminar asks how the US and other nations in the western world have seen nature and progress in the past and what it will take to shift ideologies of extraction and domination into new directions. Which ideas about 'green living' exist in Europe and North America? Which of them have worked? Students are expected to engage in dialogue with peers who come from very different backgrounds (architecture, planning, ecology, political science, anthropology etc.). They are asked to write their seminar paper during the semester, to precirculate it, and to discuss it during a block session on February 10-11, 2023 at the Vollmar-Akademie Kochel. The seminar starts on October 24.

- **Language:** English
- **ECTS:** 6 ECTS Points
- **SWS:** 4 hours per week

- **Dates:** Mondays, 2:15 pm – 4:45 pm, Fri. 10.02.23 10am-4pm, Sat. 11.02.23 10am – 4pm
- **Start date:** 17.10.2022 **End date:** 11.02.2023
- **Location:** TUM, TBD
- **Work format:** Foundation Course
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 13710

WP 35 Theoretical and Applied Hydrology

PROF. DR. MARIANELA FADER

Theoretische und angewandte Hydrologie (Lecture)

The lecture "Theoretical and Applied Hydrology" covers the following topics: Systems theory, systems analysis, systems synthesis

- Definitions of systems
- Linear and non-linear systems
- Basics of modeling (conservation laws, energy, mass, mathematics, differential equations)
- Modeling in hydrology (analog, conceptual, physical)
- Physics of natural transport processes (diffusion, turbulence)
- Steady state flow, Darcy's law, Manning's equation
- Elements of water management (rivers, reservoirs, turbines, etc.)
- Water abundance and quality management, water resources planning
- Water Framework Directive
- Integrated and sustainable water resource management (IWRM, SWRM)

- **Language:** German
- **ECTS:** 3 ECTS Points
- **SWS:** 2 hours per week
- **Dates:** Tuesday, 12 pm - 2 pm
- **Start date:** 18.10.2022 **End date:** 07.02.2023
- **Location:** Luisenstr. 37 (C) - C 206
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 20163

WP 36 Natural Hazards

PROF. DR. LUKAS LEHNERT

Naturgefahren - Ursachen, Folgen, Handlungsoptionen (Lecture)

Vorlesung mit folgenden Inhalten:

- Hazard-, Risiko- und Katastrophenforschung

- Gefahren und Risikoanalyse
- Frequenz und Magnitude natürlicher Prozesse
- Entstehung von Naturgefahren durch:
 - meteorologische/hydrologische/glaziologische Prozesse (z.B. Tropische Wirbelstürme, Hitze-/Kältewellen, Überschwemmung, Dürre, Sturm-/ Sturzfluten, Permafrostschmelze)
 - geologische/geomorphologische Prozesse (z.B. Erdbeben, Vulkaneruption, Bodenerosion)
 - biologische Prozesse (z.B. Epidemien & Waldbrände)
- Ursachen, Folgen und Handlungsmöglichkeiten (Fallbeispiele)
- Naturkatastrophenmanagement: Vorhersage, Prävention und Bewältigung von Naturkatastrophen
- Einflüsse von Naturgefahren auf gesellschaftliche Prozesse
- Rolle, Aufgaben und Möglichkeiten der Geographie in der Katastrophenforschung

Lernziele: Die Absolventen dieses Moduls verfügen über vertiefte wissenschaftliche Kenntnisse zu Naturgefahren. Die anhand von Fallbeispielen untermauerten Kenntnisse erstrecken sich über ein weites Spektrum von methodischen wie inhaltlichen Fragestellungen und schließen die menschliche Beeinflussung der Gefahren sowie ihre Quantifizierung ein.

➤ Language:	German	
➤ ECTS:	3 ECTS Points	
➤ SWS:	2 hours per week	
➤ Dates:	Mondays, 12 pm - 2 pm	
➤ Start date:	17.10.2022	End date: 06.02.2023
➤ Location:	Luisenstr. 37 (C) - C 024	
➤ Work format:	Lecture	
➤ Registration online:	26.09.2022	until 10.10.2022
➤ Belegnummer:	20154	

WP 37 Evolutionary Ecology

PROF. DR. DINGEMANSE
Evolutionary Ecology (Lecture)

The lecture is divided into 3 parts.

The first part is a broad perspective on the history of ideas and thinking in evolutionary biology, revealing the connections between the different disciplines in ecology and evolution, as well as their origins. From a scientific point of view, it examines the interplay between genetic changes and natural selection.

The second part of the lecture is a primer on general principles of ecology. This part of the lecture is mainly repeating basic and general principles of ecology to bring EES students to a common knowledge base, independent of their educational background during their bachelor studies. Students will learn and discuss the relationships between the individual and its environment, the dynamics of populations and the structure and function of communities.

The third part focusses on the principles of behavioral ecology, introducing optimality approaches and the concept of trade-offs to explain variation in behavior and life-history from an adaptive perspective. These principles are applied to understand life-history variation, optimal foraging strategies, mating strategies, parental care and conflict, and predator-prey interactions.

➤ Language:	English
➤ ECTS:	6 ECTS Points
➤ SWS:	4 hours per week
➤ Dates:	Mondays, 8:30 am - 10:00 am, Tuesdays: 08:30 am - 10 am

- **Start date:** 17.10.2022 **End date:** 06.02.2023
- **Location:** Großhad. Str. 2 (B) - Kl. Biologie 2
- **Work format:** Lecture
- **Registration online:** 26.09.2022 **until** 10.10.2022
- **Belegnummer:** 19392

Final Project Module: Thesis / Creative Project

WP 38/39 Final Project

DR. GESA LÜDECKE

Final Project Colloquium (Colloquium)

The Final Project Colloquium addresses students in their final semester who want to pursue their final project. At this event, students present their project ideas to each other. The colloquium offers the opportunity to discuss any open questions regarding methodology, research focus, etc. It also serves to gain insight into what kind of topics fellow students are working on for their final projects and to reflect on the interdisciplinary character of the program. If you want to do your final project this semester, please get in touch with Gesa Lüdecke as soon as possible. Thank you!

- **Language:** English
- **ECTS:** 1 ECTS Point
- **SWS:** 2 hours per week
- **Dates:** Friday, 11.11.22, 2 pm – 4 pm
- **Start date:** 11.11.2022 **End date:** 11.11.2022
- **Location:** TBD
- **Work format:** Workshop
- **Registration online:** 26.09.2022 **until** 06.02.2023
- **Belegnummer:** 20154