

Student Handbook Annex – TRACEE Master ST6

Study track 6: Climate Change Science

PROGRAMME EDITION 2026

Version: 2025-06-02

Contents

1 The Study Track 6: Climate Change Science 5
1.1 The Vision of the Study Track 6
1.2 Target Group of Students: Entry Requirements 6
1.3 Intended Learning Outcomes of the Study Track 6
2 Structure Overview of the Study Track 6 7
2.1 Semester Periods of the Study Track 7
2.2 Academic Degree and Grades of the Study Track 8
2.3 Examinations Regulations of the Study Track 8
3 Study Track Content Overview 9
4 Your semester at Stockholm University (SU) 9
5 Your semester at National and Kapodistrian University of Athens (NKUA) 10
5.1 Arrival and Welcome Activities 10
5.2 Housing 10
5.3 Living Expenses 10
5.4 Transport 11
5.5 Navigating Campus 11
5.6 Student Health 12
5.7 Special Needs and Disability Support 13
5.8 Resting and Contemplation Rooms 13
5.9 Student Organisation 13
5.10 Language Courses 15
6 Your semester at Eberhard Karls University of Tübingen (UT) 15
6.1 Arrival and Welcome Activities 15
6.2 Housing 16
6.3 Living Expenses 16
6.4 Transport 16
6.5 Navigating Campus 17
6.6 Student Health 17
6.7 Special Needs and Disability Support 17
6.8 Resting and Contemplation Rooms 17
6.9 Student Organisation 18
6.10 Language Courses 18
7 Description of the Curriculum 19
7.1 First Semester at SU 20
7.2 Second Semester at NKUA 26
7.3 Third Semester at UT 33

7.4 Fouth Semester (Masterthesis) at SU or NKUA or UT 40

1 The Study Track 6: Climate Change Science

The study track Climate Change Science (ST6) is an international research-oriented study track focusing on the evaluation and solution of environmental problems. The study track aims for a comprehensive understanding of the physical, chemical, and biological processes which shape the climate system. The focus is on physical processes in the atmosphere and in terrestrial settings, including selected components of e.g., the bio-, hydro-, pedo-, litho- and cryosphere. Students from various science backgrounds learn to qualitatively and quantitatively address complex processes in soils, water and air and to evaluate environmental risks **based on multi-disciplinary approaches.**

The first semester will be offered a**t Stockholm University**. **The second semester** will take place at the **National and Kapodistrian University of Athens** with the focus on »Geoscience – The atmosphere and climate dimension«. **The third semester** is offered by the **University of Tübingen** with the focus on »Geoscience - The geosphere and climate dimension«. The Master thesis can then be completed at one of the three universities.

Study track	**Semester 1**	**Semester 2**	**Semester 3**	**Semester 4**
ST6: Climate Change Science	SU	NKUA	UT	SU or NKUA or UT
	Common Core	**Study Track**		**Master Thesis**
	Transdisciplinary stream			

The **study and examination language** of Study Track 6 is **English.**

SU is a renowned educational institution in Sweden, known for its excellent research and teaching. The Department of Earth Sciences plays a central role in the study of earth pro-cesses and environmental issues. Here, various disciplines such as geology, geophysics, meteorology and oceanography are combined to promote a comprehensive understanding of the earth and its systems. Students and researchers have access to modern laboratories and innovative technologies that enable them to address current challenges in the field of geosciences. The university places great emphasis on interdisciplinary collaboration and sustainable development, which makes it an attractive place for students from all over the world.

UT is a full university covering virtually all areas in natural and social sciences giving the individual students much space for inter/transdisciplinary projects. The University is one out of eleven excellence Universities and has the largest Department for terrestrial geosci-ences in Germany providing state-of-the art laboratory and field facilities in a new building from 2020. Tübingen is located in hilly south-western Germany, the bike gets you everywhere you need to go and it is one of the most sought after student locations in Germany.

NKUA is one of the oldest and most prestigious universities in Greece, founded in 1837. Located in the heart of Athens, it offers a wide range of undergraduate and postgraduate programs across various fields, including humanities, sciences, law, and medicine. NKUA is known for its rich academic tradition, vibrant student life, and commitment to research and innovation. The university attracts students from around the world, fostering a diverse and inclusive environment. With its historical significance and modern facilities, NKUA continues to play a vital role in shaping the educational landscape of Greece and beyond

1.1 The Vision of the Study Track

Students will acquire a comprehensive understanding of the climate system including past and present climate variability as well as ongoing climate change. They will gain focussed knowledge about how climate is studied using remote sensing atmospheric and climate science and geophysics, ecosystem responses and feedbacks, as well as vegetation and soils in the climate system. Extending beyond the natural sciences, students will learn about sustainability in its broader sense (including renewable energies), and about climate policies. Students will apply the multi-disciplinary skills they have learned about in the study track by conducting a research internship projects in climate science.

1.2 Target Group of Students: Entry Requirements

Prerequisite for the Study Track 6 is a Bachelor's degree in natural sciences or engineering. In addition, performance must also have been achieved in the following subjects of the Bachelor's program in particular:

- 6 CP in mathematics or statistics,
- 6 CP in physics,
- 6 CP in geology or chemistry or equivalent*.

To take part in the Study Track, applicants must also document knowledge of English at least at the level of B2 of the Common European Framework of Reference for Languages (CEFR). Requirements can be met with an English test, for example an overall IELTS score of 6.5 with no subtests under 6.0 or a TOEFL score of 90 overall with Reading 20; Listening 19; Speaking 19; Writing 21.

* *These competences may also be acquired in the first or second semester.*

1.3 Intended Learning Outcomes of the Study Track

The intended learning outcomes of this Study Track, in addition to the overarching learning outcomes of the programme, are listed below.

Knowledge and understanding

- demonstrate a comprehensive understanding of the Earth's climate system, including its components (atmosphere, hydrosphere, biosphere, lithosphere) and the interactions between them.
- demonstrate insights into climate change policies, international agreements (e.g., Paris Agreement), and the role of governmental and non-governmental actors in climate change mitigation and adaptation.

Competence and skills

- plan and undertake appropriate field and advanced laboratory techniques to quantify environmental processes in the various compartments
- develop, interpret, and evaluate climate models, including regional and global climate projections, with a focus on uncertainty, data limitations, and predictive capacity.

Judgement and approach

- critically evaluate the scientific principles underlying climate change, including greenhouse gas emissions, feedback loops, and the physical and chemical processes driving global warming.

- analyze and propose effective mitigation and adaptation strategies for addressing climate change, considering technological, policy, and behavioural approaches at the local, national, and global levels.
- reflect on the ethical implications of climate science and policy decisions, and demonstrate an understanding of global responsibilities in the context of climate change and sustainability.

2 Structure Overview of the Study Track 6

2.1 Semester Periods of the Study Track

The study track takes place at Stockholm University (SU), National and Kapodistrian University of Athens (NKUA) and the University of Tübingen (UT). Below you will find an overview of the semester times of the participating universities:

Semester	University	Period
1st Semester	SU	Winter semester runs from **Beginning of September to Mid-January (including exams)** of the following year.
2nd Semester	NKUA	Summer semester runs from **Mid-February to mid-June (including exams)** of the following year.
3rd Semester	UT	Winter semester runs from **1 October to 31 March (including exams)** of the following year.
4th Semester	SU	Summer semester runs from **Mid-January to Beginning of June (including exams)** of the following year.
	NKUA	Summer semester runs from **Mid-February to mid-June (including exams)** of the following year.
	UT	Summer semester runs **from 1 April to 30 September (including exams)** of the following year

2.2 Academic Degree and Grades of the Study Track

The study track is divided in 4 semesters of 30 ECTS each for a total of 120 ECTS.

The cooperating universities award a joint degree “Master of Science” (abbreviated to “M. Sc.”) with the title “Transdisciplinary Studies of Climate, Environment and Energy” on the basis of the successfully completed programme. The joint certificate, ToR and Diploma Supplement is issued by the coordinating partner university: Stockholm University.

The overall Master`s degree grade (in the German and Greek grading system) for the programme is calculated from the average of all graded courses, as weighted by credit points. For the overall Master's degree grade on the Diploma Supplement, the grades are converted according to the following comparison table:

ECTS Grading Scale	NKUA	SU	UT
A	9-10	A	1,0-1,3
B	8-8,9	B	1,4-2,1
C	7-7,9	C	2,2-2,8
D	6-6,9	D	2,9-3,6
E	5-5,9	E	3,7-4,0
FX	0-5	FX	4,1-5,0
F		F	

2.3 Examinations Regulations of the Study Track

Examinations taken at the cooperating partner universities are carried out and assessed in accordance with the regulations that apply at the partner universities.

3 Study Track Content Overview

The study track overview by study progress is presented below:

University	Type	Module Title	ECTS per Semester				Total ECTS
			S1	S2	S3	S4	
SU *Climate, Energy and Environment – A Transdisciplinary Perspective*	Mandatory	Systems Thinking	3				**30**
	Mandatory	Climate, Environment and Energy – A Natural Science Perspective	9				
	Mandatory	Climate, Environment and Energy – A Social Science Perspective	9				
	Mandatory	Climate, Environment and Energy – A Humanities Perspective	6				
	Mandatory	Creating Knowledge Through Transdisciplinary Methods	3				
NKUA *Geoscience – The Atmosphere and Climate Dimension*	Mandatory	Climate, Climate Variability and Climate Change		9			**30**
	Mandatory	Energy and Climate Change: The Role of Renewable Energy Sources		9			
	Conditionally Elective	Select 2 courses from the list below: • Earth Observation for Climate Change (6 ECTS) • Design, Development and Implementation of a Research Project in GIS Environment (6 ECTS) • Science, Technology, Society: Environment and Sustainability (6 ECTS) • Climate Policies and Diplomacy (6 ECTS)		12			
UT *Geoscience - The Geosphere and Climate Dimension*	Mandatory	Physics of the Earth's Surface			6		**30**
	Mandatory	Modelling for Sustainable River Management			6		
	Conditionally Elective	Select 3 courses from the list below: • Data Analysis and Modelling Methods in Geoscience and Environmental Science (6 ECTS) • Physical Properties of Earth Materials (6 ECTS) • Advanced Geophysics (6 ECTS) • Glaciology (6 ECTS) • Inter- and Transdisciplinary Perspectives on Climate and the Environment (6 ECTS)			18		
SU / NKUA / UT *Master Thesis*	Mandatory	Master Thesis				30	**30**
			30	**30**	**30**	**30**	**120**

4 Your semester at Stockholm University (SU)

The services provided at Stockholm University for the semester within the Study Environmental Chemistry and Toxicology are the same than the ones provided during the first semester (Common core) listed in the student handbook.

5 Your semester at National and Kapodistrian University of Athens (NKUA)

5.1 Arrival and Welcome Activities

Each semester, the university organizes **Arrival and Welcome Activities** to support and guide all incoming **Erasmus+, CIVIS, and international students**. These events take place **twice a year**, at the beginning of the winter and spring semesters, and provide essential information to help students settle into their academic and social life.

During these sessions, representatives from various departments introduce students to the university's academic programs, support services, and extracurricular opportunities. Presentations include insights into elective courses, language learning options, student associations, and campus facilities, such as the gym and accessibility services. Additionally, student organizations, such as **E**SN (Erasmus Student Network), share information about social and cultural activities designed to enhance students' overall experience.

5.2 Housing

There are various ways for finding a flat in Athens, ranging from advertisements to agencies and digital services. Most apartments are unfurnished, while those near the city centre are usually old or recently renovated. Rent costs don't include public utility services (electricity, water, heating, telephone line, internet). There is also a typical extra cost, a building fee, which is shared with the tenants, for services such as cleaners, gardeners, elevator maintenance, electricity for shared building spaces, etc. Renting an apartment requires signing a lease contract, which is necessary for establishing tenant rights and responsibilities.

5.3 Living Expenses

Mobile phone-Internet

Greece uses the same GSM system as other EU countries, Asia and Australia. However, USA and Japan use an incompatible mobile system to the European one. Acquiring a landline may be quite complicated, so most students simply have a mobile phone. The easiest payment method is through a prepaid card. All you need is to visit any provider store (Cosmote, Nova Greece, Q-Telecom, Vodafone Greece), buy a SIM card (with or without a device), load the account with a certain amount of money and receive a phone number verification in your name. You will need to show your student ID or passport. With your academic ID, you are eligible for student packages at a lower price. Alternatively, you may apply online to Vodafone, What´s up (Cosmote), Nova or Q-Telecom providers and your SIM card will be sent by post to the residential address you suggested.

SIM Card costs start from 10€ and you can reload it either at the provider's store or by buying a prepaid card from kiosks or supermarkets.

Tax Identification Number (TIN/in Greek AFM)

It is necessary for foreign students to obtain a TIN number in order to open a bank account and accept the lease agreement in Taxisnet. In order to obtain your TIN number (AFM) and Key Code follow the next steps: 1. Submit an application on the digital portal myAADE under «TIN number (AFM) & Key Code (Act for myself)» without filling in the details of a residence permit and the personal details of a tax representative. 2. After submitting the application, you will receive an application number (Αρ. Αίτησης). Keep this number, as you will need it to schedule an online appointment with an AADE employee to obtain your TIN number and Key Code. 3. After the AADE employee confirms your

application details and passport, your TIN number (AFM) and Key Code will be issued. The data (TIN number, passwords, and Key Code) will be sent to your email address in an encrypted file as specified in the application. For further details on how to obtain your AFM and your username and password, please see the attached instructions.

Bank

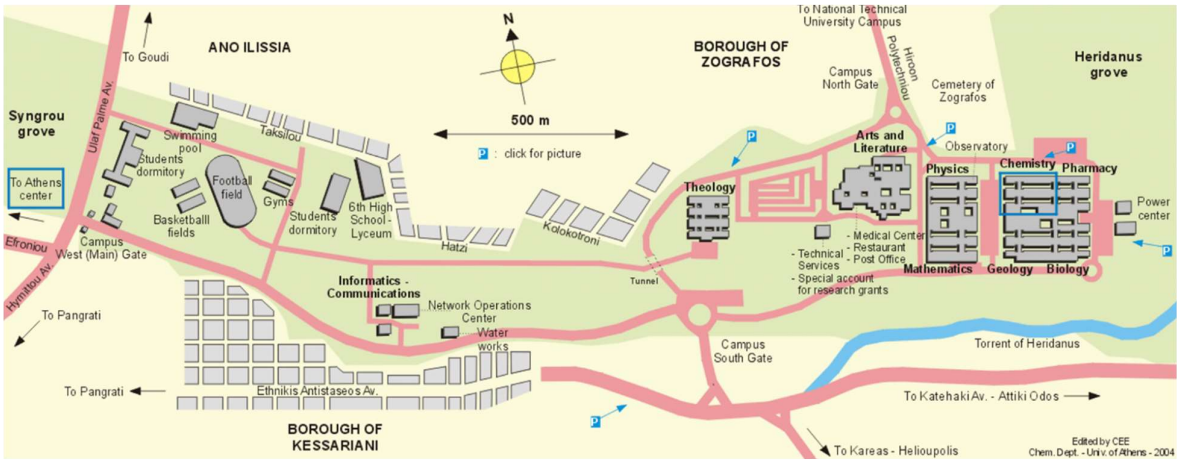
If you are a Greek resident for more than one or two semesters, maintaining a bank account in the country of origin may not be efficient because of high bank charges. In addition, a Greek bank account with e-banking username/password are necessary for applying for residence permit. Submitting the required documents is mandatory for the bank to open a new account for you and it is done by appointment at the branch of the bank, closest to your home.

5.4 Transport

In the Athens-Piraeus area and the airport, you may transport by Metro, Tram, Suburban railway, City Buses and, Electric trolley-buses. They run from 5:00 am. until midnight (12:00), and there are also some night bus lines. Information about lines: https://www.oasa.gr/en/, STASY | Athens Urban Rail Transport. For a detailed guide to public transport, please visit Athens Transport. There are two types of transportation fares: ATH.ENA Ticket for one or multiple routes and personalized cards (ATH.ENA Card), with which you can buy tickets for 30, 90, 180 or 360 days.

Students are entitled to a reduced price with an ATH.ENA Card, which can be acquired by (1) showing the Academic ID or proof of registration from your Department of studies, (2) a photo and (3) your ID or passport at Issuing Points for Personalized Cards.

5.5 Navigating Campus



NKUA provisions and services

Advising & Counselling Services

- Student Ombudsman
- Psychosocial Intervention Unit
- Counselling Office - Department of Theology
- Counselling Office - Department of Psychology
- Mental Health Community Centre
- Psychological support hotline 10306

Support Services

- Accessibility Unit for Students with Disabilities
- Student Support Fund
- University Club
- Student Residences
- Student Meal Services
- Healthcare Services
- Scholarships - Funding
- Career Services

Study and Leisure Facilities

- 9 University Libraries
- 2 libraries at the University Club
- Computer and multimedia Centre
- Foreign Language Teaching Centre ('Didaskaleio')
- Modern Greek Language Teaching Center
- University Gym and Athletics Centre
- Student Cultural Club • Erasmus+

5.6 Student Health

Health Care Services

Undergraduate/postgraduate students and PhD candidates are fully eligible for medical, pharmaceutical and hospital healthcare, provided that they have not already chosen another Healthcare Insurance Plan. Healthcare Insurance includes healthcare services in Public Hospitals, University Hospitals, and Public Primary Healthcare Facilities which are part of the National Healthcare System (ESY/ΕΣΥ in Greek). In case of an emergency or an accident, students can also seek help from Municipal Medical Centres of the country, upon showing their Academic ID Card or AMKA number (Social Security Number). In addition, the University has its own services, which are located at the centre of Athens (15 Ippokratous Street), and at the University Campus in Zographou (12 Olof Palme Street, Panepistimioupoli, Ilisia), which provide Healthcare Services for the following medical specialisations (upon showing your Academic ID card):

a. **General Practitioner**, Phone Number: (+30) 210 368 8241, (+30) 210 368 8243, Monday, Wednesday and Friday 08:00 – 14:30, Tuesday and Thursday 09:30 – 15:00
b. **Eye Specialist**, Phone Number: (+30) 210 368 8240, Monday, Wednesday and Friday 08:30 – 13:30, Tuesday and Thursday 09:30 – 14:30
c. **Dentist**, Phone Number: (+30) 210 368 8210-11, Monday to Friday 08:00 – 13:30
d. **Dermatologist**
e. **Psychiatrist**, 15 Ippokratous St., Monday, Thursday and Friday 09:00 – 14:00, Tuesday and Thursday 08:30 – 13:00 Phone Number: (+30) 210 368 8226, and at University Campus Zographou, Monday to Tuesday 09:00 – 14:00, Phone Number: (+30) 210 727 5580
f. **Psychologist** 15, Ippokratous St., Monday to Friday 08:00 – 14:00, Phone Number: (+30) 210 368 8282, (+30) 210 368 8209, (+30) 210 368 8244 and at University Campus Zographou Monday to Friday 08:00 – 14:00, Phone Number: (+30) 210 727 5579, (+30) 210 727 5589

European Health Insurance Card (for EU Students)

The European Health Insurance Card is a free card that gives you access to medical stateprovided healthcare, during a temporary stay in any of the 27 EU countries, Iceland, Liechtenstein, Norway and Switzerland or the United Kingdom under the same conditions and at the same cost (free in some countries) as people insured in that country.

The benefits concern chronic or other illnesses as well as pregnancy and childbirth. Cards are issued by the respective national health insurance provider in the country of origin, before leaving the country.

Private insurance contract for non-European Union students.

The insurance contract to be submitted with the application for residency permit or its extension, should include:

- Health care in public hospitals: 10.000€ annually with own-contribution of 20%.
- Permanent (total or partial) impairment insurance caused by an accident: 15.000€ annually with own-contribution of 20%.
- Illness or accident-related medical and pharmaceutical expenses: 1.500€ annually with own-contribution of 20%.

The contract should indicate that it covers expenses defined by the law/ministerial decision and should explicitly mention that it covers everything that might occur to the student during their stay in the country. If there has already been another insurance contract, from your country of origin, it can be used if officially translated into Greek, as long as it includes the above provisions.

In any other case, students may sign a Greek financial contract agreement with an insurance company. The cost starts from 80€ per year.

Social Security Number (AMKA in Greek)

An AMKA number is unique to an individual, making Health Security services available, and it is mandatory in case of employment.

Obtaining an AMKA number requires:

- A valid passport copy
- A residence permit for studying, which allows part-time market access (for third country students)
- A copy of employment contract
- A European citizen's registration certificate from the Police Department (in case of European Union students)

The National Social Security Provider (EFKA/ΕΦΚΑ in Greek) is the relevant department for obtaining your AMKA number. Students should address their local EFKA department directly (the one closer to residence).

5.7 Special Needs and Disability Support

The National and Kapodistrian University of Athens operates an **Accessibility Unit**, which supports students with learning difficulties or severe illnesses. The main provisions involve adjusting the environment, supportive informatic technologies and accessibility services. NKUA aims at meeting Disabled Student's basic needs, such as interpersonal communication with academic community members, access to materials for note taking and writing assignments, and access to the university establishments, educational material, classroom boards and projectors, examinations and internet content.

5.8 Resting and Contemplation Rooms

5.9 Student Organisation

Registering at the University

Beginning your studies requires registering at the relevant Department of the School. Registration provides access to all University facilities and services, and allows you to create your online student account and receive a student identity card (academic ID).

Please, submit the necessary documents and relevant certification to the Department Registry. For the countries which are part of the Apostille Convention, certification should bear the Apostille Stamp. For countries which do not participate in the convention, certification should bear a Consulate validation (visa) in case it has been issued in a foreign country.

Upon submitting the documents, you will receive:

1. A registration certificate as a temporary academic ID, which you will need for applying for a residence permit at the Directorate of Foreigners and Immigration of the Decentralized Authority at the your area of residence.
2. The registration certificate carries the registration number which you will need to create your online account.

Please, visit the following webpage for more information:
https://issu.uoa.gr/guide_for_all_students/getting_ready_ for_your_studies/enrolment/

An incoming NKUA student is expected to create an online account using their student registration number (provided after registering) and their passport number.

For **creating** and **activating** this account, you may contact the NKUA account administration services.

1. Undergraduate students can directly apply for a new account, while postgraduate students should send a signed application form to the Registrar's Office of their Department.
2. After receiving a verification e-mail or SMS approving the application, you may check with the account administration services and activate your account.
3. By activating your account, you gain access to https://my-studies.uoa.gr or https://my-uni.uoa. Gr/.
4. You also gain access to the following internal services, networks, and external online resources of the University:
    - the online registration for individual courses and examinations
    - the e-class platform
    - the online library
    - the Pergamos application
    - the registration for receiving textbooks
    - the online application for an academic ID and other services.

Please visit the following webpage for more information:
https://issu.uoa.gr/guide_for_all_students/getting_ ready_for_your_studies/enrolment/

All registered students are entitled to an Academic Identity Card (Paso in Greek).

Student discounts are available in all public transportation fares, cultural events, museums, trade fairs and many more, upon showing an academic ID.

When sitting for an exam at the end of each semester, you need to provide your academic ID.

After registering at the Department of your choice, please, apply for an Academic ID through the electronic service of the university, following the instructions of the Ministry of Education, Religious Affairs and Sports and providing a digital photo of yourself (.jpg, .png).

Points to consider:

1. Please, DO NOT activate the option «I am already a graduate from another department of the University or Institute of Technology», at the beginning of the process, because this will NOT allow you to receive your Academic ID .
2. You will be asked to fill in your Social Security Number (AMKA). If you already have one, please, fill it in. If not, you need to select the option: «I declare that I do not have a Social Security Number (AMKA)».
3. Please, fill in and doublecheck your personal details carefully, where requested.
4. Only in case you are a student at NKUA for a year or less, will you have to select the option: «Erasmus student (to be selected only by foreign students)».
5. You will receive your academic ID from a Vodafone store. Once you fill in your address, a list of stores will appear for you to pick up your ID from. Please, select a point of delivery nearest to your home.

For more information, please, visit:
https://issu.uoa.gr/guide_for_all_students/getting_ready_for_your_studies/academic_id_card/

5.10 Language Courses

The NKUA offers Greek language courses to Erasmus+ incoming students, in order to enable them to understand the Greek language. Even if many of the incoming students take courses in English, a basic knowledge of the Greek language will help them to get acquainted with everyday life in Greece.

The Greek Language Courses (for the first semester - Code: NGLT0001 and for the second semester - Code: NGLT0002) offer **6 ECTS** per semester (6hours/week) and are **free-of-charge for one semester**. Students who have attended courses for the first semester and wish to attend the second semester's courses must register again and they have to pay the tuition fees on their own.

Important Note: Please make sure that you click on the programme that applies to Erasmus students- Title: **ERASMUS.**

For further information, please refer directly to the Modern Greek Language Teaching Center's website (**https://en.greekcourses.uoa.gr/program_of_courses/**)

In order to fill in the online Application Form for the Greek Language Courses, you must have already received the Acceptance Letter from the Department.

6 Your semester at Eberhard Karls University of Tübingen (UT)

6.1 Arrival and Welcome Activities

Starting out can be difficult. In the first few weeks, you will experience many new things. We aim to help you find your way around the University.

As an international student, you are invited to our Welcome Program, which includes a Help Desk, an academic writing workshop, a mini-workshop on study planning with the digital "Alma" system, and various peer-to-peer activities from students for students, for instance an advisory course on "How to study at a German university".

The University of Tübingen also offers a specific welcoming and introductory sessions here you can ask all your questions directly. Further information: Link

The Department of Geosciences at the University of Tübingen includes almost 40 professorships from the general fields of geology, mineralogy, environmental sciences, geography, and archaeological sciences. It is thus one of the largest departments of its kind at German universities.

6.2 Housing

It is difficult to find a room or an apartment in Tübingen at the beginning of your studies. The university has responded to the particularly tight situation on the housing market. The most common types of accommodation are the following:

- *Student residences:* A room in a student residence hall / dormitory is good value for money. Note that in Germany, all student residences are self-catering – you usually share a kitchen as well as sanitary facilities and have a single room on your own. Still, life in dormitories differs widely: In some dorms, residents do a lot together in their free time and form a close community; in others, they tend to keep to themselves. Accommodation in Tübingen can be found in halls of residence run by the Studierendenwerk.
- *Shared apartments:* A popular form of housing among students is sharing an apartment (Wohngemeinschaft, or WG for short). Similar to dormitories, life in WGs is various: Some apartments are shared by friends; in others, the flatmates aren't that close, but get together for joint activities from time to time. For some students, sharing a flat is an inexpensive way to live, but they are not that interested in forming a community. It's up to you what you make of a shared apartment. Most-used websites for sharing/finding shared apartments are: www.wg-gesucht.de, www.kleinanzeigen.de.

Further information: Link

All residents in Germany must register their place of residence with the local Residents' Registration Office (called "Bürgerbüro" in Tübingen) within two weeks of moving into their new accomodation. Book appointment in advance or complete the online registration by using your online ID function. Both forms of registration require a confirmation from your housing provider ("Wohnungsgeberbescheinigung") which can be either signed by your landlord and uploaded by you/handed in on site, or confirmed by your landlord electronically.

6.3 Living Expenses

The necessary allowance of a university student at the University of Tübingen per month would be:

Cost of living (incl. transport)	467 Euro
Rent	500 Euro
Other expenditures (incl. health insurance)	134 Euro
Total expenses	**1101 Euro**

More Information for students at the University of Tübingen about student housing, canteens and cafeterias, studying abroad, student finances, studying with children, clubs and societies (music, the arts, theater, sport), mobility, insurances, and getting involved: Link.

6.4 Transport

Students at the University of Tübingen are entitled to a discounted semester ticket for local public transport. The semester ticket is valid on all buses and trains in the NALDO public transport network, which includes the greater districts of Tübingen, Reutlingen, Zollernalbkreis and Sigmaringen. No-one else is allowed to use your semester ticket. If you lose it, you must buy another one. Further Information: Link.

Here you can find more information on how to get to Tübingen.

6.5 Navigating Campus

The following map provides an overview of the campus. The campus is spread over the Altstadt, the Morgenstelle, the Kliniken and the Sand. The "Geo- und Umweltforschungszentrum" (Geo- and Environmental Center) hosts all groups active in environmental geosciences. It is located in close vincinity to the universities' further science departments.

In this interactive virtual guided tour of Tübingen (in German, produced in 2020, but still good for a first impression of the city), you can get to know some of the most relevant places in the city of Tübingen from the perspective of the students Amelie and Tony.

The University regularly hosts events that give interested members of the public, students and employees insights into topics being dealt with at the University. From concerts, exhibitions and conferences to public lectures - there is something for everyone. Further information: Link.

6.6 Student Health

Studying can pose many challenges, whether content-related, organizational or emotional. Psychologically difficult situations can arise at any stage of your studies. No matter whether you are dealing with study-related stress (e.g. coursework overload), with problems in your family or social life, or with economic or medical issues that may affect your mental health – the university offers you support through preventative services, counseling options, and competent contact points that you can turn to in situations of crisis. Further information: Link.

6.7 Special Needs and Disability Support

Services for students with a disability or (chronic) illness: It is estimated that there are more than 4,000 students at the University of Tübingen whose ability to study is affected by illness and/or disability. In order to support such students, the University of Tübingen offers special counseling services that can be used at any stage of studies, or even before the start of studies.

We can support you in deciding on the appropriate type of study and university, in planning and organizing your studies, and in answering questions about possible alternatives. There is also the option of counseling in personally difficult situations. Important topics may also include financing your studies, getting access to necessary tools and resources, finding suitable housing, and assistance in everyday study routines. If you need an individual adjustment of study conditions, you can apply for disadvantage compensation ("Nachteilsausgleich"). Counseling is voluntary, confidential and open-ended. Further information: Link.

6.8 Resting and Contemplation Rooms

Whether you are preparing a group presentation, working individually or conducting research - the University Library offers you a variety of different work spaces. For further information: Link.

Since 2013, the university library has housed a "Room of Silence" in the transition between the Bonatzbau and the main building.It was set up by the University of Tübingen to be open to members of all religions for individual prayer and meditation. However, it can also serve as a retreat for people without religious convictions for a moment of silence and pause. For further information: Link.

In the Ammerbau on level 3 (A321), a resting and work room is available for students with disabilities or a (chronic) illness. The room is accessible without barriers and equipped with a height-adjustable desk, an armchair with stool and a yoga mat. For further information: Link.

6.9 Student Organisation

For students of all academic fields and study programs: Here you can find all our counseling services, events and workshops, as well as a range of useful information for studying at the University of Tübingen. The Student Counseling Service is there for you throughout your studies. We support you at the beginning and during all stages of your study program. We offer you a wide range of events, guidance materials, and of course individual counseling. We are a neutral service and will always treat your situation as confidential; i.e. the counseling is subject to professional discretion.

When do lectures start? Which courses can I take? And how do I take leave of absence? From planning your timetable, to expenses and paperwork, to getting assistance with your studies - the information below can help you get organized. For further information: Link.

The University of Tübingen offers a number of different services which give helpful advice if you are planning to study in Tübingen or if you are already enrolled here - whether you are just beginning, are well into your studies, or are finishing your studies and planning a career. Directly below, you will find a list of these services, sorted according to topic as well as according to the different phases of studying. For further information: Link.

Students at the University of Tübingen have various opportunities to become involved in University policymaking. The University of Tübingen is home to many student groups and initiatives which are active in the fields of politics, the environment, or in social policy. For further information: Link

The University sports programme opens for registration about a week before the semester begins and offers a wide range of options — from high-intensity fitness classes and team sports to stress-relief activities such as mindfulness training, nutrition seminars, and meditation workshops.

6.10 Language Courses

Learning German at the University of Tübingen

- Are you interested in taking a summer course or an intensive course at a famous German university during your semester break?
- Would you like to take the German proficiency exam (DSH) and get ready to study at a German university? Or would you like to improve your German while studying in Germany?
- The common language in your lab, your working group or in your classes is English, but would you like to be proficient enough to successfully handle everyday situations in German?
- Would you like to learn more about Germany and its people?
- The department “German as a Foreign Language and Intercultural Programs” offers German language classes, courses relating to the geography, history and institutions of Germany and language proficiency exams.

Learning Foreign Languages at the University of Tübingen

- Would you like to improve your languages skills while studying and acquire important additional qualifications for your future working life?
- Do you need a UNIcert certificate or a country specific certificate in order to be able to account for your language level?
- Are you studying at the University of Tübingen and are interested in voluntary additional language Training?

Language courses for students of the University of Tübingen are offered by the Foreign Language Center (FSZ). You can find more information about the courses here.

7 Description of the Curriculum

Legend	
Grading System:	g = graded ng = not graded (pass/fail) nE = no exam
Type of Exam / Study Requirement:	WE = written assessment OE = oral assessment A = assignment / term paper, written report R = report, presentation LP = lab protocol / journal SP = successful participation PF = portfolio examination MT= Master thesis
Duration of Assessment:	Duration of the assessment in *min*
Weighting:	Weighting of grade for the module
CH:	Credit Hours
Status:	c = compulsory op = optional
Type of Lecture:	L = lecture S = seminar E = exercise/tutorial FC = field course LC = laboratory course PR = project
CR:	Credits (ECTS)

7.1 First Semester at SU

Module Number: TRACEE_ST	**Module Title: System Thinking**		**Type of Module: Mandatory**
Credits (ECTS)*	3 CP		
Workload* - Contact Time - Private Study	Workload: 90 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	Stockholm University	
Regular Cycle*	Every academic year		
Language	English		
Learning-/ Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	• Definition and core concepts of systems thinking • Understanding complexity in environmental, social, and technological systems • Characteristics of complex systems: emergence, nonlinearity, self-organization, and adaptation • The role of uncertainty in systems analysis • Introduction to complexity science and its relevance to climate, environment, and energy studies • Integrating knowledge across disciplines: natural sciences, social sciences, engineering, and policy • Transdisciplinary research: involving stakeholders in system design and problem-solving • Designing sustainable systems using a systems thinking approach • Ethical considerations and ensuring equity in system design		
Qualification Goals*	Students will be able to discuss systems thinking and its history, central system concepts, as well as types of systems and their properties. Students will develop a comprehensive understanding of system thinking principles. They will gain the ability to identify and analyze complex systems in the context of climate, environment, and energy. Students will be able to apply system thinking frameworks to address interdisciplinary challenges related to climate change, environmental sustainability, and energy transitions. This includes recognizing the interdependencies between social, ecological, and technological systems. Students will learn how to engage in transdisciplinary collaboration, integrating knowledge from diverse fields such as science, policy, engineering, and social sciences. They will enhance their ability to communicate complex system dynamics to both experts and non-experts. Students will be trained to critically evaluate and design sustainable solutions to address global challenges. They will develop the ability to assess the long-term consequences of interventions within interconnected environmental, social, and energy systems.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*3*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: TRACEE_NSP	**Module Title: Climate, Environment and Energy – A Natural Science Perspective**		**Type of Module: Mandatory**
Credits (ECTS)*	9 CP		
Workload* - Contact Time - Private Study	Workload: 270 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	Stockholm University	
Regular Cycle*	Every academic year		
Language	English		
Learning-/ Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	• Introduction to Natural Science Perspectives on Climate, Environment, and Energy • Climate Science and its Drivers • The Earth System and Interactions • Biodiversity and Ecosystem Dynamics • Energy Systems and Natural Resource Use • Climate-Environment-Energy Interactions • Environmental Pollution and Contaminants • Climate Change Impacts on the Earth System • Climate Change Mitigation and Adaptation from a Natural Science Perspective • The Role of Natural Science in Environmental Policy and Global Governance • Emerging Topics in Natural Sciences and Environmental Change		
Qualification Goals*	Students will be able to desscribe energy and matter and their transfer within the Earth's system, as well as solutions for future energy supply. They can describe global biogeochemical cycles, ecosystem services, and biodiversity, as well as the risks they face due to global environmental changes. Students will be able to explain the climate system, drivers and feedback mechanisms, as well as Earth's past, present, and future climate. They will develop the ability to explain key concepts such as the greenhouse effect, energy flow, carbon cycles, ecosystem dynamics, and the interactions between natural and human systems. Students will be able to apply systems thinking to complex environmental and energy challenges, recognizing the interconnectedness of climate, ecosystems, and energy systems. They will be proficient in analyzing the interactions and feedbacks between natural systems, human activities, and technological interventions. Students will develop the ability to effectively communicate complex scientific concepts related to climate, environment, and energy to both specialist and non-specialist audiences. They will be able to convey the significance of scientific data and findings to policymakers, stakeholders, and the general public in an accessible and compelling manner.		

	Students will be equipped to integrate scientific knowledge into environmental and climate policy development. They will learn how to use natural science data to inform decision-making processes, especially in the context of global climate negotiations, energy transitions, and sustainable development. Students will develop interdisciplinary skills, collaborating with experts from various fields (e.g., social sciences, engineering, policy) to address complex climate and environmental issues. They will also refine their critical thinking skills to assess and challenge existing scientific theories and assumptions, contributing to more effective, evidence-based solutions. Students will understand the ethical implications of environmental and climate science. They will develop a strong commitment to sustainability and social responsibility, considering the long-term impacts of scientific solutions on global ecosystems, human communities, and future generations.

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*9*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: TRACEE_SSP	Module Title: Climate, Environment and Energy – A Social Science Perspective		Type of Module: Mandatory
Credits (ECTS)*	9 CP		
Workload* - Contact Time - Private Study	Workload: 270 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	Stockholm University	
Regular Cycle*	Every academic year		
Language	English		
Learning-/Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	• Introduction to Social Science Perspectives on Climate, Environment, and Energy • The Political Economy of Climate Change and Environmental Issues • Environmental Policy and Governance • Social Movements, Public Opinion, and Climate Activism • Energy Systems and Social Equity • Ethics, Responsibility, and Climate Justice • Social Science Methods for Climate and Environmental Research • Future of Climate, Environment, and Energy Governance		
Qualification Goals*	Students will gain a deep understanding of the key concepts and theoretical frameworks from social sciences (e.g., sociology, economics, political science, anthropology) used to analyze climate change, environmental issues, and energy transitions. Students can describe past, present, and future economics, politics, and policies on energy systems, environment, and climate change. They are able to discuss the international, European, and national legal framework for climate, environmental, and energy policies and the transition. Students are able to discuss knowledge, behaviour and action in relation to climate change, as well as the role of communication and education in addressing environmental and climate challenges. Students will develop the ability to assess the social implications of climate change, such as environmental justice, vulnerability, inequality, and power relations. They will analyze how social factors, including gender, race, class, and access to resources, intersect with climate impacts and energy systems. Students will acquire the skills to analyze environmental and climate policies, governance structures, and institutions at local, national, and international levels. They will evaluate the effectiveness of different policy responses, such as carbon pricing, climate adaptation strategies, and renewable energy transitions, through a social science lens. Students will understand the global-local dynamics of environmental and energy systems, analyzing how global climate change and energy policies interact with local contexts, cultures, and practices.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*9*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: TRACEE_HP	Module Title: Climate, Environment and Energy – A Humanities Perspective					Type of Module: Mandatory			
Credits (ECTS)*	6 CP								
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: Depends on the selected courses				Private Study: Depends on the selected courses			
Duration of Module* Module Coordinator	1 semester			Stockholm University					
Regular Cycle*	Every academic year								
Language	English								
Learning-/ Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)								
Module Content*	• Introduction to Humanities Perspectives on Climate, Environment, and Energy • Environmental Ethics and Justice • Cultural Narratives and Climate Change • History of Environmental Thought and Action • Philosophy of Nature and Human-Nature Relationship • The Role of Art and Literature in Shaping Environmental Consciousness • Technology, Innovation, and Cultural Responses to Climate and Energy Challenges • Future Visions: Imagining Sustainable Futures								
Qualification Goals*	Students will develop a deep understanding of how the humanities (e.g., philosophy, history, literature, ethics, cultural studies) contribute to the analysis of climate change, environmental issues, and energy systems. Students can discuss historical, literary, aesthetic, and philosophical aspects of environmental thinking and addressing concerns about climate and the environment. Students will understand the historical roots of current environmental and energy crises, exploring past environmental transformations, colonialism, industrialization, and their lasting impacts on contemporary climate and energy systems. Students will explore how literature, art, and media have represented and influenced public perceptions of climate change, energy, and the environment. They will develop the ability to analyze environmental storytelling, symbolism, and cultural expressions of sustainability, environmental degradation, and the Anthropocene. Students will explore how climate change and environmental issues are framed through political, social, and economic discourse, and how these narratives shape public policy, scientific understanding, and collective action. They will analyze how different narratives (e.g., crisis, opportunity, denial) influence the public's perception of climate change and environmental issues, and how these narratives can be leveraged to promote climate action. Students will develop the skills to collaborate across disciplines, integrating humanistic perspectives with natural and social science research to address climate, environmental, and energy challenges. They will learn how to bridge the gap between scientific knowledge and societal values, ensuring that policy and solutions reflect not only technical feasibility but also cultural and ethical considerations. Students are able to analyse sociocultural paradigms and rhetorical strategies in climate and environmental communication.								
Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*6*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: TRACEE_CK	**Module Title: Creating Knowledge Through Transdisciplinary Methods**					**Type of Module: Mandatory**			
Credits (ECTS)*	3 CP								
Workload* - Contact Time - Private Study	Workload: 90 h	Contact Time: Depends on the selected courses				Private Study: Depends on the selected courses			
Duration of Module* Module Coordinator	1 semester				Stockholm University				
Regular Cycle*	Every academic year								
Language	English								
Learning-/ Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)								
Module Content*	• Introduction to Transdisciplinary Knowledge Creation • Methods and Tools for Creating Knowledge through Transdiciplinary Methods • Collaborative Knowledge • Creation in Transdisciplinary research: Case Studies								
Qualification Goals*	Students can describe methods for involving society in different cultural contexts for knowledge generation and case studies of transdisciplinary research. Students will acquire a comprehensive understanding of the principles and practices of transdisciplinary research, particularly the role of community collaboration in generating knowledge. They will understand how integrating local and community-based knowledge with scientific expertise can lead to more effective solutions for climate, environment, and energy challenges. Students will acquire skills to effectively translate and disseminate research findings in accessible formats for diverse community audiences, ensuring that research benefits are shared and understood by those directly affected. They will develop strategies for knowledge translation that respect community preferences and enhance local capacity for decision-making and action.								
Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*3*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

7.2 Second Semester at NKUA

Module Number: NKUA_1	**Module Title: Climate, Climate Variability and Climate Change**					**Type of Module: Mandatory**			
Credits (ECTS)*	9 CP								
Workload* - Contact Time - Private Study	Workload: 270 h	Contact Time: Depends on the selected courses				Private Study: Depends on the selected courses			
Duration of Module* Module Coordinator	1 semester				National and Kapodistrian University of Athens				
Regular Cycle*	Every academic year								
Language	English								
Learning- / Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)								
Module Content*	• Introduction of the main mechanisms and processes of the climate system as well as their variability/change in space and time. • Examination of the climatic system and its components as Climatic scales of time and space and climatic factors. • Analysis of the planetary radiation and energy budgets • Study of greenhouse gases and their role in global warming potential. • Understanding planetary circulation and climate systems including phenomena like El Niño, La Niña, ENSO. • Investigation of climate variability and sensitivity vulnerability and resilience. Forcing and feedback mechanisms. Climate models. • Exploration of the assessment of the impact of climate change to the natural and anthropogenic environment. • Understanding extreme climate events. • Review of international framework for the protection of climate.								
Qualification Goals*	• Students will gain in-depth knowledge of the mechanisms and processes governing the climate system and their variability across different spatial and temporal scales. • Students will develop the ability to identify and evaluate climatic factors such as planetary radiation, energy budgets, greenhouse gases, and their roles in influencing climate dynamics, including global warming potential. • Students will acquire insights into planetary circulation patterns, climate systems, and phenomena such as El Niño, La Niña, and the El Niño-Southern Oscillation (ENSO). • Students will be equipped to assess the impacts of climate variability and change on natural systems and human activities, considering factors like vulnerability, resilience, and sensitivity to environmental changes. • Students will comprehend the forcing mechanisms and feedback loops that drive climate change and variability, along with their implications for the Earth's climate system. • Students will develop the ability to analyze and interpret climate models, including their role in predicting future climate scenarios and assessing risks. • Students will understand the causes and consequences of extreme climate events and their significance in the context of a changing climate. • Students will familiarize with global efforts and international frameworks aimed at protecting the climate and mitigating climate change impacts. • Students will cultivate the ability to critically assess scientific data and engage in informed discussions about climate-related challenges and solutions.								
Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*9*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: NKUA_2	Module Title: Energy and Climate Change: The Role of Renewable Sources of Energy		Type of Module: Mandatory
Credits (ECTS)*	9 CP		
Workload* - Contact Time - Private Study	Workload: 270 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	National and Kapodistrian University of Athens	
Regular Cycle*	Every academic year		
Language	English		
Learning- / Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	• Review of current global and regional energy consumption patterns, with an emphasis on fossil fuel dependency and its environmental implications. • Understanding the relationship between energy systems and climate change, with a particular focus on the transition to renewable energy sources. • Examination of the role of greenhouse gas emissions in climate change and explore mitigation strategies, emphasizing energy's role in reducing emissions. Introduction to renewable energy sources—solar, wind, hydro, geothermal, and biomass—covering their principles of operation, advantages, and limitations. Review of innovations and emerging trends in renewable energy. • Comparison of the environmental impacts of renewable and non-renewable energy sources and analysis of the real-world examples of successful renewable energy projects. • Understanding the potential of emerging technologies, such as energy storage and hydrogen, in shaping a sustainable energy future		
Qualification Goals*	• Students will demonstrate an in-depth understanding of global and regional energy consumption patterns, with a focus on the environmental impacts of fossil fuel dependency. • Students will evaluate the relationship between energy systems and climate change, emphasizing the role of greenhouse gas emissions in driving global warming and the importance of energy transitions in mitigation strategies. • Students will develop a comprehensive understanding of renewable energy technologies—solar, wind, hydro, geothermal, and biomass—including their operational principles, benefits, and limitations. • Students will critically analyze and compare the environmental impacts of renewable and non-renewable energy sources, fostering a deeper understanding of sustainability challenges and opportunities. • Students will investigate emerging trends, innovations, and technologies in renewable energy, such as advanced energy storage systems and hydrogen solutions, and assess their potential to drive a sustainable energy future. • Students will examine real-world case studies and lessons from countries at the forefront of renewable energy transitions, understanding the factors behind their success and scalability. • Students will formulate and propose strategies for mitigating climate change through the adoption of renewable energy, demonstrating a practical understanding of policy, technology, and socio-economic considerations. • Students will integrate knowledge from diverse fields, including technology, environmental science, economics, and policy, to address complex challenges in energy transitions and climate change mitigation. • Students will cultivate the ability to critically assess current energy systems, identify areas for improvement, and contribute to academic or professional discourse on sustainable energy development. • Students will develop the expertise required to lead in roles related to energy policy, renewable energy project management, environmental consultancy, or research in sustainable energy systems.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam /*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*9*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: NKUA_3	Module Title: Earth Observation for Climate Change		Type of Module: Elective
Credits (ECTS)*	6 CP		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	National and Kapodistrian University of Athens	
Regular Cycle*	Every academic year		
Language	English		
Learning- / Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation, Research Internship (Will be informed at the beginning of the selected course)		
Module Content*	• In-depth understabding on the use of Earth Observation for climate change research and applications. • Principles of passive and active remote sensing. • Categories and characteristics of satellites and satellite sensors. • Satellite meteorology and climatology. • Digital image processing. • Climate and Climate • Change applications with the use of remote sensing.		
Qualification Goals*	• Students will acquire a comprehensive understanding of the principles of passive and active remote sensing, including their underlying physical and technological foundations. • Students will demonstrate knowledge of the categories, characteristics, and functionalities of satellites and satellite sensors, focusing on their relevance to meteorology, climatology, and environmental monitoring. • Students will develop the ability to process and interpret satellite-based data for applications in climate science, including weather forecasting, climate variability studies, and long-term monitoring of climate change. • Students will gain practical expertise in digital image processing methods, enabling the extraction and analysis of information from satellite imagery for climate-related research. • Students will utilize remote sensing tools to investigate and address climate change phenomena, such as temperature trends, sea-level rise, deforestation, and greenhouse gas monitoring. • Students will develop the ability to apply earth observation technologies in practical and innovative climate applications, including disaster management, urban heat island studies, and carbon cycle analysis. • Students will explore emerging trends and advancements in remote sensing technology, preparing for the future of earth observation in climate research and sustainable development. • Students will enhance critical thinking and problem-solving by cultivating the capacity to analyze complex climate challenges using earth observation data, integrating scientific knowledge with technical and computational skills. • Students will develop interdisciplinary expertise by connecting earth observation technologies with other disciplines, such as environmental science, data analytics, and policy-making, to create comprehensive solutions to climate-related issues.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*6*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: NKUA_4	Module Title: Design, Development and Implementation of a Research Project in GIS Environment		Type of Module: Elective
Credits (ECTS)*	6 CP		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	National and Kapodistrian University of Athens	
Regular Cycle*	Every academic year		
Language	English		
Learning-/Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	• Learning research design, data collection, and geospatial data analysis strategies in the field of climate change adaptation. • Developing appropriate research questions and conceptual models, and applying them to climate change adaptation. • Introduction to the principles of Geographic Information Systems (GIS) and methods for processing vector and raster data. • Studying the theoretical background of key climate change issues and analysis techniques in a GIS environment, including the use of machine learning models on geospatial data. • Conducting a case study by selecting a climate change-related problem to be developed in a GIS environment using a variety of data sources. • Evaluating the results of the analysis and proposing solutions or measures to address the studied problem		
Qualification Goals*	• Students will gain skills to formulate Research Questions: by designing clear, focused, and impactful research questions tailored to climate change adaptation challenges. • Students will be able to create and apply conceptual models to address complex environmental and societal problems associated with climate change. • Students will gain a solid understanding of Geographic Information Systems (GIS) principles, including processing and analyzing vector and raster data. • Students will develop the ability to collect, organize, and integrate diverse data sources for geospatial analysis. • Students will be able to use GIS tools to analyze climate change phenomena, assess risks, and identify adaptation strategies. • Students will apply machine learning models to geospatial data for predictive analysis and modeling climate change impacts. • Students will identify and select real-world climate change issues, design geospatial methodologies, and conduct comprehensive analyses. • Students will gain abilities to critically interpret the results of GIS-based analyses and assess their reliability, accuracy, and significance. • Students will develop actionable solutions and measures to address the climate change problems analyzed, incorporating scientific, technical, and socio-economic perspectives.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*6*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: NKUA_5	Module Title: Science, Technology, Society: Environment and Sustainability		Type of Module: Elective
Credits (ECTS)*	6 CP		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	National and Kapodistrian University of Athens	
Regular Cycle*	Every academic year		
Language	English		
Learning- / Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	The course focuses on enriching Science, Technology, Society Studies from these fields and vice versa. It consists of four (4) parts: the first part provides the conceptual and analytical framework for understanding the relationship between Science/Technology, Society and Environment, the second one examines the applications and variations The conceptual and conceptual framework and its applications and variations of this framework to the multiple relationships and interactions between humans and environment. Emphasis is placed on the role of science and technology in transformation of these relationships, the third examines the environmental impacts of the of major economic and development activities, the conflicts between the environment and the related conflicts and the ways in which science/technology and the fourth part provides some basic tools for critical assessment and understanding of governmental or transnational policies related to environment and sustainability.		
Qualification Goals*	• Students will be able to grasp the theoretical and analytical frameworks that explain the dynamic relationships between science/technology, society, and the environment. • Students will analyze how societal actions and technological advancements influence, and are influenced by, environmental processes. • Students will critically assess the role of science and technology in shaping human-environment interactions, including their role in promoting or mitigating environmental change. • Students will evaluate the potential of technological innovations to foster sustainable development and resolve environmental challenges. • Students will gain abilities to investigate the environmental consequences of major economic and developmental activities, including the conflicts they generate • Students will identify and propose strategies for reconciling economic development goals with environmental sustainability. • Students will develop the ability to critically evaluate governmental and transnational policies related to environmental governance and sustainability. • Students will understand the tools and methodologies used to assess the effectiveness of sustainability initiatives • Students will integrate insights from social sciences, environmental studies, and technological fields to address multifaceted environmental problems • Students will enhance the ability to critically analyze and evaluate the societal and environmental implications of scientific and technological developments.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*6*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

Module Number: NKUA_6	Module Title: Climate Policies and Diplomacy		Type of Module: Elective
Credits (ECTS)*	6 CP		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: Depends on the selected courses	Private Study: Depends on the selected courses
Duration of Module* Module Coordinator	1 semester	National and Kapodistrian University of Athens	
Regular Cycle*	Every academic year		
Language	English		
Learning-/ Teaching Forms*	Seminar, group work, collaborative learning, case studies, presentation (Will be informed at the beginning of the selected course)		
Module Content*	This course aims to explore the state-of-the art of the climate policies of developed and developing countries, map them in the context of the international and European framework and highlight the challenges ahead to achieve just transition and climate neutrality by 2050 as well as building societal resilience to address the impacts that cannot be avoided. It views climate change not only as an environmental problem, providing for technical solutions, but also as a social problem where the solutions expand to include economic, political, cultural and institutional changes. Some of these solutions have the potential for transforming society in ways that address multiple goal challenges, including poverty and inequality, food insecurity, water insecurity, biodiversity loss and health crises.		
Qualification Goals*	• Students will gain an in-depth understanding of the climate policies of developed and developing countries within the context of international and European frameworks. • Students will have the abilities to analyze the pathways and challenges to achieving climate neutrality by 2050, with a focus on just transition principles • Students will understand climate change as both an environmental and a social problem, requiring solutions that span technical, economic, political, cultural, and institutional domains. • Students will recognize the links between climate solutions and other global challenges, including poverty, inequality, food and water insecurity, biodiversity loss, and public health crises. • Students will develop the ability to map, compare, and critique climate policies across various countries and regions. • Students will gain the abilities to formulate and propose effective strategies to enhance societal resilience and adaptation to climate impacts. • Students will be able to evaluate and advocate for policies that promote equity and inclusivity, ensuring a fair transition for vulnerable populations affected by climate change and mitigation efforts. • Students will explore the transformative potential of climate policies in addressing societal issues such as inequality and systemic injustice. • Students will apply interdisciplinary approaches to design solutions that integrate environmental, economic, social, and institutional considerations. • Students will assess the broader societal impacts of climate change policies and their implications for sustainable development goals.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Selected Courses	*various*	*c*	-	*6*	*Written or oral*	-	*g*	-
Applicability*	-								
Participation Prerequisites*	No prerequisites								

7.3 Third Semester at UT

Module Number: M 301	**Module Title: Physics of the Earth's Surface**		**Type of Module: Mandatory**
Credits (ECTS)*	6		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 90 h / 6 SWS	Private Study: 90 h
Duration of Module* Module Coordinator	1 semester	Glotzbach	
Regular Cycle*	Every winter semester		
Language	English		
Learning-/Teaching Forms*	This module includes a combination of lectures and exercises where the exercises include either computer exercises or scientific paper discussions related to the lecture topics.		
Module Content*	This module gives an introduction into the physics of Earth's surface, with emphasis on processes shaping the Earth's surface on human and geological timescales. Most importantly an overview of the relevant cycles (energy, water, relevant elements/gases) acting on Earth's surface will be given. Specific topics addressed in the lecture include: • Earth's surface energy balance • Carbon and hydrological cycle and mass balance • How and why tectonics, topography, and climate interact over short and long (million year) timescales. • Physical and mathematical approaches for understanding erosion and sedimentation by rivers, hillslopes, glacial, and biotic processes. Topics addressed in the exercises and discussion include: • Computer exercises using Arc or Q-GS to visualize and analyze Earth's surface • Computer exercises using Matlab and other software to investigate physical and geochemical processes discussed in lectures.		
Qualification Goals*	Goals of this class center around enabling students to: • Understand the physics and relations between Earth's shaping processes on different temporal and spatial scales • Visualize, quantify and model Earth's surface processes using computer software tools. • Develop skills in critically reading scientific literature.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Physics of the Earth's Surface	*L*	*c*	*4*	*4*	*WE*	*90*	*g*	*0,7*
		E	*c*	*2*	*2*	*R*		*g*	*0,3*

Applicability*	M.Sc. Geowissenschaften/Geosciences, M.Sc. Geoökologie/Geoecology, M.Sc. Applied & Environmental Geoscience This module compliments other geoscience, applied environmental geoscience and geoecology modules. Students are provided with the context for how the atmosphere (climate), hydrosphere, biosphere, and tectonic processes interact to produce the Earth's surface. It also complements modules in physical geo-graphy by providing a physics and math based understanding of surface processes active both human relevant, and geologic (million year) timescales.
Participation Prerequisites*	Introductory geology.

Module Number: M 236	**Module Title: Modelling for Sustainable River Management**		**Type of Module: Mandatory**
Credits (ECTS)*	6		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 60 h / 4 SWS	Private Study: 120 h
Duration of Module* Module Coordinator	1 semester	Zarfl	
Regular Cycle*	Every summer semester		
Language	English		
Learning-/ Teaching Forms*	Lecture and accompanying seminar (exercises, presentations, discussions)		
Module Content*	• Introduction into different mathematical modelling approaches to describe environmental processes with a specific focus on freshwater ecosystems (including differential systems but beyond), parameter estimation techniques and uncertainty analysis • Understanding interdependent environmental system dynamics within the (socio-)hydrological cycle across scales and system boundaries • Application of models to environmental challenges • Models as tools for decision/discussion support/ sustainable water management		
Qualification Goals*	The students are familiar with a variety of modelling approaches and their suitability for specific research questions related to environmental processes. They can deal with uncertainty in parameter values and model structure; evaluate model results and simulated system dynamics. They are aware of current developments in environmental systems analysis and can discuss strengths and weaknesses of applied model approaches. Drawing from a solid understanding of mathematical modeling and socio-hydrological interdependencies, they can critically analyse the role of conceptual and mathematical models in decision support and sustainable water management across spatial and temporal scales.		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Modelling and Simulation for Environmental Process Understanding	*L*	*c*	*2*	*6*	*A*	-	*g*	*0.5*
		S	*c*	*2*		*R*	-	*g*	*0.5*
Applicability*	M.Sc. Geoökologie/Geoecologie, M.Sc. Applied & Environmental Geoscience								
Participation Prerequisites*	recommended: BSc course "Modellierung in den Geo- und Umweltwissenschaften"								

Module Number: M 317	**Module Title: Data Analysis and Modeling Methods in Geo- and Environmental Sciences**		**Type of Module: Elective**	
Credits (ECTS)*	6			
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 60 h / 4 SWS	Private Study: 120 h	
Duration of Module* Module Coordinator	1-2 semester			Drews
Regular Cycle*	every semester			
Language	English			
Learning- / Teaching Forms*	Lectures and Computer Exercises for Data Analysis and Modeling			
Module Content*	World-wide technical advances in monitoring the surface and sub-surface result in a new data environment for modern Geo- and Environmental sciences. Problem solving increasingly requires rigorous models and also integration of observations varying in space and time. Extracting the relevant information is achieved with computational methods that also require an understanding of the underlying mathematical principles. It is subdivided into units, which include: • Finite Element Method • Fourier- and Laplace-Transform Techniques • Geographical Information Systems • Introduction Scientific Programming (Matlab) • Introduction Scientific Programming (Python) • Introduction to R • Introduction to Time Series Analysis • Machine Learning 1 • Machine Learning 2 • Principles of Model Calibration • Remote Sensing of River Systems Each unit counts for two credits. Students are free to select 3 units out of the units offered. Another 3 units can be used to fill a second container module M325 (Data-Analysis and Modeling Methods in Geo- and Environmental Sciences 2). The individual units are offered either over four weeks within the lecturing period of the semester, or as one-week block course. The selection of units may vary with the instructors from year to year. Some units require prior participation in other units of this module (check with instructors beforehand).			
Qualification Goals*	The goals of this module are • that students are able to understand selected mathematical concepts • that they can implement them computationally, that they can apply them to geo- and environmental related problems • develop relevant technical skills for data analysis and modelling • applied problem solving skills using Matlab / Python / R			

Prerequisites for the allocation of credits /grades (if necessary weighting)*

Courses	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
Variable Topics	*L,E*	*c*	*2*	*2*	*R,A*	-	*g*	*1/3*
Variable Topics	*L,E*	*c*	*2*	*2*	*R,A*	-	*g*	*1/3*
Variable Topics	*L,E*	*c*	*2*	*2*	*R,A*	-	*g*	*1/3*

Applicability*	Compulsory module in the MSc Geosciences, elective module in the MSc Geoecology and Applied & Environmental Geosciences This module compliments other geology, geoecology, and environmental sciences courses (e.g. geophysics, climatology and ecosystems, applied tectonics and surface processes, remote-sensing) by providing a background for quantitative data analysis and modelling.
Participation Prerequisites*	(TBD w.r.t. Python, Matlab, R)

Module Number: M 303	Module Title: Physical Properties of Earth Materials		Type of Module: Elective
Credits (ECTS)*	6		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 90 h / 6 SWS	Private Study: 90 h
Duration of Module* Module Coordinator	1 semester	Bons	
Regular Cycle*	Every winter semester		
Language	English		
Learning- / Teaching Forms*	Lectures and practicals (microscopy, computer exercises)		
Module Content*	The course focuses on the mechanical properties of rocks and ice under natural conditions. It covers • An overview of the most important deformation mechanism and processes. • A derivation of the governing equations (flow laws) that describe the rheology of rocks and ice. • Description and interpretation of deformation (micro-) structures, with particular attention to recognising expressions of deformation processes and establishing the resulting mechanical properties. • Application of rock deformation theory for geological and glaciological problems. The course consists of lectures and practical exercises, including microscopy.		
Qualification Goals*	Main aim of the module is to make students acquainted with the deformation processes that occur in rocks and ice. This includes being able to: • recognize deformation structures; • interpret the processes that produced these structures; • infer conditions of deformation from these structures; • as well as the rheological properties of the materials at the time of deformation • apply the insights to better understand the evolution of glaciological and geological problems, such as the flow of ice sheets and glaciers, subduction systems, etc. In the end, the students will have gained the necessary skills to work in academic research, as well as applied research, where the mechanical behaviour of rocks and ice plays a role.		

Prerequisites for the allocation of credits / grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Physical properties of Earth materials	*L*	*c*	*4*	*4*	*WE*	*120*	*g*	*0,7*
		LC	*c*	*2*	*2*	*A*	*-*	*g*	*0,3*

Applicability*	M.Sc. Geowissenschaften/Geoscience The module provides advanced knowledge and skills in the fields of rock mechanics, rheology and of structural analysis and interpretation the recognition and interpretation of deformation structures. These are a necessary prerequisite of any field based-study, from basin analysis to the study of high-grade metamorphic or igneous complexes, as well as for the understanding of the behaviour of glaciers and polar ice sheets. The module is thus of direct practical relevance to all geoscience students, no matter whether they intend to pursue and academic or industrial career.
Participation Prerequisites*	• BSc-module "Strukturgeoplogie und Tektonik" or equivalent. • Optical mineralogy/microscopy • English (read & write)

Module Number: M 212	**Module Title: Advanced Geophysics**		**Type of Module: Elective**
Credits (ECTS)*	6		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 90 h / 6 SWS	Private Study: 90 h
Duration of Module* Module Coordinator	1 semester	Drews	
Regular Cycle*	Every winter semester		
Language	English		
Learning- / Teaching Forms*	The module uses a combination of in-class lectures, in-class & applied exercises, and online videos.		
Module Content*	This module teaches advanced methods in geophysics including data acquisition, processing and modelling. In each semester we will typically explore one or two methods in-depth (e.g., refraction seismics, electrical resistivity tomography, ground-penetrating radar, magnetics) and develop a full processing chain from first principals, e.g., including survey planning, data acquisition, forward modeling and data integration using computational inverse techniques.		
Qualification Goals*	• Gain an advanced understanding for specific geophysical methods. • Understand the principals of forward and inverse modelling and apply it with computational methods. • Build-up transferable skills (e.g., signal analysis and numerical modeling) also applicable in many other geo- and environmental disciplines.		

Prerequisites for the allocation of credits / grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Advanced Geophysics	*L*	*o*	*4*	*4*	*WE/OE*	*90*	*g*	*1*
		FC	*o*	*2*	*2*				

Applicability*	M.Sc. Geowissenschaften/Geosciences, M.Sc. Applied & Environmental Geoscience
Participation Prerequisites*	Solid understanding of basic geophysical sub-surface imaging taught at the BSc levels. Programming skills are helpful but not strictly essential and can also be acquired in class.

Module Number: M 315	Module Title: Glaciology		Type of Module: Elective
Credits (ECTS)*	6		
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 90 h / 6 SWS	Private Studies: 90 h
Duration of Module* Module Coordinator	1 Semester	Weikusat	
Regular Cycle*	Every winter semester		
Language	English/German (can be held in German depending on students)		
Learning- / Teaching Forms*	Two weeks block course including lectures, tutorials and exercises. Poster presentations		
Module Content*	Topics covered in lectures and exercises: • Components of the earth's cryosphere in recent and palaeo-time scales • Cryosphere and climate (sea level) • Ice cores (palaeo-climate records) • Material ice (modifications, crystal structure, defects, physical properties) • Micro-dynamics of ice (deformation and recrystallization mechanisms) • Formation processes of natural ice (e.g. meteoric glacial ice, sea ice, ice shelf ice, marine ice) • Mass balance of glaciers and ice sheets (ablation and accumulation measurements and processes, e.g. melting, calving) • Ice dynamics (stress and strain, deformation modes, flow features, flow law) Poster session on hot topics in glaciological research (exam): • basics poster preparation and presentation techniques • present a topic / recent research paper on a poster and a 5 min. oral presentation and 5 min questions / discussion		
Qualification Goals*	During the course the students will: • Gather general knowledge of the field about the cryosphere and the related glaciological subtopics • Develop an understanding of the physical processes relevant for the cryosphere • Acquire an up to date overview of current glaciological research topics and being able to evaluate conclusions in a critical way • Acquire expertise in assessing cryosphere related information with respect to modern climate change discussions • Gather practical experience in simple ice core data processing and ice dynamic modelling (exercises and tutorials).		

Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Glaciology	*L*	*c*	*4*	*4*	*R*	-	*g*	*1*
		E	*c*	*1*	*1*				
		S	*c*	*1*	*1*				

Applicability*	M.Sc. Geowissenschaften/Geosciences, M.Sc. Applied & Environmental Geoscience. The module covers topics related to the material of the core modules mineralogy, geodynamics and applied geosciences.
Participation Prerequisites*	Fundamentals in geology/mineralogy and physics

Module Number: ITP	Module Title: Inter- and Transdisciplinary Perspectives on Climate and the Environment								
						Type of Module: Elective			
Credits (ECTS)*	6 CP								
Workload* - Contact Time - Private Study	Workload: 180 h	Contact Time: 60 h / 4 SWS				Private Study: 120 h			
Duration of Module* Module Coordinator	1 semester			GUZ					
Regular Cycle*	Every wintersemester								
Language	English								
Learning- / Teaching Forms*	Lectures, collaborative projects, serious games, active learning exercises, discussion and interaction with international guest experts, civic engagement and service learning								
Module Content*	The module covers pressing global issues such as climate change, the water crisis and ecosystem degradation through an inter- and transdisciplinary approach that will equip students with skills needed to explore and address interconnected environmental and social challenges. At the intersection of Earth System Sciences and transdisciplinary real-world engagement, global planetary challenges are approached in a collaborative and solution-oriented way. Innovative teaching methods focus on bringing in diverse student perspectives from different study fields in an engaging way. By combining interdisciplinary insights with a global perspective, the module empowers participants to contribute meaningfully to solutions that respect planetary boundaries and contribute to a sustainable and just future. The module consists of at least two seminars addressing topics such as: • Nature-based solutions for carbon drawdown • Global policies on climate adaptation and mitigation measures • Environmental communication • Disaster risk and resiliency								
Qualification Goals*	• Analyse Earth surface and environmental processes and their societal impacts in different regions of the world • Discuss and explain climate action including mitigation and adaptation strategies • Communicate effectively about climate and environment to understand, motivate and empower public audiences, and inspire action in all sectors of society								
Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Elective Courses	*S*	*c*	*4*	*6*	-	-	*g*	-
Applicability*	-								
Participation Prerequisites*	-								

7.4 Fouth Semester (Masterthesis) at SU or NKUA or UT

Module Number: TRACEE_MT	**Module Title: Master Thesis**		**Type of Module: Mandatory**
Credits (ECTS)*	30 CP		
Workload* - Contact Time - Private Study	Workload: 900 h	Contact Time: 30 h / 2 SWS	Private Study: 870 h
Duration of Module* Module Coordinator	1 semester	The Master's thesis can be completed at Stockholm University or University of Athens or University of Tübingen (according to the examination regulations by the respective partner university)	
Regular Cycle*	During the third semester, students will be asked to submit a proposal for a thesis project. The TSTC (Transdisciplinary Stream and Thesis Committee) will communicate on the procedure for the submission of proposals and decide on students' project proposals for thesis and degree projects, with particular consideration to the transdisciplinary aspects and in accordance with specific regulations at SU or NKUA or UT where the student will carry out the thesis project.		
Language	English		
Learning-Teaching Forms*	Masterthesis, Transdiciplinary Research Project, Colloquium, Presentation (according to the regulations of the respective partner university)		
Module Content*	**Stockholm University:** • Students at Stockholm University would register to the course: "Transdisciplinary Studies of Climate, Environment and Energy, Independent Project". • The independent project is 30 ECTS and aims to provide experience and advanced knowledge in scientific and transdisciplinary work within the fields of climate, environment, and/or energy. Key elements include planning, execution, and reporting. Additionally, students will practice literature review, writing a scientific report, and presenting research results orally in seminars. • The course is divided into two parts (More information is available in the syllabus of the course): → Part 1: Planning (5 ECTS). Assessment is based on a written report → Part 2: Implementation (25 ECTS). Assessment is based on an oral and written presentation of the independent project.		
	University of Athens • Students at National and Kapodistrian University of Athens would register to the course: "Transdisciplinary Studies of Climate, Environment and Energy, Development of Research Diploma Thesis". • The independent project is 30 ECTS and aims to provide experience and advanced knowledge in scientific and transdisciplinary work within the fields of climate, environment, and/or energy. Key elements include planning, execution, and reporting. Additionally, students will practice literature review, writing a scientific report, and presenting research results orally. • Students have to complete the following: → Contacting a supervisor for the Master's thesis topic → Compilation of a research proposal of the agreed topic → Preparation of the Master's thesis Assessment is based on an oral and written presentation of the independent project		
	University of Tübingen • The independent research project is 30 ECTS and aims to provide experience and advanced knowledge in scientific and transdisciplinary work within the fields of climate, environment, and/or energy. Key elements include planning, execution, and reporting. Additionally, students will practice literature review, writing a scientific report, and presenting research results orally. • Students have to complete the following: → Contacting a supervisor for the Master's thesis topic → Compilation of a research proposal of the agreed topic → Preparation of the Master's thesis → Poster presentation of the thesis' results on the Master's Day → Presentation of the thesis' results in the research group		

Qualification Goals*	Students will be able to design, execute, and critically assess a transdisciplinary research project that integrates knowledge, methods, and perspectives from multiple disciplines to address relevant topics in the field of climate, environment, and energy challenges. Students will be able to critically review existing literature, and develop innovative, transdisciplinary frameworks. Students will be able to present their research findings in a clear, structured, and accessible manner, tailored to both academic and non-academic audiences, including policymakers, local communities, and other relevant stakeholders. They may demonstrate the ability to communicate complex transdisciplinary concepts in diverse formats, including written reports, presentations, and policy briefs.								
Prerequisites for the allocation of credits /grades (if necessary weighting)*	*Courses*	*Type of Lecture*	*Status*	*CH*	*CR*	*Type of Exam*	*Duration of Exam*	*Grading System*	*Weighting*
	Master Thesis	*See regulation by the universities*	-	-	*30*	*MT*	-	*g*	*100*
Applicability*	-								
Participation Prerequisites*	30 CP Modules of semesters 1 30 CP Modules of semester 2+3								

Contact us

Do you have any questions about the TRACEE Master Programme? Please do not hesitate to contact us!

Responsible office/contact person
CIVIS ACES - Master TRACEE
Address
Svante Arrhenius väg 8
114 18 Stockholm
SWEDEN
Email address
tracee@aces.su.se
Telephone number
+46 8 08-16 20 00

Further Information:

TRACEE Master

SCAN ME