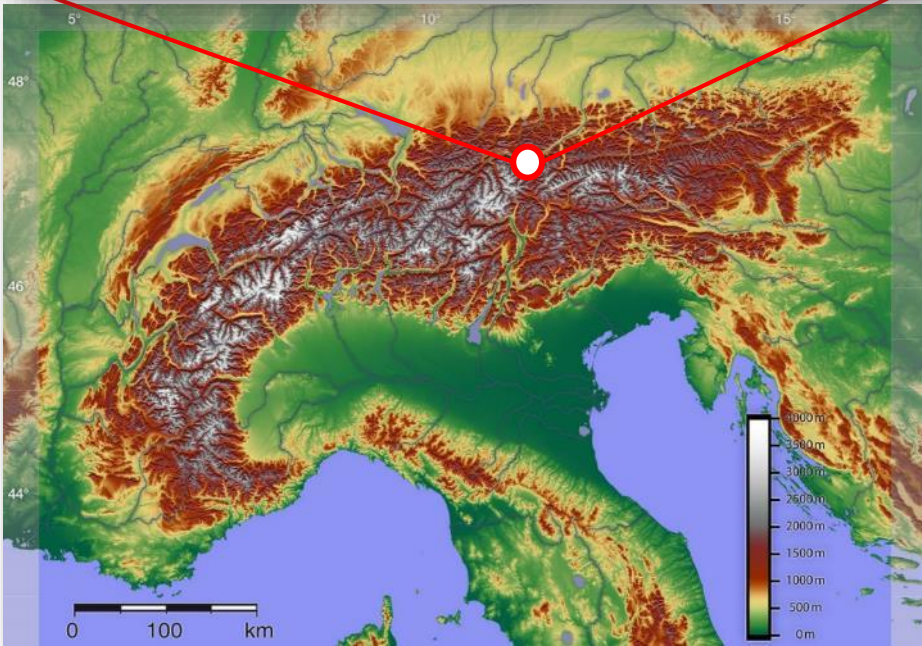


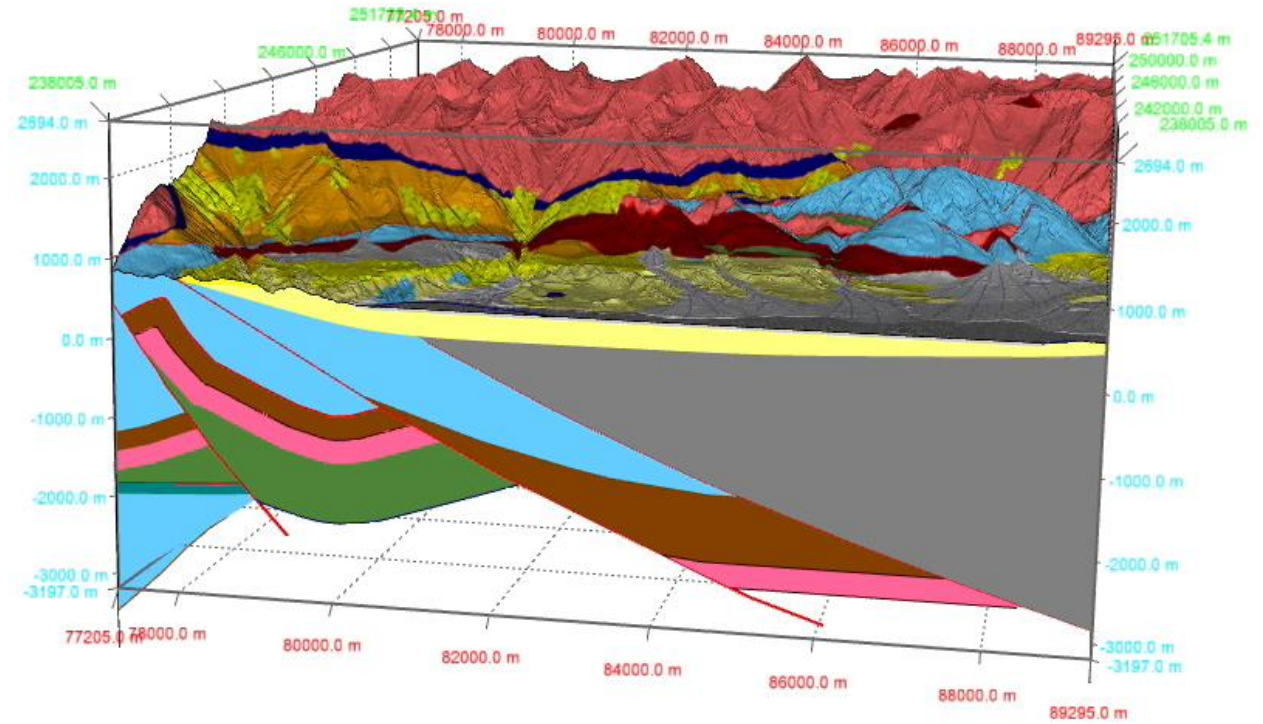
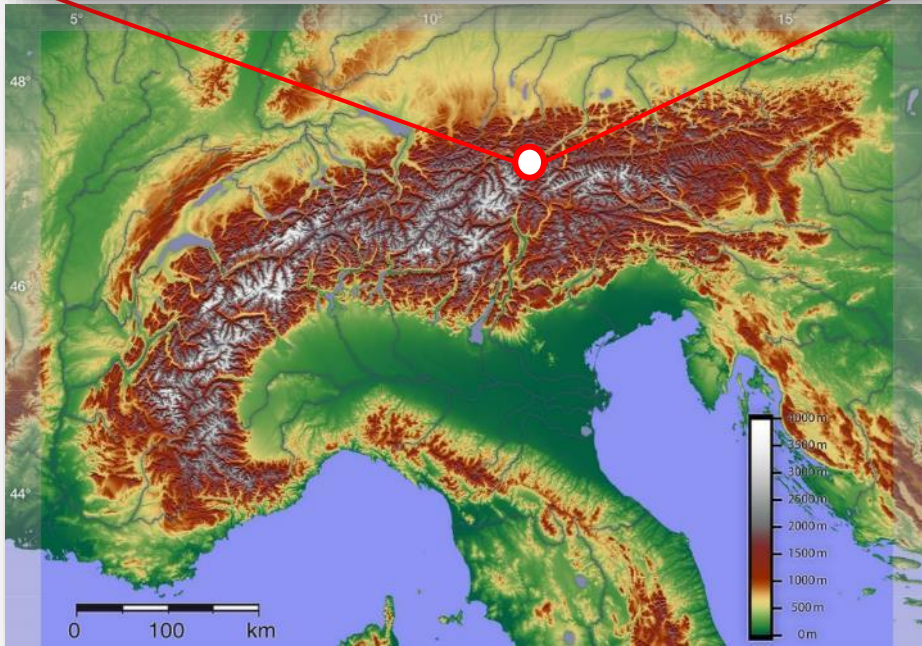


Master Studies: Earth Sciences

Innsbruck's location in the heart of the Alps offers unique conditions for studying Earth Sciences



Innsbruck's location in the heart of the Alps offers unique conditions for studying Earth Sciences



3D Modell Karwendel. Ortner

Master in Earth Sciences

- **Requirements**
Bachelor in Earth Sciences or equivalent
(*equivalence? Contact study coordinator*)
- **Duration /ECTS-AP**
4 semester/120 ECTS-AP
- **Type:**
full-time
- **Language**
English and German
(depending on international students
→ coordination with lecturers)

Mandatory:

Master Introduction (Group Project 10 ECTS)

Thesis concept + Thesis + Defensio

40 ECTS

Master Introduction (Group Project 10 ECTS)

Thesis concept + Thesis + Defensio

40 ECTS

Your possibilities, your choice:



80 ECTS



Monte Cristallo

Marmolada

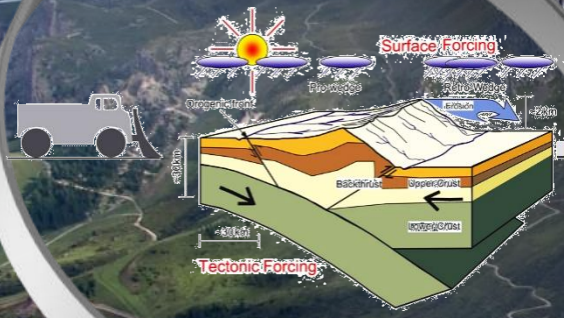
Catena del Padon

Sella

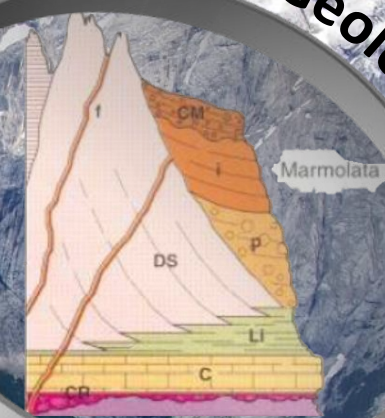
Alpine Geology

Regional Geology

Mountain building processes



Structural Geology



Quaternary Geology and Applied Geology



Paleoclimate

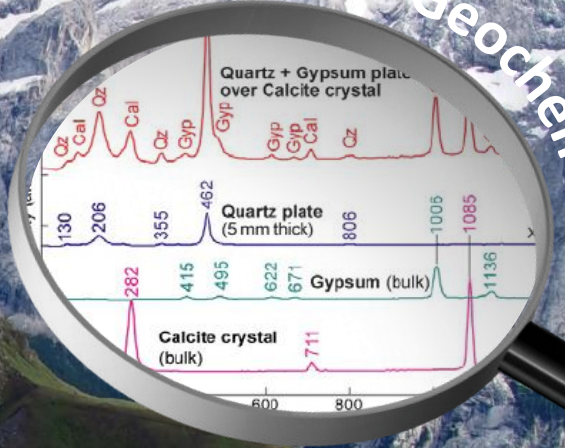
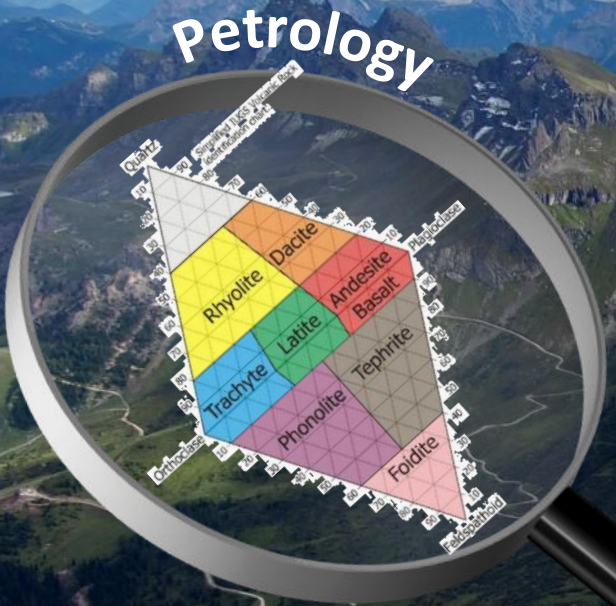


Infrastructure

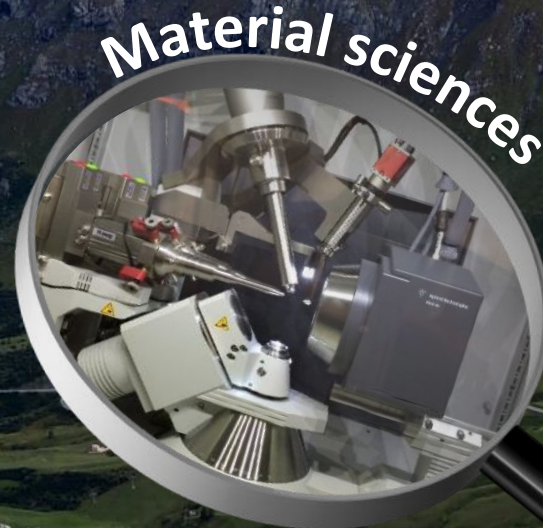
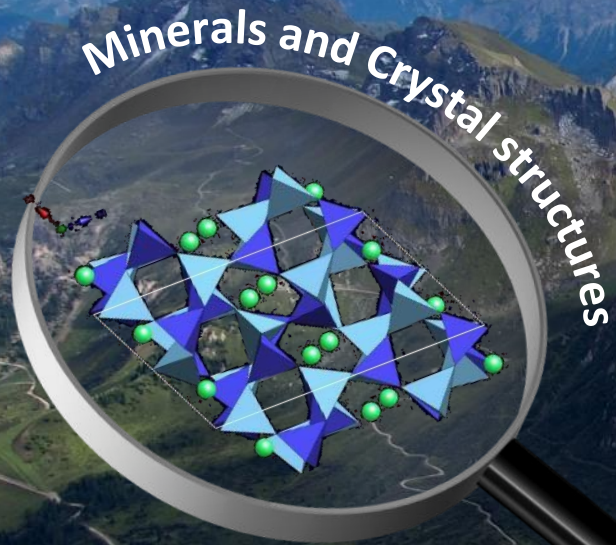


Mass movements

Petrology and Geochemistry



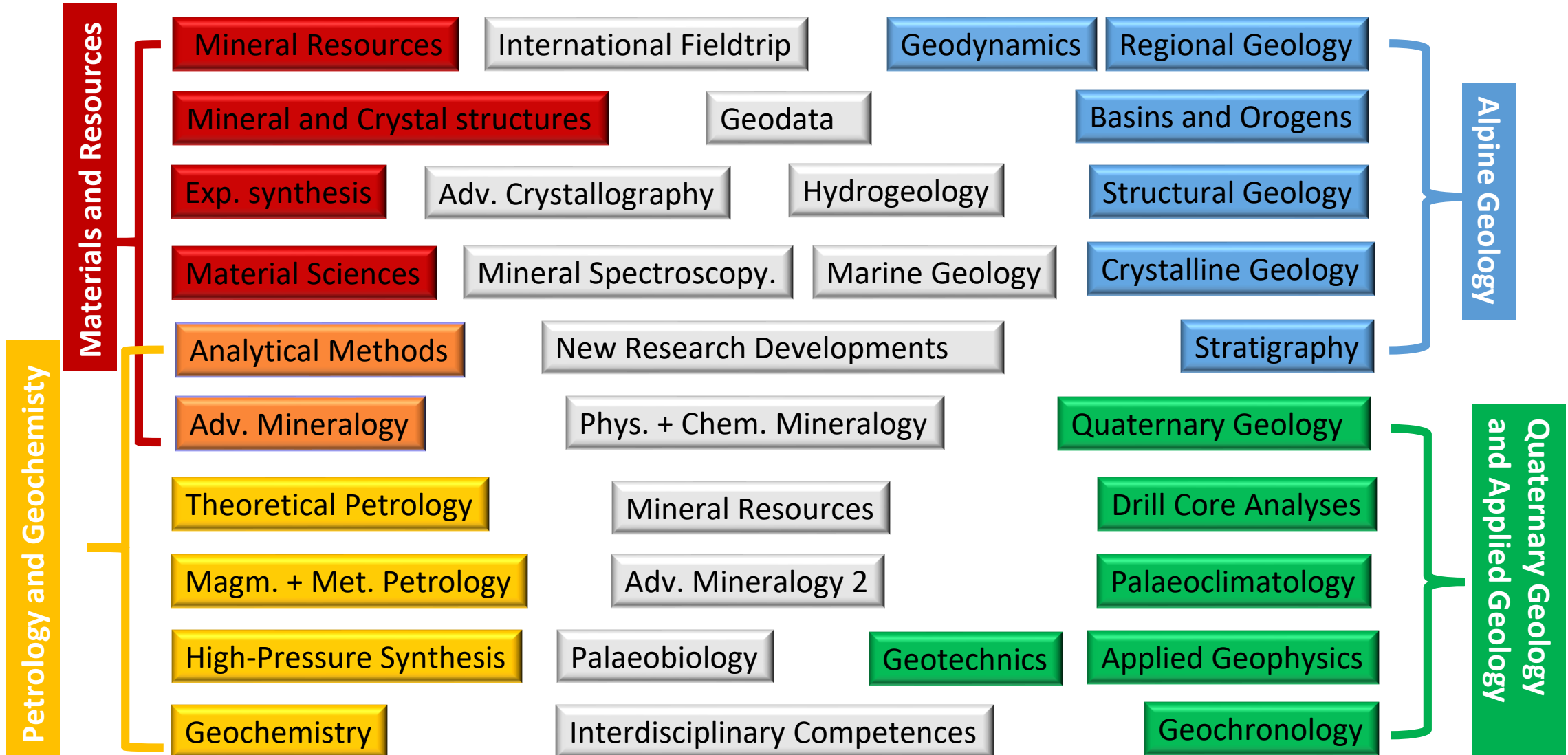
Materials and Resources



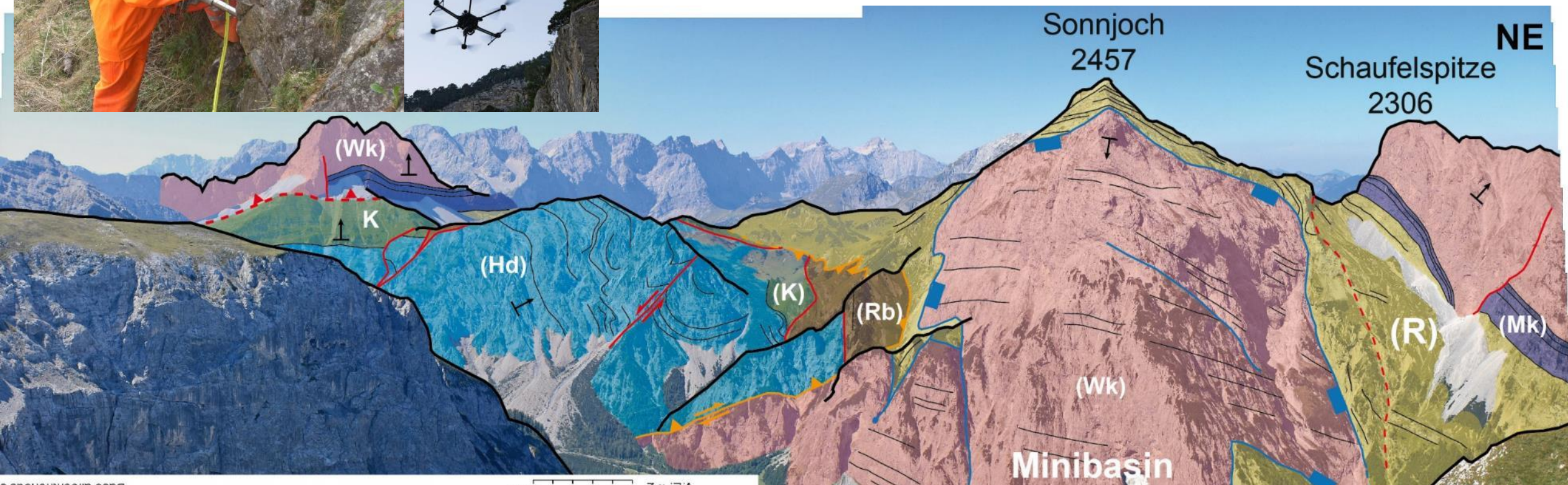
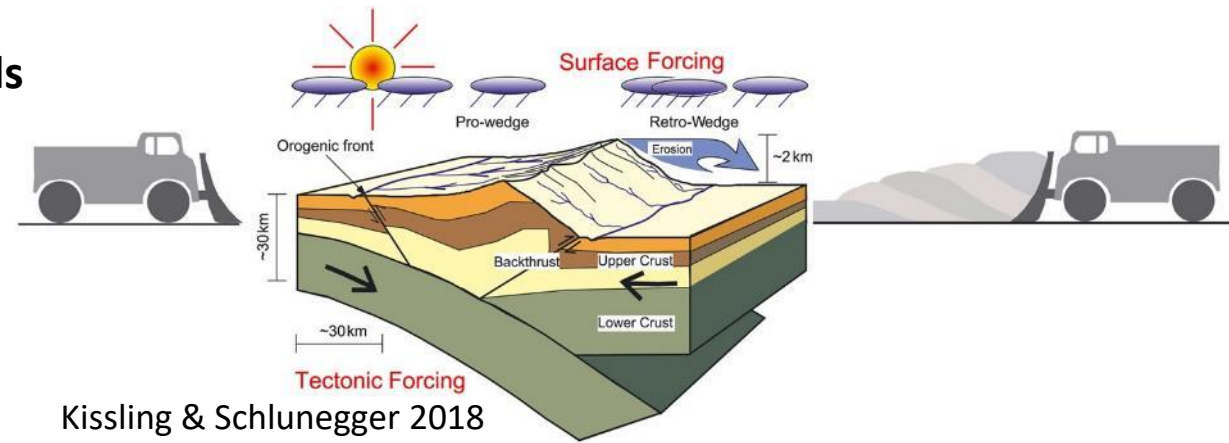
Master Introduction (Group Project 10 ECTS)

Thesis concept + Thesis + Defensio

Your possibilities, your choice:



- Geodynamic processes of mountain building
- Special research focus on the Alps and modern field methods



Courses

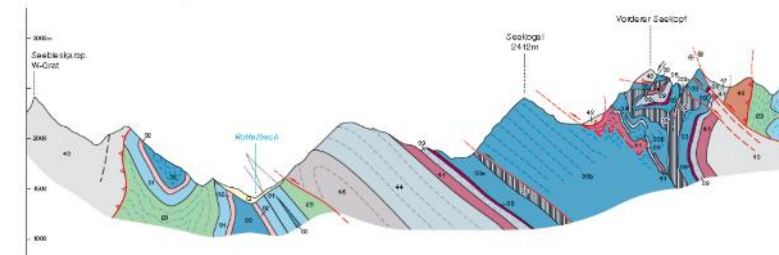
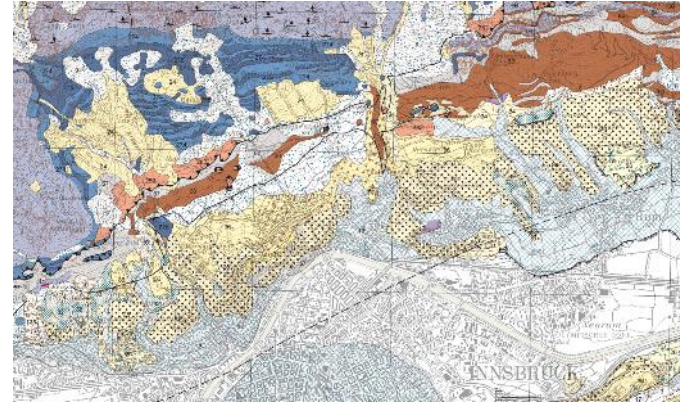
Regional Geology



Pomella



Ortner



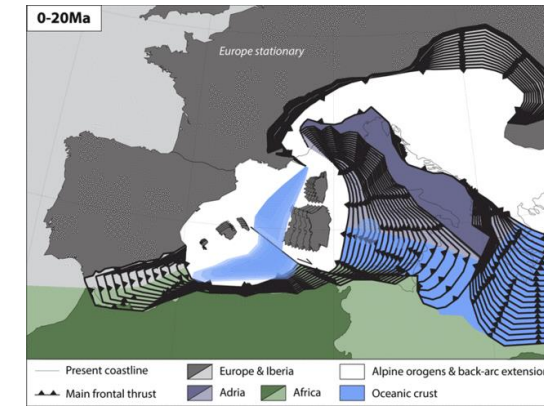
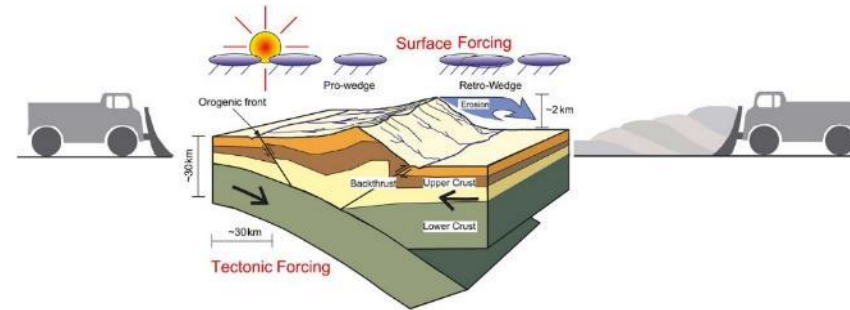
Geodynamics



Ortner



Rogowitz



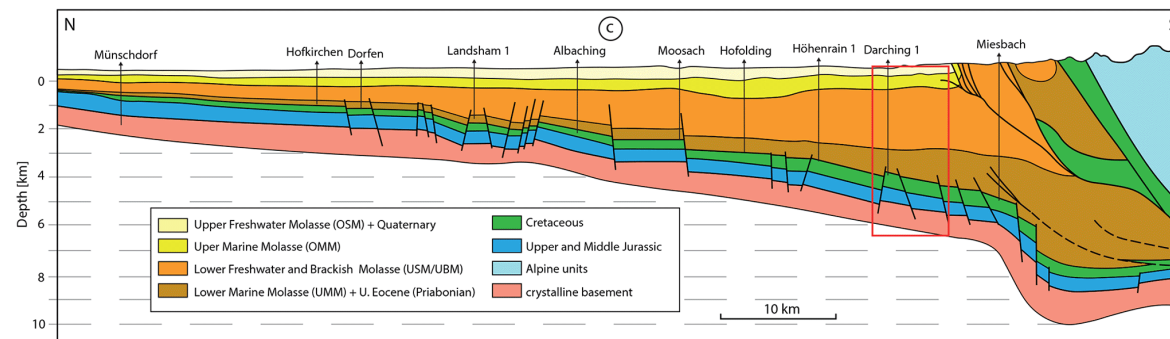
Basins and Orogens



Sanders



Strasser



Courses

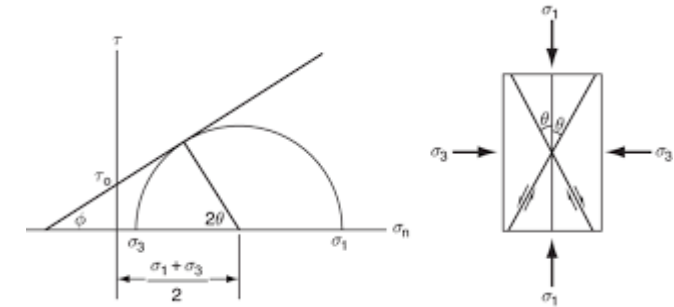
Structural Geology



Ortner



Rogowitz



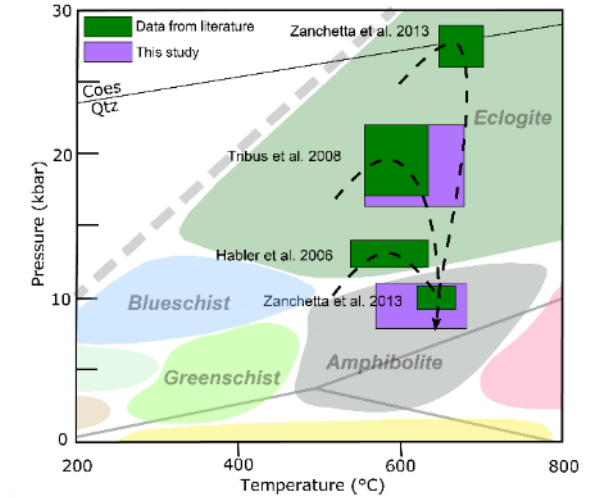
Crystalline Geology



Tropper



Konzett



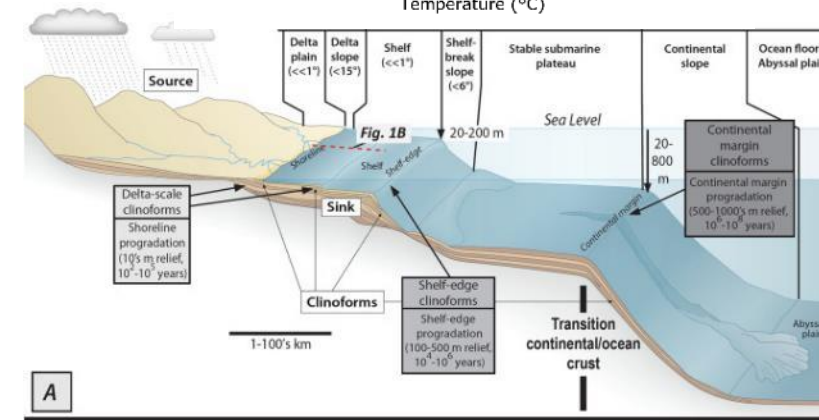
Stratigraphy



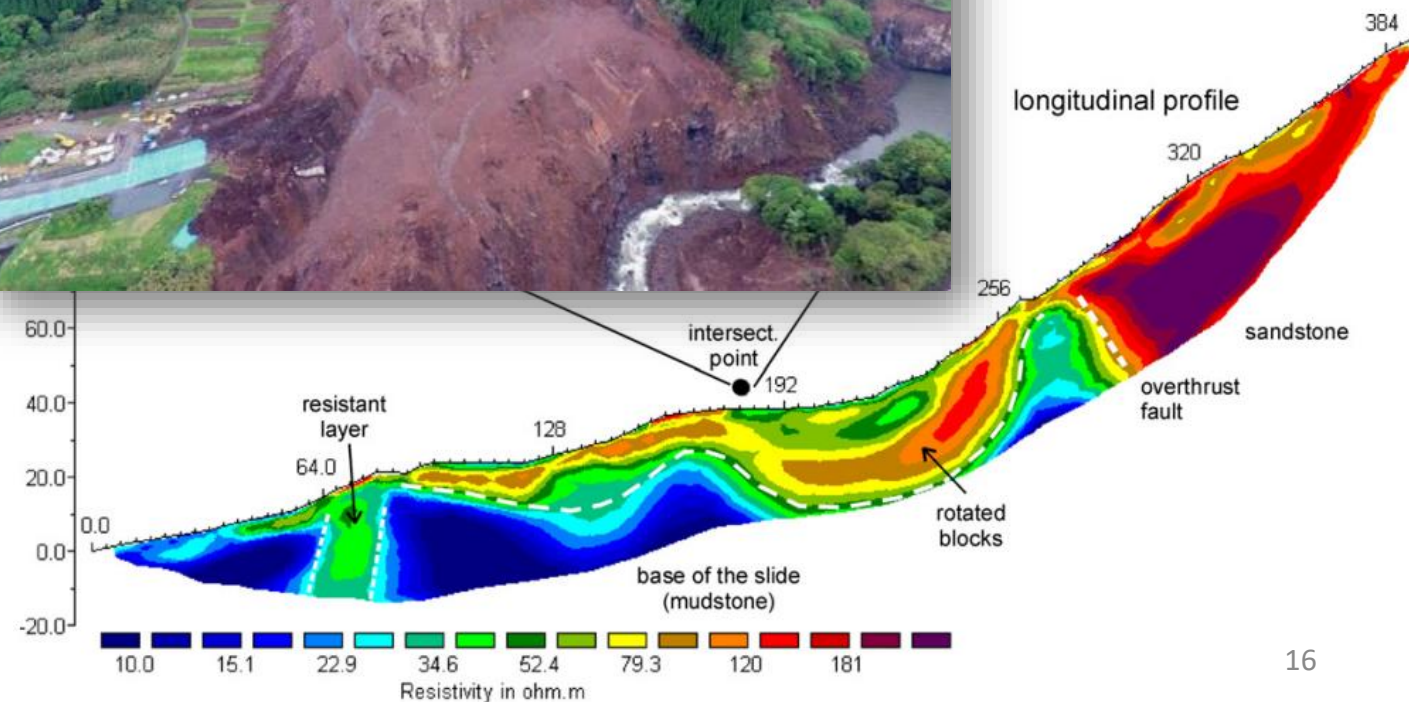
Strasser



Sanders



- **Earth surface processes: DRIVERS** of erosion, sediment transport, deposition
- **Special research focus on Climate Change and Natural Hazards**

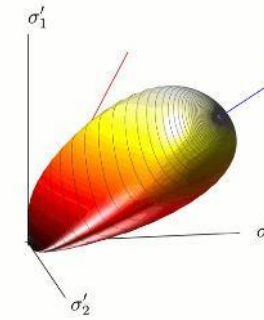
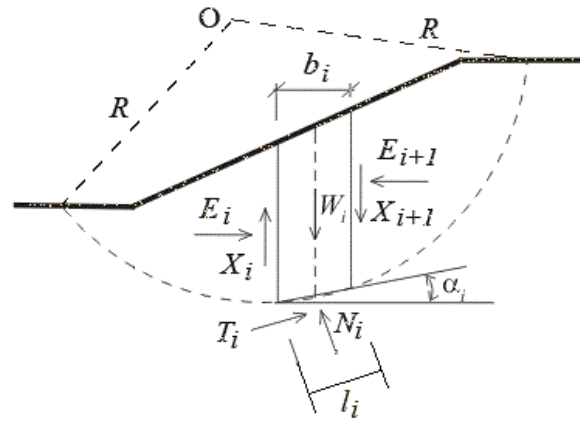


Courses

Geotechnics



Fellin



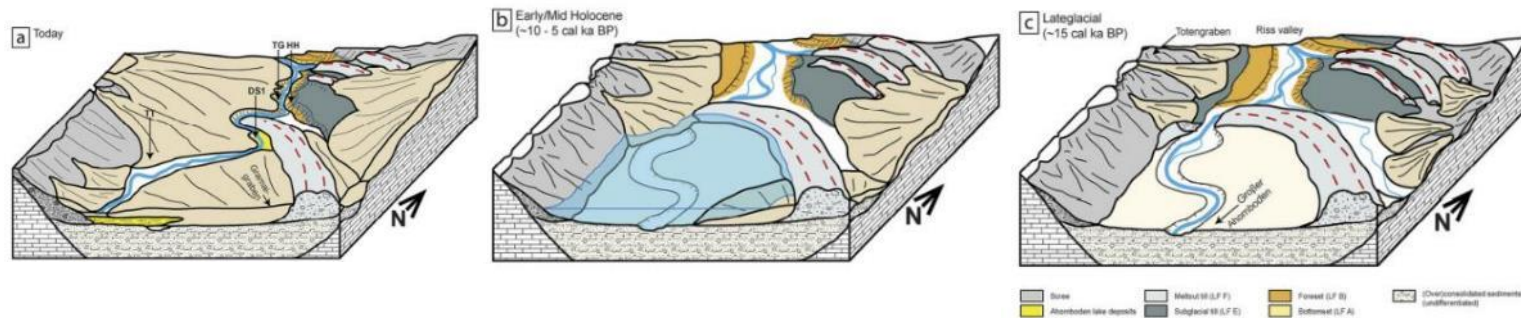
Quaternary Geology



Meyer



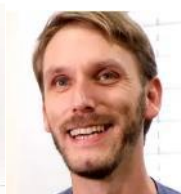
Spötl



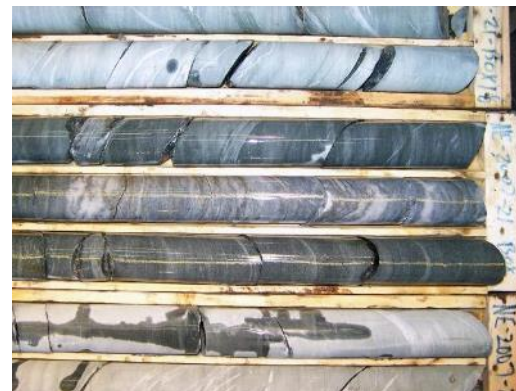
Core analysis



Strasser



Ramisch



Courses

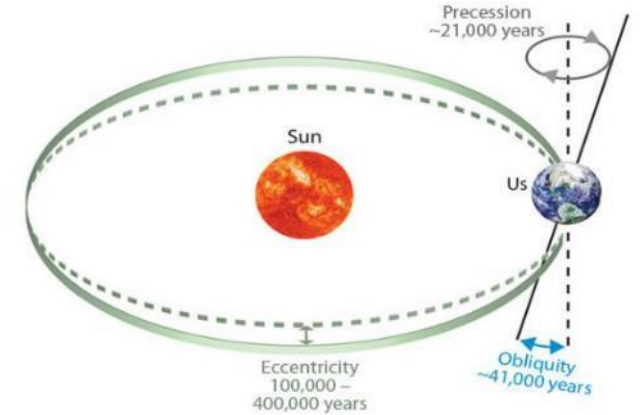
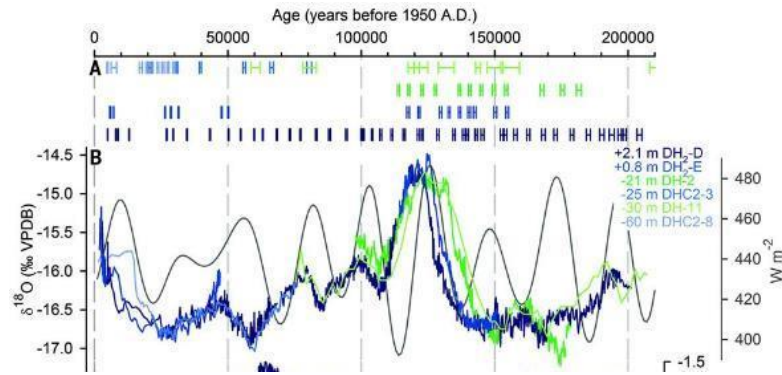
Paleoclimatology



Moseley



Koltai



Applied Geophysics



Moernaut



Isotopes + Geochronology

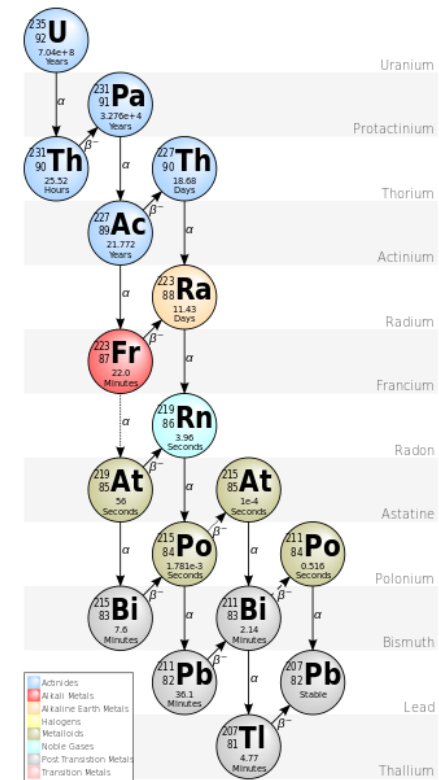
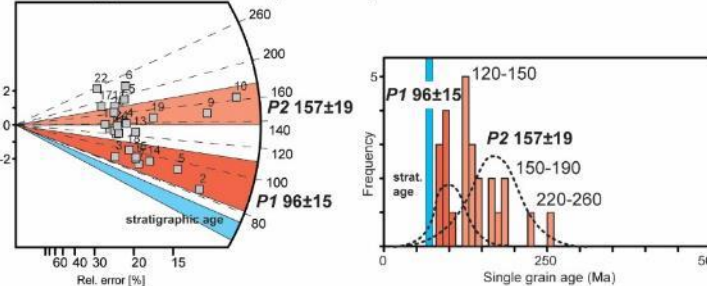


Dublyansky



Pomella

AP45 Upper Gosau Fm. (75-65Ma)





Stalder



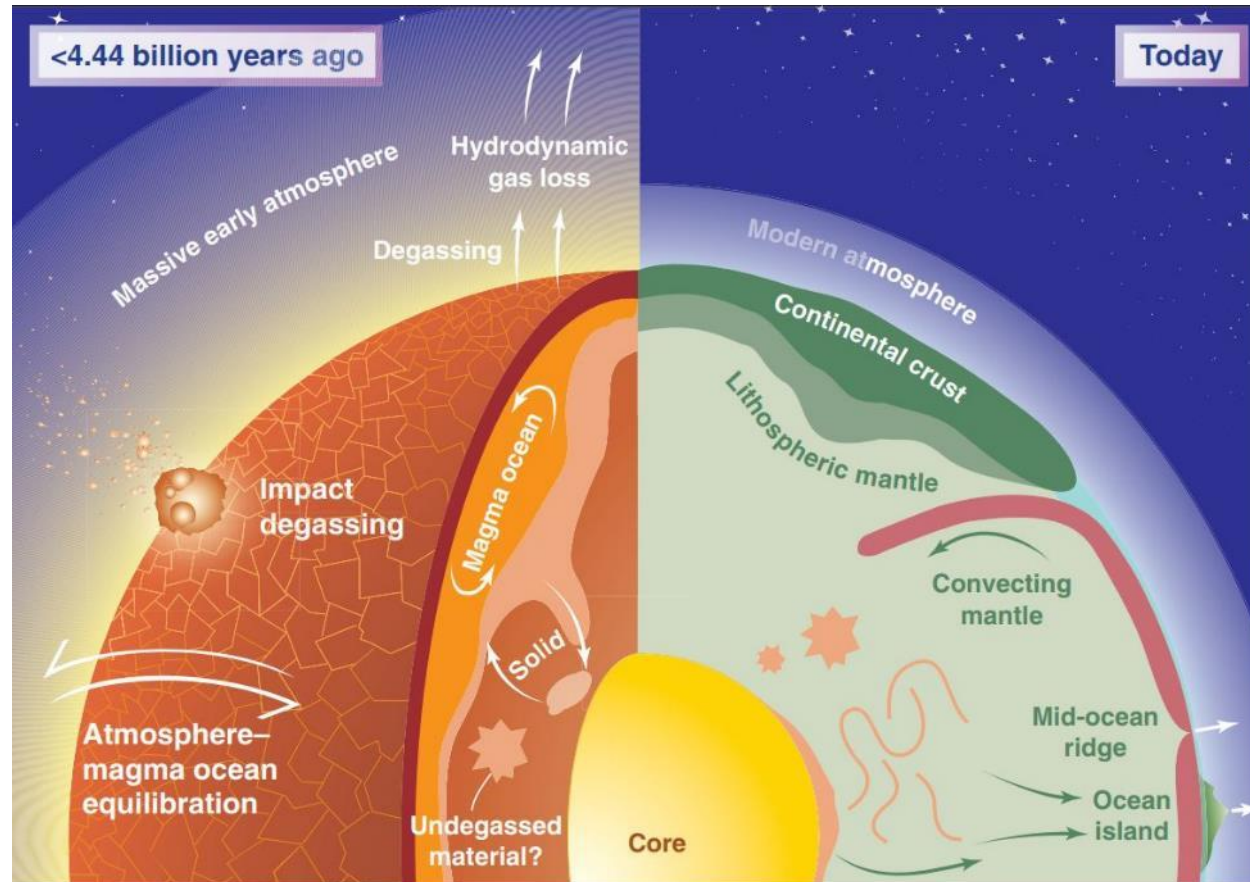
Konzett



Tropper

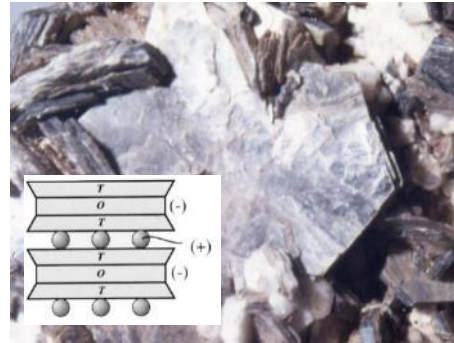


Mrosko

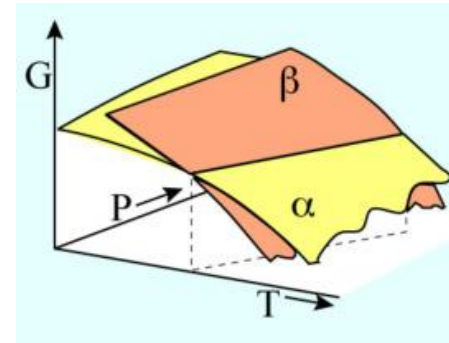




Analytical Methods



Systematic Mineralogy



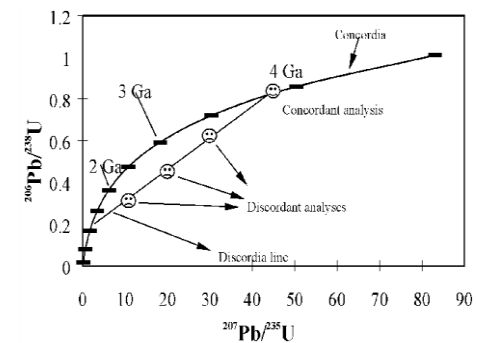
Theoretical Petrology



Experimental Petrology



Igneous and
Metamorphic Petrology

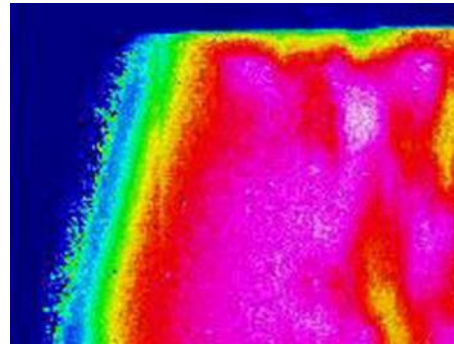


Isotope Geochemistry

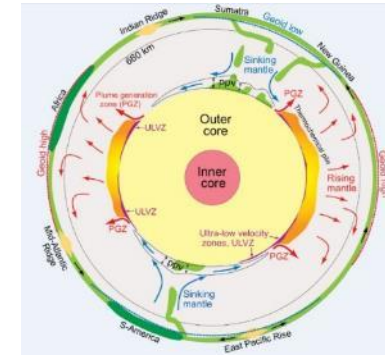
Research areas:



Geochemistry of Pegmatites



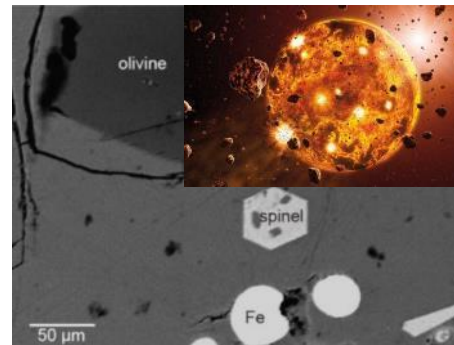
Global Volatile Cycles



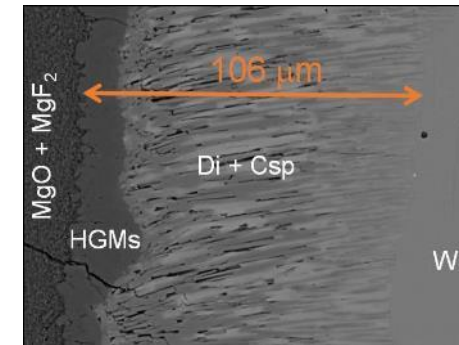
Deep Earth



Meteorites



Early Earth



Kinetics of Metamorphic Reactions



Kahlenberg



Heijny



Krüger



Krüger

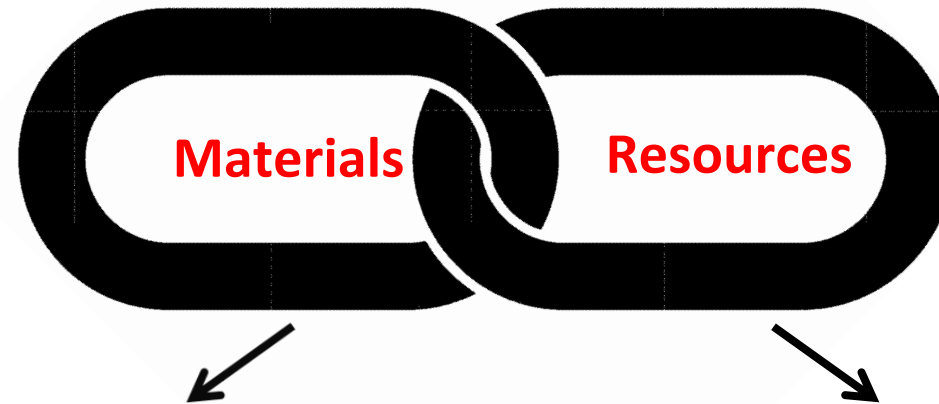


Tropper



Patton

+ external lecturers
from industry



Iron ore sintering
(Vanderbijlpark Steel Plant,
South Africa)



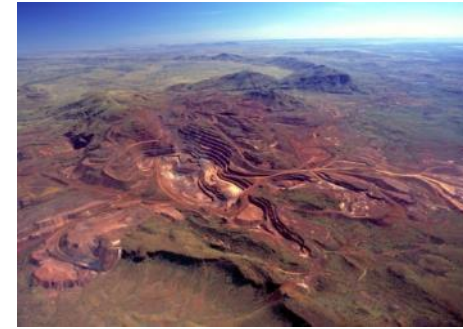
Banded Iron Formation
(Hamersley Province,
Australia)



Analytical Methods



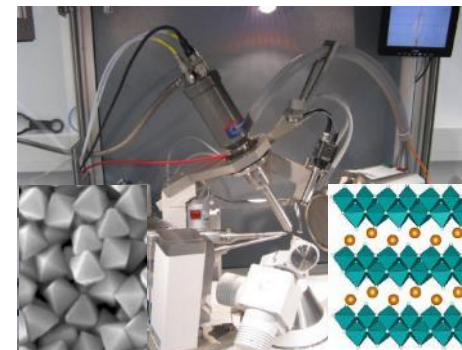
Material Sciences in Mineralogy



Mineralogy of Raw and Processed Materials

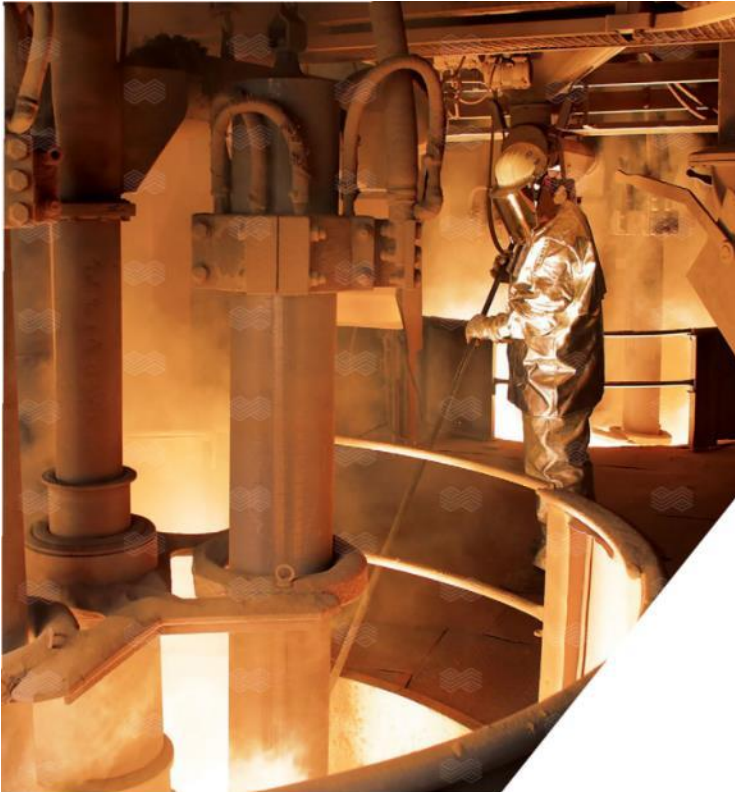


Experimental Synthesis Techniques

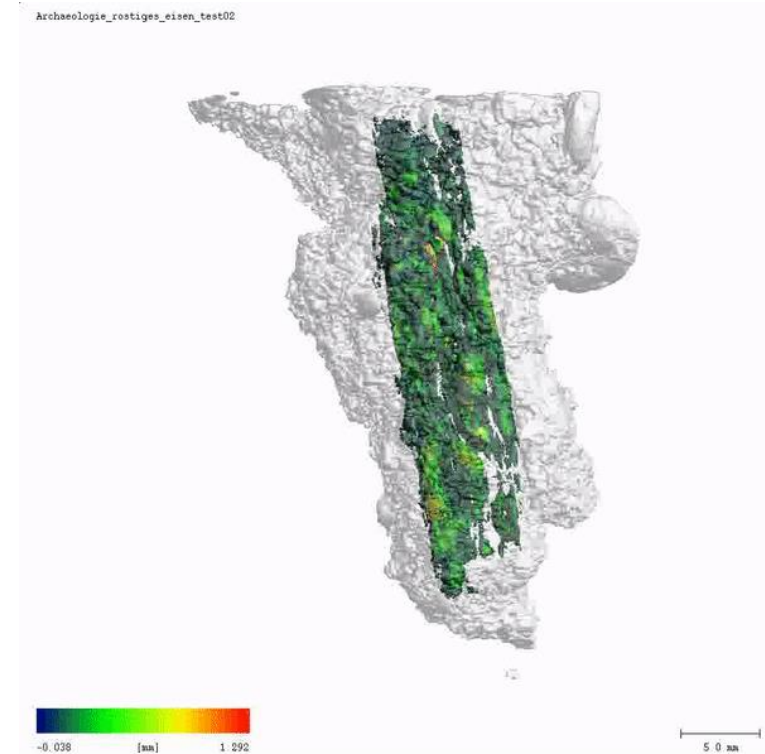


Structures of Crystalline Materials

Research areas:



Goal: Explore new ways for the production of large MgO crystals



Goal: Explore new ways for the conservation of archeological sample material

Excursions!



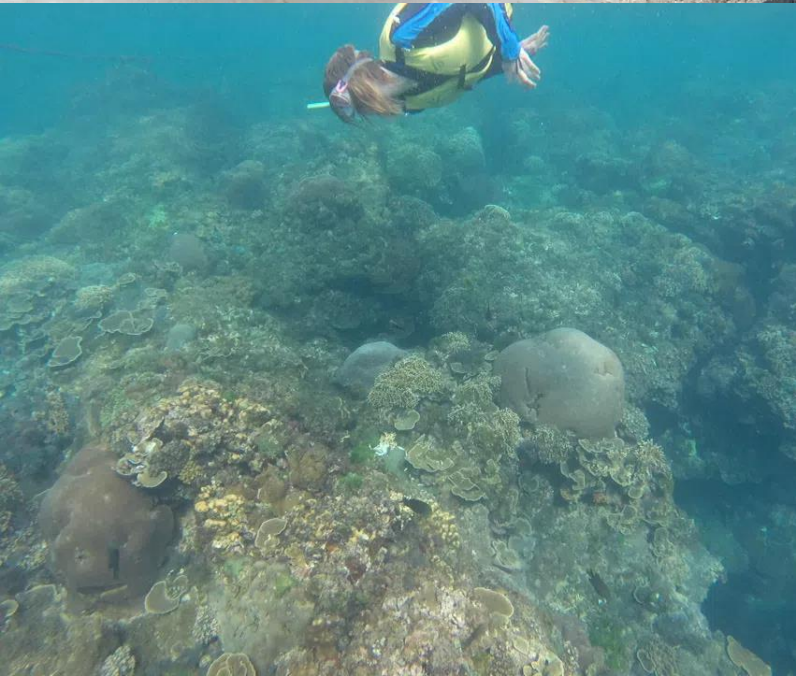
Korsika



Sella

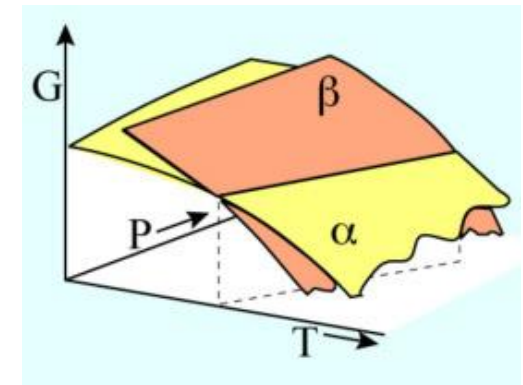
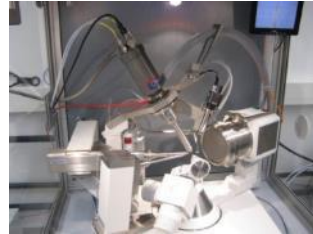
Pfitsch

Taiwan (2020 and 2025)



A Master in Earth Sciences gives you an amazing set of skills:

- ✓ Field methods
- ✓ Laboratory methods
- ✓ Computational methods
- ✓ Scientific writing
- ✓ Presentation
- ✓ Project management



A Master in Earth Sciences gives you an amazing set of skills:

- ✓ Field methods
- ✓ Laboratory methods
- ✓ Computational methods
- ✓ Scientific writing
- ✓ Presentation
- ✓ Project management

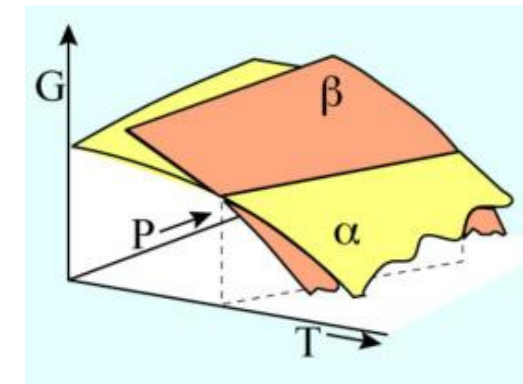
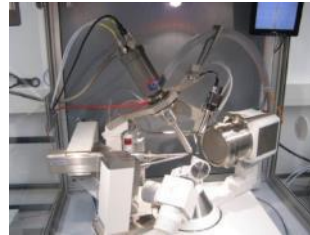
Fundamental research



Applied studies

All specializations will train you in both **fundamental research and applied studies**

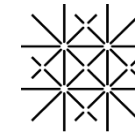
For your MSc thesis, you get the chance to participate in **internationally-renowned research groups**



... Jobs, jobs, jobs! The focus areas open up job opportunities in the applied geoscientific sector, the raw materials industry and energy industry, but also with various public authorities, consulting companies and in academic research (PhD studies).



Südtiroler
Landesverwaltung



Universität
Basel

u^b

UNIVERSITÄT
BERN



UNIVERSITÉ
DE GENÈVE

Konferenz der Vorsteher
der Umweltschützämter der Schweiz



Bayerisches Landesamt für
Umwelt



e.g.



TOFWERK



TYROLIT



RHI MAGNESITA



BERNARD
GRUPPE



ILF

CONSULTING
ENGINEERS

FS GEOTECHNIK



geo.zt
beratende geologen



Opportunities for making a practicum in a company

- Practicum + report/talk
→ Accounts for 5 ECTS in the module “Praxis”
- Confirmation from the study coordinator BEFORE the practicum

<https://fileshare.uibk.ac.at/f/ad0c4ce18d0747bcaae5/>
(procedure)

Study/Erasmus coordinator: Jasper.Moernaut@uibk.ac.at

Opportunities for a study semester (or practicum) abroad

- Financial support (400-500 € per month)
- No tuition fee
- ECTS are accounted for
- Planning and application well in advance!

WHERE?

- Riga (Letvia)
- Bucarest (Rumania)
- Uppsala (Sweden)
- Tromsø (Norway) → possibility to stay in Svalbard (Spitzbergen)
- Amsterdam (Netherlands)
- Reykjavik (Iceland)

<https://www.uibk.ac.at/de/international-relations/studierendenmobilitaet/outgoing/mobilitaetsprogramme/erasmus-studmob/>

- South America & Indonesia: via agreements at the Institute of Geography
<https://www.uibk.ac.at/de/geographie/studium/ausland/>

Individual focus:

- Interdisciplinary competences (10 ECTS)
- Other courses outside Earth Science (20 ECTS)
(e.g. from Geography, Climatology, Biology, Engineering Sciences, etc)

Package „Window of Opportunity“: 30 ECTS

<https://www.uibk.ac.at/studium/angebot/wahlpakete/>

Wahlpakete (Ergänzungen)

» Wahlpaket

Wahlpakete (Ergänzungen) sind Module im Umfang von 30 ECTS-AP, welche die fachlichen Inhalte um Inhalte anderer Fachdisziplinen/Studien, die nicht aus dem eigenen Studium stammen, ergänzen.

Example:

Digital Science

Nähere Informationen »

Studierende eines facheinschlägigen Informatikstudiums können die Ergänzung Digital Science nicht absolvieren.

Modulstruktur

- 5 ECTS-AP Einführung in die Programmierung
- 5 ECTS-AP Einführung in das Datenmanagement
- 10 ECTS-AP Datenanalyse
- 5 ECTS-AP Aspekte der Digitalisierung
- 5 ECTS-AP Data Analysis Lab

- Erasmus



© iStockphoto

Practical Information: where do I find info?

Official information: <https://www.uibk.ac.at/en/programmes/ma-earth-sciences/>

uibk.ac.at/en/programmes/ma-earth-sciences/



Master's Programme Earth Sciences

Do you want to better understand processes below the Earth's surface and be able to find and interpret signs of the climate of past times?

Apply online

Which processes take place **below the Earth's surface**? How often do **earthquakes** occur? Where do you find signs of the **climate** of past geological times? What influences the properties and quality of **ceramics**?

The students of the Master's Degree Programme in Earth Sciences develop further competencies in the analysis of geo-relevant materials and data. Students may choose an individual focus in applied areas (e.g. engineering geology, hydrogeology, natural hazards, ceramic materials) and theoretic disciplines (e.g. climate reconstruction, geochronology, geodynamics, petrology).

Master of Science

Duration/ECTS-Credits
4 semesters/120 ECTS-Credits

Mode of Study
Full-time

Language
German

Requirements
Relevant bachelor's degree/equivalent and [Language Certificates](#)

Faculty

[Faculty of Geo- and Atmospheric Sciences](#)

Level of qualification
Master (Second Cycle)
ISCED-11: Level 7, EQF/NQF: Level 7

ISCED-F
0532 Earth sciences

Study code
UC 066 815

Official information: <https://www.uibk.ac.at/en/programmes/ma-earth-sciences/>

General

Requirements

Course Sequence

Minor

Supplementary Programme

Examination

Forms

Contact and Information

The curriculum is the basis of a degree programme. A look at the curriculum for the Master's Programme Earth Science will give you a detailed overview of the structure, content, examination regulations and qualification profile of this Master's degree.

The curriculum can clarify several important questions before you start your studies. For example, which criteria have to be fulfilled for enrolment in the Master's Programme Earth Science, how long the programme takes, which modules have to be completed and much more.

The curriculum [2021W](#) currently applies to the Master's Programme Earth Science.

Information on the Curriculum (2021W)

The [complete version of the curriculum](#) reflects the currently valid version of the curriculum. It is for informational purposes only and is not legally binding. The legally binding version of the curriculum, including any amendments, may be found in the University of Innsbruck Bulletins.

Complete version as of 1 October 2021
Curriculum for the
Master's Programme in Earth Sciences
at the Faculty of Geo and Atmospheric Sciences of the University of Innsbruck

Table of contents

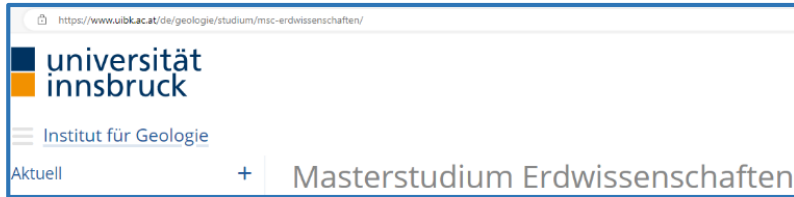
- § 1 Allocation of the study programme
- § 2 Qualification profile
- § 3 Scope and duration
- § 4 Admission
- § 5 Types of courses
- § 6 Allocation of places for courses with a limited number of participants
- § 7 Compulsory and elective modules
- § 8 Master's Thesis
- § 9 Examination regulations
- § 10 Academic degree
- § 11 Coming into force
- § 12 Transitional provisions

Curriculum:

- Description of all courses
- Information on MSc thesis
- etc.
- Legally binding

More detailed info (timeplan):

<https://www.uibk.ac.at/de/geologie/studium/msc-erdwissenschaften/>



Pflichtmodule

20 ECTS

Einführungsmodul	+	Vorbereitung Masterarbeit		Defensio
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Masterarbeit

20 ECTS

Wahlmodule

80 ECTS insgesamt, wobei 30 ECTS aus einer der vier Vertiefungsrichtungen stammen können. Es muss jedoch keine Vertiefung gewählt werden.

Mineralische Roh- und Werkstoffe	+	Theoretische Petrologie	○	Geodynamik	+	Quatärgeologie	+
Strukturen kristall. Materialien	+	Magm. & Metamorphe Petrologie	+	Regionale Geologie	+	Bohrkernanalyse	○
Experimentelle Syntheseverfahren	+	Hochdrucksynthese	●	Becken & Orogene	○	Geotechnik	+
Materialwissenschaftliche Mineralogie	+	Geochemie & Isotope	+	Strukturgeologie	+	Angewandte Geophysik	+
Analysmethoden	+			Kristallingeologie	+	Isotope & Geochronologie	+
Spezielle Mineralogie	○			Stratigraphie	+	Paläoklimatologie	+
Freie Exkursionen	○	Kristallographie für Fortgeschrittene	+	Praxis		Ausgewählte Kapitel erdw. Forschung	+
Mineralspektroskopie	+	Exkursion Industrie und Rohstoffe	+	Geodaten	+	Marine Geologie	+
Physikalisch-Chemische Mineralogie	+	Spezielle Mineralogie 2	○	Hydrogeologie	○	Paläobiologie	+
Interdisziplinäre Kompetenzen (gesamtes Angebot der Universität Innsbruck)							

Vertiefungsrichtungen

Materialien & Ressourcen
Petrologie & Geochemie
Alpine Geologie
Quartär- & angewandte Geologie
Freie Wahlmodule

Module im Wintersemester

○ WS 24/25 (ggf. gleich im 1. Semester belegen!)

+

Module im Sommersemester

● SS 25

+

More detailed info (lecturers, course subscriptions): https://lfuonline.uibk.ac.at/public/lfuonline_lv.home

The screenshot shows the LFU:online website interface. At the top left is the university logo. The navigation menu includes 'Studies', 'Research', 'Connect', and 'About us'. The main heading is 'LFU:online'. Below this, there is a search section with a dropdown menu for 'winter semester 2023/2024', a text input field containing 'earth science', a 'Search' button, and links for 'Advanced search' and 'Reset'. To the right, there is a dropdown menu for 'LFU:online' with 'Courses' selected and a 'My course bookings' link below it.

- What is offered in this specific semester?
- Timing of classes and exams?

Elective Module 18: Geochemistry and Isotope Geochemistry (5 ECTS-Credits; 3 h) ▼

Prerequisites for registration: none

Learning Outcome: The students master the basics of isotope geochemistry and geochronology and can apply the methods and concepts of the geochemistry of stable and radiogenic isotopes to igneous and metamorphic processes.

Elective Module 19: Material Science Mineralogy (7.5 ECTS-Credits; 4 h) (no courses)

Prerequisites for registration: none

Learning Outcome: The students understand practical relationships between chemical composition, crystal structure and physical properties of important products of technical mineralogy and know the processes involved in their manufacture.

Elective Module 20: Mineral Raw Materials (5 ECTS-Credits; 4 h) ▼

Prerequisites for registration: none

Learning Outcome: The students know the mineral raw materials of important branches of industry and understand the basics of natural development processes, technical processing as materials and recycling. The students can evaluate the criticality of the primary and secondary raw material supply in the context of historical, current and future resource management.

Additional Information



Research



Studies



Departments



Organization / Contact

News und Events

Naturkatastrophen: Risiko von Gebäudeschäden besser einschätzen (07.03.2022)

Klimawandel lässt Gletscherseen in Hochasien gefährlich anwachsen (07.03.2022)

Schneeverwehungen am Gletscher modellieren (21.02.2022)

Vorgestellt: Gebirgsgefahren im Blick (20.01.2022)

Wenn es im Winter blitzt (21.12.2021)

„Girls on Ice“ mit Arthur-Haidl-Preis 2021 ausgezeichnet (14.12.2021)

» all News and Events

We introduce ourselves

Bastian Joachim-Mrosko, Department of Mineralogy and Petrography



» further academic staff

Academic Year 2024/2025

	Winter Semester 2024/2025	Summer Semester 2025
Online application for Bachelor's, Diploma and Master's Programmes without selection procedures	till 05.09.2024	till 05.02.2025
Registration für study programmes with selection procedures	Admission Procedures	no registration for the summer semester (excluding Admission examination to prove the sporting aptitude)
General Admission Period for Bachelor's and Diploma Programmes	08.07.2024 - 05.09.2024	07.01.2025 - 05.02.2025
Exceptions for Bachelor's and Diploma Programmes	06.09.2024 - 31.10.2024	06.02.2025 - 31.03.2025
Admission Period for Master's Programmes	08.07. - 31.10.2024	07.01. - 31.03.2025
Application Period (for non-EEA citizens and stateless persons)	until 15.05.2024	until 15.10.2024
Admission Period for non-EEA citizens and stateless persons	08.07. - 05.09.2024	07.01. - 05.02.2025
Registration for the Continuations of Studies Paying of the Austrian Students' Union Fee/Tuition Fee	until 31.10.2024	until 31.03.2025
Teaching and Examination Period	01.10.2024 - 07.02.2025	03.03.2025 - 28.06.2025

» Holidays

Informationen zum ÖH-Beitrag/Studienbeitrag

Am Beginn nur ÖH-Beitrag

Ordentliche Studierende mit einer Staatsbürgerschaft aus der EU/EWR/CH und ihnen Gleichgestellte, die für ein Bachelor-, Diplom-, Master- oder Doktoratsstudium zugelassen werden, bezahlen zu Beginn des neuen Studiums nur den ÖH-Beitrag. Für die Fortsetzungsmeldung des Studiums müssen Studierende, die sich innerhalb der vorgesehenen Studiendauer (+ Toleranz) befinden, jedes Semester ebenfalls nur den ÖH-Beitrag fristgerecht einzahlen.

ÖH-Beitrag im Studienjahr 2022/2023: € 21,20

ÖH-Beitrag im Studienjahr 2023/2024: € 22,70

Wer muss den Studienbeitrag bezahlen?

Der Studienbeitrag ist zu bezahlen, wenn

- die **beitragsfreie Zeit** (vorgesehene Studiendauer eines Bachelor-, eines Master- oder eines Doktoratsstudiums bzw. eines Studienabschnitts eines Diplomstudiums + zwei Toleranzsemester) **überschritten** wurde
- auf Grund der **Staatszugehörigkeit** Beitragspflicht besteht
- ein **außerordentliches Studium** (z.B. zur Belegung einzelner Lehrveranstaltungen, Studienberechtigungsprüfung) betrieben wird.

Der Studienbeitrag beträgt € **363,36 pro Semester** (A, EU/EWR, CH) bzw. für Drittstaatenangehörige € **726,72 pro Semester**. Neben dem Studienbeitrag ist auch der ÖH-Beitrag zu zahlen (s.o.).