

Earth Sciences FIT Syllabus

Class Schedule:

Monday 7/6	Tuesday 7/7	Wednesday 7/8	Thursday 7/9	Friday 7/10
Introductions, course objectives, Focus 1: P. Ustriyana	Focus 2: C. Tsuyuki	Focus 3: B. McGurk	Focus 4: M. Kang	Focus 5: R. Raffel
Monday 7/13	Tuesday 7/14	Wednesday 7/15	Thursday 7/16	Friday 7/17
Breakout sessions with instructors for writing and presentation	Breakout sessions with instructors for writing and presentation	Independent writing and presentation prep session	Individual presentations	Individual presentations; writing submission; graduation

Central Foci:

1. Climate is changing: What we might miss
 - What can we learn from macro- and microclimate effects on future biodiversity and ecosystem? Is a megadrought coming closer? What does drought bring to the forests and other ecosystems, and how do they and the life within respond?
2. Materials on earth: Causes of global changes and contributors to a sustainable future
 - What facts do we have about chemical hazards to the environment? What have we learned? What are microplastics? How have they impacted the Earth? How can we design materials and chemicals for a sustainable society?
3. Water and soil: Preservation, conservation, restoration
 - What are the global threats that our water and soil face? What is water scarcity, what types of scarcity occur, and what can we do to address it? How do we restore the terrestrial ecosystems, including forests? How can soil be enlisted to fight climate change?
4. Cryosphere and lithosphere: Geology, ice loss, and biodiversity
 - How has the ice sheet on the Earth's poles changed over time? How does the ice loss contribute to the rising sea level? How do geological changes of the Earth affect biodiversity?
5. Biodiversity and its connection with humans
 - What is biodiversity? Why is it important from the perspective of ecosystems and humans? How do humans impact biodiversity?