

Course offered for the STAT PhD program starting from a.y. 2023/2024

TITLE	Dynamic evolution of the oceanic lithosphere at mid-ocean ridges
Lecturer	Carlotta Ferrando
Duration and Credits	8 hours – 2 CFU
Course description	<p>Mid-ocean ridges are important Earth connections, where much of the exchange of heat and mass between the lithosphere and the oceans takes place. This course deals with the composition and evolution of the oceanic crust and lithospheric mantle along mid-ocean ridges. The PhD students will be informed about the recent research on the processes shaping the oceanic lithosphere through studies of rock samples recovered during oceanographic expeditions and sampled at fossil analogues, the ophiolites.</p> <p>The formation and structure of ocean lithosphere depend on rates of spreading and magma supply; this course will provide an overview on the differences between fast- and slow-spreading ridges. Bathymetric data acquired at present-day mid-ocean ridges will be coupled with recent results in petrology and geochemistry to review recent advances in our understanding of the evolution of the oceanic lithosphere.</p> <p>The course includes a session dedicated to state-of-the-art techniques for the investigations of the oceanic floor and lithosphere and sampling at modern ridges.</p>
Course organization	This course consists of frontal lessons.
Teaching period	June – September. Students are invited to contact the reference lecturer to schedule the class.