

Course offered for the STAT PhD program starting from a.y. 2019/2020

TITLE	<b>Metamorphic fluids in the lithosphere</b>
Lecturer	Marco Scambelluri
Duration and Credits	4 CFU
Course description	<p>Fluids are essential to metamorphism of the continental and oceanic lithosphere. Numerous studies point out that in absence of fluids reaction kinetics is inhibited and that large domains of the lithosphere preserve metastable on a long-term. At convergent margins, fluids affect mass transfer and seismicity in large rock volumes. In the last two decades, efforts have been done to identify metamorphic fluids, their migration pathways and their interaction mechanisms with continental and oceanic rocks within colliding plates.</p> <p>Aim of this course is providing the students an advanced update on the behavior and mobility of aqueous-carbonic fluids in variably altered and volatile-rich lithosphere, with emphasis on fluid/rock interaction, fluid drainage and mobility in metamorphic rocks, and on time duration of the fluid pulses.</p>
Course organization	Frontal lectures and field excursion
Teaching period	June-July or September-October