Course offered for the STAT PhD program

TITLE	**Metamorphic geology: from field to modelling**
Lecturer	Donato Belmonte – Marco Scambelluri
Duration and Credits	16 hours - 4 CFU
Course description	The course highlights the fundamental processes controlling metamorphism in Earth systems. Special attention is devoted to the role of chemico-physical and thermodynamic properties of solid and fluid phases in modelling metamorphic phase equilibria and phase relations by P-T-X phase diagram and pseudosection calculations. Since fluids are essential to boost the kinetics of metamorphic reactions, an advanced update on the behavior and mobility of C-O-H fluids in variably altered and volatile-rich lithosphere is also provided, with emphasis on fluid/rock interaction, fluid drainage and mobility in metamorphic rocks, time duration of the fluid pulses. Practical case histories are presented and developed during the course.
Course organization	The course consists of frontal lessons, hands-on tutorials on computational modelling and field excursion.
Teaching period	May-June or September-October