

# CURSO DE DOCTORADO



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## ***Lectures on Convex Analysis***

### **Abstract:**

Convex optimization has an increasing impact on many areas of mathematics, applied sciences, and practical applications. It is now being taught at many universities and being used by researchers of different fields. As convex analysis is the mathematical foundation for convex optimization, having deep knowledge of convex analysis helps students and researchers apply its tools more effectively. The main goal of this course is to provide an easy access to the most fundamental parts of convex analysis and its applications to optimization. Modern techniques of variational analysis are employed to clarify and simplify some basic proofs in convex analysis and build the theory of generalized differentiation for convex functions and sets in finite dimensions. Of course, we do not expect to touch every aspect of convex analysis, but the course consists of sufficient material for a first one on this subject. It can also serve as supplemental reading material for a course on convex optimization and applications

### Time table:

- 26.11.2019. 18:30-20:30. First sesion
- 27.11.2019. 17:30-19:30. Second sesion

**Seminario IMUVA. Edificio LUCIA**  
**Martes 26 de Noviembre de 2019 (18:30)**

