Preliminary course information:

Stochastic control problems form an important class of optimization problems which find applications in a wide variety of fields. The general problem can be formulated as follows: how should a decision maker control a system with a stochastic component to maximize the expected reward? The aim of this course is to develop the theory of stochastic control based on question from mathematical finance, including portfolio optimization problems and problems of optimal stopping (American options). Basic knowledge in stochastic calculus is useful. Knowledge in mathematical finance and optimization theory are not needed (but can of course be helpful).

Contact Sören (sorenc@chalmers.se) for more information about the course.