

Static and Dynamic Hedging
FRE-GY 6141 A
Fridays 11:00am-1:41pm
Rogers Hall, Room 200
updated Oct. 30, 2020

Instructor: Professor Peter Carr
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Special Dates: First lecture Oct. 30, No lecture Nov. 27, Last lecture Dec. 11.

Pre-requisites: Derivative Securities and Stochastic Calculus, or equivalent.

Content: This half semester course targets several popular derivative securities and focuses on conditions under which their payoffs can theoretically be replicated. The replicating strategies involve static and/or semi-static and/or fully dynamic trading strategies in related securities. The replicating strategies are sometimes model-dependent, sometimes semi-robust, and sometimes robust i.e. model-free.

Course requirements: There will be two assignments and one take-home final exam. Collaboration on homework is encouraged, but collaboration during the exam is not. Students must write up and turn in their homework solutions individually. The exact date of the final take-home exam is TBD based on class consensus of optimal timing (with never excluded). Half the grade is based on the two assignments; the other half is based on the final exam.

Slides: Slides and assignments can be downloaded from NYU Classes.

Reading Materials: Unfortunately, there is no textbook on this topic because much of it is research level. Slides will form the basis of the homework assignments and the exam. I will assign relevant background articles on a week by week basis.

Please turn over for the schedule.

Static and Dynamic Hedging, Fall 2020 Second Half
Fridays 11:00am-1:41pm

Class	Date	Topic
1	Oct. 30	Path Independent Payoffs; Discrete-Time Dynamic Hedging
2	Nov. 6	Path Independent Payoffs; Continuous-Time Dynamic Hedging
3	Nov. 13	Payoffs involving sample path max and/or min
4	Nov. 20	Payoffs involving default
5	Nov. 27	No class; Happy Thanksgiving
6	Dec. 4	Payoffs linear in quadratic variation/realized variance
7	Dec. 11	Payoffs linear in localized dispersion measures
8	Dec. ??	Take-home Final exam