Static and Dynamic Hedging
FRE-GY 6141 A
Fridays 11:00am-1:41pm
Jacob 777
updated Oct. 29, 2021

Instructor: Professor Peter Carr
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Special Dates: First lecture Oct. 29, No class Nov. 26, Last meeting Dec 17.

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 in-class final exam. Collaboration on homework is encouraged, but collaboration during the final exam is not. Students must write up and turn in their homework solutions individually. The final exam will be held on Dec. 17, 2021. 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 Brightspace.

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.

Please turn over for the schedule.

Static and Dynamic Hedging, Fall 2021 Second Half
Fridays in Jacobs 777 11:00am-1:41pm

Class	Date	Topic
1	Oct. 29	Path Independent Payoffs; Discrete-Time Dynamic Hedging
2	Nov. 5	Path Independent Payoffs; Continuous-Time Dynamic Hedging
3	Nov. 12	Path Independent Payoffs; Static Hedging
4	Nov. 19	Barrier Options; Dynamic Hedging or Semi-Static Hedging
5	Dec. 5	Variance Swaps; Dynamic and Static Hedging
6	Dec. 10	Stoptions/DVA; Discrete Dynamic Replication with Options
8	Dec. 17	Final exam

Inclusion Statement

The NYU Tandon School values an inclusive and equitable environment for all our students. I hope to foster a sense of community in this class and consider it a place where individuals of all backgrounds, beliefs, ethnicities, national origins, gender identities, sexual orientations, religious and political affiliations, and abilities will be treated with respect. It is my intent that all students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. If this standard is not being upheld, please feel free to speak with me.