

**MATH 479 (MAST 661Q)**  
Convex and Non-Linear Analysis  
*Fall 2014*

**Instructor:** Dr. A. Stancu, Office: LB 921-27, Phone: (514) 848-2424, Ext. 5345  
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**Office hours:** Tuesdays, 9:00-10:00

**Reference Text:** [http://www.stanford.edu/~boyd/cvxbook/bv\\_cvxbook.pdf](http://www.stanford.edu/~boyd/cvxbook/bv_cvxbook.pdf)  
**Errata:** [http://www.stanford.edu/~boyd/cvxbook/cvxbook\\_errata.html](http://www.stanford.edu/~boyd/cvxbook/cvxbook_errata.html)

**Topics:** Convex sets and functions; topological properties; duality; representation and inequalities; log convex and log concave functions; elements of the differential theory like subgradient and Legendre transform; applications to geometric problems and/or financial mathematics.

**Grading:** Homework (20%), Midterm (30%), Final Exam (50%).  
**Graduate students will be required to do extra work for these evaluations.**

The homework will be assigned approximately every two weeks, during class, and posted on Moodle. In case of a student's absence or late arrival, it is the student's responsibility to find the assignment and submit it on time. **No late assignments will be accepted.** Solutions of the assigned problems will be posted on moodle after the due date of each assignment.

**A midterm exam will be scheduled in class during the 7th or 8th week of classes.** The exact date will be announced at least two weeks in advance. **A missed test cannot be made up.**