

MATH 4025 Optimization Theory and Applications

Math 4025 Spring 2022

Time: Tuesday and Thursday, 12:00Noon-1:20PM

Classroom: Room 239, Lockett Hall

Instructor: Name: Hongchao Zhang Email: zhc At lsu.edu
web page : <http://www.math.lsu.edu/~hozhang/Math4025-Spring2022/Math4025.html>

Office Hours: Tuesday and Thursday 1:30-2:30 PM, or by email Appointment
Zoom Meeting ID: 435 490 7449

Text: *Lecture Notes*
Reference Books: *Convex Optimization by Stephen Boyd and Lieven Vandenberghe*, ISBN 978-0-521-83378-3; *Nonlinear Programming by Dimitri P. Bertsekas*, ISBN 1-886529-00-0

Prerequisites: Linear Algebra, Multivariable Calculus

Contents: Depending on the time available, tentative topics include Introduction to typical optimization problems, Unconstrained optimization algorithms, Constrained optimization algorithms, Optimality conditions, Duality theory, Structured optimization algorithms.

Homework: Homework will be handed out in the class.

Grade: Class Attendance: 10%; Homework: 25%; Midterm Exam: 25% Final Exam: 40%

Grade Scale: A-: 90-92 A:93-96 A+:97-100; B-: 80-82 B:83-86 B+:87-89;
C-: 70-72 C:73-76 C+:77-79; D-: 60-62 D:63-66 D+:67-69; F: less than 60
Final grades maybe finally scaled, but will only be scaled up.

Note: Except for unforeseen reasons, students must obtain advance approval from the instructor for missing any assignments including Homeworks and Exams, etc. Under this case, any excuse for missing an assignment must be properly documented and any missed assignment must be made up within three days.