

Instructor Information

Instructor	Amin Khademi, PhD	Office Hours	Friday 3:00-4:00 pm
Office	267 Freeman Hall		Or by appointment
Telephone	656-6919	Email	khademi@clemson.edu

Office hours are subject to change during the semester. Any changes will be distributed through Canvas and/or email.

Course Description

This course intends to expose students to different types of nonlinear programming problems, and to the various algorithms used to solve these. It covers material from convex sets and functions, optimality conditions, constraint qualification, Lagrangian duality, unconstrained optimization, and penalty and barrier functions.

Course Objective

Modeling optimization problems, identifying the convexity of problem, and deriving optimality conditions.

Prerequisite

IE 8030: Engineering Optimization and Applications. This will be strictly enforced.

Course Text

Mokhtar S. Bazaraa, Hanif D. Sherali, C. M. Shetty, Nonlinear Programming: Theory and Algorithms, 3rd Edition, Wiley, 2005.

Grade Determination

Item	Percentages
Homework	60% total
Exams	40% total (20%, 20%)

Mid-term is on Thursday (February 28, 2019) in class. Final exam is on Friday (May 3, 2019) 7:00 am-9:30 am. I do not exempt any students from the final exam.

The following percentages will guarantee the corresponding letter grade:

At least	Letter grade
90%	A
80%	B
70%	C

Homework Information

Homework will be assigned on a regular basis and may not be graded in its entirety. Homework received after the scheduled end of class will be rejected as late.

Required Software

Some homework assignments involve using an optimization software. Any optimization software is

accepted such as AMPL, GAMS, LINDO, LINGO, and CPLEX. The project involves implementing an algorithm. Any programming language can be used such as MATLAB, C/C++, and JAVA.

Academic Integrity

I understand that students may choose to study with other students. It must be understood that the work submitted by each student for homework and exams represents the efforts and work of that student and that the work submitted by groups of students for group assignments represents the efforts and work of the students in that group only. Group assignments will be explicitly identified as such. The Provost has asked that every course syllabus include the following statement:

As members of the Clemson University community, we have inherited Thomas Green Clemson's vision of this institution as a "high seminary of learning." Fundamental to this vision is a mutual commitment to truthfulness, honor, and responsibility, without which we cannot earn the trust and respect of others. Furthermore, we recognize that academic dishonesty detracts from the value of a Clemson degree. Therefore, we shall not tolerate lying, cheating, or stealing in any form.

Class Attendance

Class attendance will not be explicitly tracked. Excessive absence will likely hurt your grade in a general way. However, each student is responsible for all announcements made in class and sent to your Clemson University e-mail account, including scheduling of exams and homework assignments. Notification will be given in advance if neither I nor a substitute instructor is unable to attend class. In some cases, you may be given an activity for this class period that may be performed during this time period. If no prior arrangement has been made and neither I nor a substitute instructor have arrived by 15 minutes after the scheduled start of class, the students may leave. Please note that no electronic devices are allowed in this class.

Students with Disabilities

Students with disabilities who need accommodations should make an appointment with Dr. Arlene Stewart, Director of Disability Services, to discuss specific needs within the first month of classes. Students should present a Faculty Accommodation Letter from Student Disability Services when they meet with instructors. Student Disability Services is located in Suite 239 Academic Success Building (656-6848;sds-l@clemson.edu). Please be aware that accommodations are not retroactive and new Faculty Accommodation Letters must be presented each semester.

The Clemson University Title IX (Sexual Harassment)

Clemson University is committed to a policy of equal opportunity for all persons and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender, pregnancy, national origin, age, disability, veterans status, genetic information or protected activity in employment, educational programs and activities, admissions and financial aid. This includes a prohibition against sexual harassment and sexual violence as mandated by Title IX of the Education Amendments of 1972. This policy is located at <http://www.clemson.edu/campus-life/campus-services/access/title-ix/>. Ms. Alesia Smith is the Clemson University Title IX Coordinator, and the Executive Director of Equity Compliance. Her office is located at 110 Holtzendorff Hall, 864.656.3181 (voice) or 864.656.0899 (TDD).