Math 292: Operations Research

Course: 21-292: Operations Research
Instructor: Michael Tait, Wean Hall 7124, mtait@cmu.edu
Office Hours: Tuesday 2-4 pm or by appointment.
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TA Office Hours: Monday afternoon by appointment and Thursday 3-5 pm.

Course Website: math.cmu.edu/∼ mtait/292

Material Covered: Operations Research is the science of decision making. We will formulate and solve optimization problems where one wishes to allocate scarce resources in order to maximize or minimize some objective function. We will focus on solving these problems by using the method of *linear programming*, where costs, profits, and consumption of resources behave linearly. This course will start with the classical Simplex Method and then move to real-world and graph theoretic applications. We will also discuss some other methods as well as some first non-linear optimization problems.
Textbook: *Introduction to Operations Research*, 10th edition, by Hillier and Lieberman.

Grading (tentative): Homework and quizzes 30%, 2 midterms each 20%, and a final 30%.

Late homework will not be accepted and missed quizzes will not be made up. However, I will drop the lowest homework and quiz grade.

Tips for success: First and most importantly, expect to spend several hours per week working for this course. If you spend enough time solving problems and reworking your notes, you will understand the concepts of the course. You should come to class prepared and eager to learn. I will let you know what we will be covering next, and you should skim over these sections before lecture. You will be surprised the difference that a 15 minute head start makes in how much you understand during a lecture. Plan to start your homework early, and that way you can ask me questions before it is due. I am always available by email, and this is the best way to get into contact with me. Mathematics can be very frustrating if you are lost and confused, but very exciting and fun if you are on top of things. I promise that you will enjoy this class more if you are doing well!

I am also available by email. If you want to make an appointment with me I will do my best to accommodate your schedule. You will increase your chances of being able to meet with me by giving me advanced notice (more than 24 hours) and by trying to schedule with me MWF in the mornings or directly after lecture.