ISE 357 Syllabus

Meeting Time/Place: Mo, We, Fr, 12:10-13:00, Mohler 451
Office Hours: Mo, Tu, Th, Fr, 16:00-17:00 and by appointment
Office: Mohler 205
On-Campus: 610.758.6584
Cell: 610.350.7649
Instructor: Charalambos Marangos, PhD
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Skype: marangosclan

Course Objective/Prerequisites: This course is primarily intended for new students in the HSE (Healthcare Systems Engineering) program who feel that they do not have as strong of an engineering background as they may need to succeed. As such, the only prerequisites for this course are a vague recollection of high-school level mathematics and a willingness to put in effort outside of class time.

The primary objective of this course is that you will leave more comfortable doing and understanding the basic mathematics that may be prerequisites of ISE 426, Optimization Models and Applications.

Course Topics: Systems of linear equations. Manipulating matrices and vectors. Vector (sub)spaces. Linear optimization (simplex algorithm). A very brief intro to vector calculus with applications in optimization. Other topics will be covered, time pending.

Textbook: The “official” course textbook is Linear Algebra and its Applications 5e, by David C. Lay, Steven R. Lay, and Judi J. McDonald. You are not required to buy the book, but I will be following its order of presentation for the first chapter and a half (at least half of the semester), and it may be a useful reference in future coursework. The decision to buy the book is totally yours to make.

Office Hours: My office is in Mohler 205. “Open-door” office hours are Mo, Tu, Th, Fr, 16:00-17:00. I can also try to accommodate appointments, just email or ask me. If you are a distance student and need some additional assistance, please email me to arrange a Skype meeting, google hangout, cell call, or else, if appropriate, we can discuss problems through email. Also, if you are an HSE student, take advantage of the HSE TAs. You should be receiving their contact info and hours from other channels.

Grading: Final grades will be computed as follows:
Homework: 50%
Midterm Exam: 20%
Final Exam: 20%
Participation: 10%
**Homework Assignments:** There will be homework assignments at most once a week and at least bi-weekly. I will typically only thoroughly read (consistently across the class) a subset of the assigned problems unknown to you before handing in the assignment. The remaining problems are there for your practice. Homework grades will be based on a combination of accuracy on the graded problems and an apparent effort to complete all the problems. A 10% late penalty will be assessed for each class period that a homework assignment is submitted late.

**Exams:** There will be one midterm exam and one final exam. You will be given at least two weeks’ notice as to when these will occur.

**Participation:** Discretionary. If you participate, if you put in the effort to succeed in this class, then you’re doing alright in this category.

**Advice:** Relax. The word “math” scares a lot of people, but the ability to describe structures and relationships that define the world we live in is something that makes us fundamentally human. Don’t get bogged down by symbols and formulae. Always try to remember that the math is there to help describe very real things, and it’s almost always best to try and understand the “thing” rather than the symbol of the thing.

Please, do not hesitate to talk to me either in office hours or by appointment.

My extension is 610.758.6584.