IE 305 SIMULATION - Fall 2020-21

Instructor

Sinan Yıldırım	FENS 2057	sinan.yildirim@sabanciuniv.edu

Teaching Assistants

Çağrı Doğuş İyican	cagriiyican@sabanciuniv.edu
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Mohammad Khalafi	mkhalafi@sabanciuniv.edu
Malek Ebadi	malek@sabanciuniv.edu

Meeting times

	Section	Time	Instructor
Lectures	A	Tuesday 10:40-12:30, Thursday 10:40-11:30	Sinan Yıldırım
	B	Tuesday 14:40-16:30, Thursday 11:40-12:30	
Recitations	A1	Monday 13.40-15.30	Ece Naz Duman
	A2		Çağrı Doğuş İyican
	B1	Monday 15:40-17:30	Mohammad Khalafi
	B2		Malek Ebadi

Office Hours

Sinan Yıldırım:	Tuesday: 17:40-18:30, Wednesday: 08:40-09:30
Çağrı Doğuş İyican	Thursday 18:40-19:30
Ece Naz Duman	Friday 09:40-10:30
Mohammad Khalafi	by appointment
Malek Ebadi	by appointment

Zoom links:

Sinan Yıldırım (Lectures and office hours): https://sabanciuniv.zoom.us/j/97123688407
Ece Naz Duman (Recitation A1 and office hour): https://sabanciuniv.zoom.us/j/99682834185
Çağrı Doğuş İyican (Recitation A2 and office hour): https://sabanciuniv.zoom.us/j/5128851007
Mohammad Khalafi (Recitation B1 and office hour): https://sabanciuniv.zoom.us/j/4047649689
Malek Ebadi (Recitation B2 and office hour): https://sabanciuniv.zoom.us/j/5131543670

Textbooks and Material

- *Simulation with Arena*, W. D. Kelton, R. P. Sadowski, and D. T. Sturrock, McGraw-Hill
- *Discrete-event System Simulation*, J. Banks, J. Carson, B. L. Nelson, and D. Nicol, Prentice Hall
- SUCourse+: Lecture notes, recitation notes, Arena examples, announcements, etc.

Software: The simulation software package **Arena** will be used.

Learning Outcomes

1. Describe the principles of simulation modeling and analysis for discrete event systems
2. Identify probability distributions and perform statistical analysis of input and output data
3. Construct the simulation model of a given system using the simulation software Arena

Tentative course outline

1. Introduction to Simulation and Hand Simulation
2. A Guided Tour Through Arena
3. Modelling Basic Operations with Arena
4. Key Probability Distributions
5. Generating Random Numbers and Random Variates
6. Input Analysis
7. Modelling Detailed Operations with Arena
8. Output Analysis

Assessment methods

	Weight %	**Tentative times**	**Comments**
Midterm 1	25	TBA, tentative: 8'th week	covers weeks 1-7
Midterm 2	25	TBA, tentative: 13'th week	covers weeks 8-12
Quiz	20	throughout the term	4 or 5 times
Final	30	TBA	covers all weeks

Make-up policy

There will be only one **comprehensive** make-up exam at the end of the semester. If you want to take this exam, you need to convince me that you had a good reason to miss an exam.

Academic integrity: Please be aware that violators of academic integrity will be subject to disciplinary action. You are strongly advised to go through the academic integrity policy implemented at Sabancı University. This policy as well as related announcements can be reached through the internal website of the university.