

# IE 305 SIMULATION

## Fall 2021-22

### Instructor

Sinan Yıldırım

FENS 2057

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### Teaching Assistants

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Okan Arslantaş (LA)

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### Meeting Times

	Section	Time	Place	Instructor
Lectures	A	Tuesday 10:40-12:30	FASS G062	Sinan Yıldırım
		Thursday 12:40-13:30		
	B	Tuesday 14:40-16:30		
		Thursday 13:40-14:30		
Recitations	A1	Monday 13:40-15:30	Online (via Zoom)	Ece Naz Duman
	A2			Navid Aftabi
	B1	Monday 15:40-17:30		Zeynep Küçüksarı
	B2			Mert Özçelik

### Office Hours

All office hours will be held online.

Sinan Yıldırım	Thu 18:40-20:30	<a href="https://sabanciuniv.zoom.us/j/6455891072">https://sabanciuniv.zoom.us/j/6455891072</a>
Ece Naz Duman	Tue 13:40-14:30	<a href="https://sabanciuniv.zoom.us/j/98577787836">https://sabanciuniv.zoom.us/j/98577787836</a>
Navid Aftabi	Wed 11:40-12:30	<a href="https://sabanciuniv.zoom.us/j/7788801528">https://sabanciuniv.zoom.us/j/7788801528</a>
Zeynep Küçüksarı	by appointment	<a href="https://sabanciuniv.zoom.us/j/99859958392">https://sabanciuniv.zoom.us/j/99859958392</a>
Mert Özçelik	by appointment	<a href="https://sabanciuniv.zoom.us/j/91745955706">https://sabanciuniv.zoom.us/j/91745955706</a>
Mohammad Khalafi	by appointment	<a href="https://sabanciuniv.zoom.us/j/4047649689">https://sabanciuniv.zoom.us/j/4047649689</a>
Okan Arslantaş	Fri 10:40-11:30	<a href="https://zoom.us/j/4505367934">https://zoom.us/j/4505367934</a> <b>Passcode:</b> q8mffr

## Textbooks and Material

- *Simulation with Arena*, W. D. Kelton, R. P. Sadowski, D. T. Sturrock
- *Discrete-event System Simulation*, J. Banks, J. Carson, B. L. Nelson, D. Nicol
- 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
2. Hand simulation
3. Modelling basic operations with Arena
4. Key probability distributions
5. Generating random variates
6. Input analysis
7. Modelling detailed operations with Arena
8. Output analysis

## Assessment Methods

Method	Weight	Time	Comments
Midterm 1	20%	11.11.2021, 19:40-21:30	covers weeks 1-6
Midterm 2	20%	17.12.2021, 19:40-21:30	covers weeks 7-12
Term project	30%	throughout the term	in 3 parts, groups in 4
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 Sabanci University. This policy as well as related announcements can be reached through the internal website of the university.