IE 305 SIMULATION - Fall 2020-21

Instructor

Sinan Yıldırım FENS 2057 sinan.yildirim@sabanciuniv.edu

Teaching Assistants

Çağrı Doğuş İyican cagriiyican@sabanciuniv.edu
Ece Naz Duman ece.duman@sabanciuniv.edu
Mohammad Khalafi mkhalafi@sabanciuniv.edu
Soner Aydın soner.aydin@sabanciuniv.edu

Meeting times

<table>
<thead>
<tr>
<th>Section</th>
<th>Time</th>
<th>Instructor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lectures A</td>
<td>Tuesday 10:40-12:30, Thursday 10:40-11:30</td>
<td>Sinan Yıldırım</td>
</tr>
<tr>
<td></td>
<td>Tuesday 14:40-16:30, Thursday 11:40-12:30</td>
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<tr>
<td>B</td>
<td></td>
<td></td>
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<tr>
<td>Recitations A1</td>
<td>Monday 13.40-15.30</td>
<td>Ece Naz Duman</td>
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<td>A2</td>
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<td></td>
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<tr>
<td>B1</td>
<td>Monday 15:40-17:30</td>
<td>Mohammad Khalafi</td>
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<td>B2</td>
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Office Hours

Sinan Yıldırım: TBA
Çağrı Doğuş İyican Thursday 18:40-19:30
Ece Naz Duman Friday 09:40-10:30
Mohammad Khalafi by appointment
Soner Aydın Wednesday 11:40-12:30

Textbooks and Material

- *Discrete-event System Simulation*, Jerry Banks, John Carson, Barry L. Nelson and David Nicol, Prentice Hall
- SUCourse+ Lecture notes, recitation notes, Arena examples, past exams, announcements, etc.
Learning Outcomes

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

Software

The simulation software package Arena will be used. You can download it from SU software repository. Further instructions are available on SUCourse.

Assessment methods

<table>
<thead>
<tr>
<th></th>
<th>Weight %</th>
<th>Tentative times</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm 1</td>
<td>25</td>
<td>TBA, tentative: 8’th week</td>
<td>covers weeks 1-7</td>
</tr>
<tr>
<td>Midterm 2</td>
<td>25</td>
<td>TBA, tentative: 13’th week</td>
<td>covers weeks 8-12</td>
</tr>
<tr>
<td>Quiz</td>
<td>20</td>
<td>throughout the term</td>
<td>4 or 5 times</td>
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<tr>
<td>Final</td>
<td>30</td>
<td>TBA</td>
<td>covers all weeks</td>
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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.