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  ecenazduman@sabanciuniv.edu
Mohammad Khalafi  mkhalafi@sabanciuniv.edu
Malek Ebadi  malek@sabanciuniv.edu

Meeting times

<table>
<thead>
<tr>
<th></th>
<th>Section</th>
<th>Time</th>
<th>Instructor</th>
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</thead>
<tbody>
<tr>
<td>Lectures</td>
<td>A</td>
<td>Tuesday 10:40-12:30, Thursday 10:40-11:30</td>
<td>Sinan Yıldırım</td>
</tr>
<tr>
<td></td>
<td>B</td>
<td>Tuesday 14:40-16:30, Thursday 11:40-12:30</td>
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<tr>
<td>Recitations</td>
<td>A1</td>
<td>Monday 13:40-15:30</td>
<td>Ece Naz Duman</td>
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<tr>
<td></td>
<td>A2</td>
<td>Monday 13:40-15:30</td>
<td>Çağrı Doğuş İyican</td>
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<td></td>
<td>B1</td>
<td>Monday 15:40-17:30</td>
<td>Mohammad Khalafi</td>
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<tr>
<td></td>
<td>B2</td>
<td>Monday 15:40-17:30</td>
<td>Malek Ebadi</td>
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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

- 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

<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>
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<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.