Frequently asked questions (FAQs) about **ENS 208 – Introduction to Industrial Engineering**

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Part A   Course Description

Q: What is the purpose of this course? What can I do upon completing this course?

The purpose of this course is to take you to a journey on a set problems and case studies that modern Industrial Engineers are involved with in real-life. Upon completing this course, you will be able to

- implement algorithms for business problems that can be depicted as an analytical/mathematical problem
- develop mathematical models in the form of linear programming problem formulations and solve these problems with (commercial) solvers
- comprehend how variation and randomness in life/observations can be depicted with functions
- establish the link between industrial engineering and required professional skills
- identify IE problems that you can attack, formulate and solve
- familiarize yourself with industrial engineering profession

Part B   Organization and Classroom Setting

Q1: How many sections do we have? Who are the lecturers? Where & when will classes meet?

- The course is delivered in two sections: A and B.
- Section A is moderated by Emre Özlü. eozlu@sabanciuniv.edu
- Section B is moderated by Gizem Özbaygın. ozbaygin@sabanciuniv.edu
- All sections will be conducted online over Zoom.
- Meeting links & schedule
  Section A (Monday 11:40 - 13:30 & Wednesday 10:40 - 12:30)
https://sabanciuniv.zoom.us/j/6442191243
   Section B (Monday 11:40 - 13:30 & Wednesday 14:40 - 16:30)
https://sabanciuniv.zoom.us/j/99835833604

Q2: Who are the teaching assistants (TAs) and learning assistants (LAs)?

- Teaching assistants and their office hours & links
  Ege Dilan Özyüksel (Mondays, 14:00-16:00, https://sabanciuniv.zoom.us/j/8560616952)
  Nima Moradi (Tuesdays, 15:00-17:00, https://sabanciuniv.zoom.us/j/8631533297)
  Fatih Habacı (Tuesdays, 18:00-20:00, https://sabanciuniv.zoom.us/j/99145831326)
  Oğulcan Doğan (Wednesdays, 18:30-20:30, https://sabanciuniv.zoom.us/j/6397460136)
  Arghavan Sharafi (Thursdays, 08:00-10:00, https://sabanciuniv.zoom.us/j/92695115872)

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- Learning assistants
  Tülay Çolakoğlu

Part C   Course Requirements

Q1: What is the working knowledge or any prerequisite?

- Sophomore standing is recommended. The prerequisite for the course is knowledge of basic courses in mathematics (MATH 101 and 102) and basic skills for computational problem solving (IF 100), or the equivalent.

Q2: Is attendance **mandatory**?

- You are expected to attend the sections which you are registered to. Attendance is mandatory and will be checked in each class.

- You need to enter the online sessions as an authenticated user with your Zoom account associated with your Sabanci University e-mail address and remain in the session starting from the class start time until the class end time.

Q3: Are there any special rules for attendance?

- **Yes.** It is required that the students attend the classes with a computer (via which an algorithm can be texted and run properly, and the outputs can be uploaded to a designated site).

Q4: Are there any **quizzes?**

- Every week we can have pop-up quizzes during the lecture hours. The topics of these quizzes can include both the concepts (you may refer to as "theory") and the applications including the algorithms and coding exercises.

Q5: Any specific requirement **for the first week?**

- **Yes**. Attendance is **required for** the first meeting times in **the first week**, on Monday, February 28th when we deliver introductory remarks and requirements for the rest of the semester.

- The platform (*anaconda*) **must be set up in the computers before the second meeting** on Wednesday, March 2nd. It is highly recommended that each student shall recollect his/her fundamentals about Python before the first meeting.

Q6: Do we have a **textbook**?

- No. We will have lecture notes, reading materials, chapters from books, case ("real life") documents, coding tutorials, and … "All that jazz" will be available on SU Course.

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Part D   **Hardware, software and programming**

Q1: What programming language will we use?

- We use Python (https://www.python.org/) which is the same programming language used in the freshman year course IF100 *Computational Approaches to Problem Solving*.

Q2: Which *platform* will be used for the python language?

- We utilize "***anaconda***" which is known as the "most popular" and easy to use python data science *platform*. It may be downloaded from the following URL: https://www.anaconda.com/products/individual

  Please select Python version 3.9. Version 3.7 and 3.8 are also OK if you already have it.

- **NOTE:** There should be no Turkish alphabet specific characters in the path name of the directory where you are trying to install Anaconda.

Part E   **Outline**

Week 1   Overview of syllabus and expectations, installation of required software, tutorials.

Weeks 2-5   Module 1 – Traveling Salesman Problem and Vehicle Routing Problem

Week 6   Midterm Exam 1 (April 6, 2022 between 19:40-21:40)

Week 7-10   Module 2 – Linear Programming Formulations and Solvers

Week 11   Midterm Exam 2 (May 11, 2022 between 19:40-21:40)

Week 12-14 Module 3 – Randomness and Variation in Observations

Part F   **Grading**

Q1: How will you evaluate students' performances?

- We evaluate students' performance through **three exams** and **quizzes.**

- Midterm and final exams will be conducted in-class. Midterm exams will be 90-minutes long.

- Quizzes will be held on SUCourse+.

- For each student, the quizzes with the lowest two grades will be dropped from the evaluation.

 Grade Components

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Midterm Exams	50% (two exams, 25% each)
Final Exam	35%
Quizzes	15%

Q2: What is the passing grade?

In order to receive a passing letter grade:

- You are required to take minimum 25 from the Final Exam.
- You are required to maintain an average grade of "40".
- You are required to attend at least 70% of the classes.

Part G   Rules and regulations

<u>**Make-up Policy**</u>

- A single comprehensive make-up exam will be offered after the final exam to those who have missed a midterm or the final exam.

- A medical report must be e-mailed to us from the Health Center in order for you to be eligible for the make-up.

- If you miss more than one exam, the remaining grades will be "zero" regardless of your excuse.

- <u>There is no make-up for quizzes</u>.

<u>**Academic Integrity and Conduct:**</u>

Each student in this course is expected to abide by the Sabanci University Academic Integrity Statement (available at <u>http://www.sabanciuniv.edu/en/academic-integrity-statement</u>) and to behave properly against the instructor and the course assistants. The violations of the integrity principles and any disrespect toward course assistants will not be tolerated.

<u>**Disclaimer:**</u>

The instructors reserve the right, when necessary, to alter the grading policy, change examination dates, and modify the syllabus and the course content. Modifications will be announced in class and via SUCourse. Students are responsible for keeping up with the announced changes.