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

The FAQs are presented in seven parts as

Part A   Course description

Part B   Classroom setting

Part C   Course requirements

Part D   Hardware, software and programming

Part E   Outline

Part F   Grading

Part G   Rules and regulations

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. At the end of this journey, we will also discuss history of Industrial Engineering and what Industrial Engineers do from a more philosophical perspective.

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 and when will classes meet?

- The course is delivered in two sections: A, B
- Both sections are moderated by Gizem Ozbaygin (ozbaygin@sabanciuniv.edu).
- All class hours will be conducted online via the Zoom link below:
  https://sabanciuniv.zoom.us/j/95473834254
- Meeting Hours for Section A: Mondays 11:40 - 13:30, Wednesdays 10:40 - 12:30
- Meeting Hours for Section B: Mondays 11:40 - 13:30, Wednesdays 14:40 - 16:30

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

- Teaching Assistants are:

Oğulcan Doğan (ogulcandogan@sabanciuniv.edu)
Semih Dilmaç (semihdilmac@sabanciuniv.edu)
Arghavan Sharafi (arghavan@sabanciuniv.edu)
İsmail Gökay Doğan (igokay@sabanciuniv.edu)
Nima Moradi (nimamoradi@sabanciuniv.edu)

- Learning Assistants are:

Ege Deniz Pekel (egedeniz@sabanciuniv.edu)
Barış Mert Bener (barisbener@sabanciuniv.edu)

- Office Hours of Teaching Assistants:

İsmail Gökay Doğan: Mondays 08.40-10.40
Zoom link: https://sabanciuniv.zoom.us/j/9655909430

Ogulcan Doğan: Wednesdays 12.40-14.40
Zoom link: https://sabanciuniv.zoom.us/j/6397460136

Semih Dilmaç: Wednesdays 17.40-19.40
Zoom link: https://sabanciuniv.zoom.us/j/6195432724

Nima Moradi: Thursdays 15.00-17.00
Zoom link: https://sabanciuniv.zoom.us/j/99321931769

Arghavan Sharafi: Thursdays 17.30-19.30
Zoom link: https://sabanciuniv.zoom.us/j/96872323252

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 lectures which you are registered to. Attendance is mandatory and will be checked in each class. According to YÖK regulations, at least 70% attendance is required. If you fail to satisfy this requirement, your course grade will be **NA**.

- To be counted in the attendance, 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 <u>attend the classes with a computer</u> (with which an algorithm can be texted and run properly, and the outputs can be uploaded to a designated site). Students without a functional computer <u>shall not be admitted</u> to the sessions.

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 **specifically required for** the first meeting time in **the first week**, <u>on the 22nd of February,</u> where/when we deliver introductory remarks and requirements.
- The platform (*anaconda*) <u>must be set up in the computers before the second meeting</u> **on Wednesday, February 24**. 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.

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 <u>IF100</u> *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 <u>Python version 3.8.</u>

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

Part E: Outline

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

Weeks 1-4   Module 1 – Traveling Salesman Problem and Vehicle Routing Problem

Week 5   Midterm Exam 1 – March 22 (11:40-13:30)

Week 6-9   Module 2 – Linear Programming Formulations and Solvers

Week 10   Midterm Exam 2 – April 30 (19:40-21:30)

Week 11-13 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 online. Quizzes will be held at Sucourse+. Further details will be provided within the semester.

- Two lowest quiz grades will be dropped while calculating the total contribution of your quiz grades to your final grade.

Grade Components	Percentage
Midterm Exams	50% (two exams, 25% each)
Final Exam	35%
Quizzes	15%
Total	**100 pts.**

Q2: What is the passing grade?

In order to receive a passing letter grade:

- You are required to take at least 25 points 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 me 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 http://www.sabanciuniv.edu/en/academic-integrity-statement) 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.