

**Fall 2019-2020**

**IENG490 Introduction to Manufacturing and Service Systems Design**

**Project Narrative**

**Project Topic:**

**Establishing a facility in TRNC for the production of toast machine**

A popular way of eating bread is toast. The project of the course is establishing a brand new company which produces at least three types of toast machines. The company must work in TRNC. You must design the facility of the company including technology to be applied, make decision on the required personnel, analyze the market, and determine the costs and incomes. The most important question to be answered is if the company can make profit or will cause loss.

**Connection to IENG492**

IENG492 is the continuation of IENG490. Students, who passed successfully IEN490 this semester, will continue the same topic in IENG492 next semester. The results of this semester work can be used next semester in IENG492.

**Working in teams**

You must work in teams both in the courses IENG490 and IENG492. The ideal size of a group is four students. The course starts with forming the groups. You are responsible for finding your co-operative partners.

**Project Requirements:**

As a requirement in this course, you should submit your progress report on November 8, 2019, Friday and your final project report on December 27, 2019, Friday 16:00. Finally, at the end of the semester, you should present your work; the presentation date is December 30, 2019, Monday in the afternoon.

The first project report; **progress report** must include at least the following items as **related to the industry** you are going to design:

1. Types of available technologies,
2. Existing competitors abroad.
3. Toast machine market in TRNC.
4. The products (at least 3 different models) you decided to produce including function and size)

5. Raw materials.
6. Standards related with your facility and the products.
7. Related rules & regulations in the TRNC.

The **final project report** must include all items above plus at least the following items:

8. Design including scaled drawings for the products you decide to produce.
9. Process Design (information on the machinery and operations used).
10. Demand forecasts for the products you decided to produce; take into consideration even the change of the population.
11. Estimated market share of your company
12. Transportation systems to be used by your plant (both within and outside your plant) that you are going to design in IENG492 course.
13. A feasibility study for the Plant you are designing (costs, revenues, operational profitability, payback period etc.).

### Assessment methods

The evaluation of the performance of students is mainly based on individual performance. Only the progress and final reports are assessment methods such that each member of a group gets the same percentage.

Assessment method	Percentage
Attendance including participation	10
Progress report	10
Midterm exam	20
Final report	20
Presentation	20
Final exam	20

The subject of the midterm exam is the progress report. Similarly, the subject of the final exam is the final report.