**ME 300 Summer Training/Internship I**

**(Pre-requisites: SEC 201; Co-requisite: Academic advisor's approval)**

The aim of ME 300, the first of the two summer practices for the Mechanical Engineering students, is to reinforce and improve theoretical and practical knowledge on manufacturing techniques and engineering concepts. Students should complete their training at a company where mechanical engineering practice is in the forefront. Students are required to complete a minimum of four-week (twenty workdays) practice as a full-time intern at the shop floor. Students are expected to practice manufacturing processes that are utilized in the factory and experience the engineering critical-thinking processes firsthand.

It is advised that students choose a company that meets these two criteria: (1) at least 10 full-time employees must be working in the manufacturing, (2) at least one full-time mechanical engineer must be available to supervise the student throughout the summer practice.

Students are expected to find the company they want to work for this practice. However, students are required to receive the departmental approval before they start their summer practice by submitting a work proposal to their academic advisors. In this proposal student will give brief information about the company and outline manufacturing activities that are planned to be engaged during practice. Manufacturing activities should include at least two of the following: casting, chip removal processes, press work, welding, heat treatment, forging, foundry, plastic injection, etc.

During the internship students should work on at least 5 sample pieces, and details of manufacturing techniques used, and technical drawings should be recorded to daily journals during the internship.

An email containing the following should be send to the internship coordinator for the approval:

• ME program start period (example: Fall 2019)

• Brief information about the company

• Number of employees working in the manufacturing

• Name and contact information of full-time mechanical engineer available to supervise the summer practice

• Manufacturing activities that are planned to be engaged during practice.

• Start and end dates of the internship

• Is it acceptable to the company for the student to include technical information (drawings, design files, etc.) created during the internship in their report? (Students should contact the company to learn more details).

Students should register for the ME300 course (2 ECTS) during the semester that they complete their summer practices to receive their grade. At the end of the practice, students are required to submit a ‘summer practice report’ about the work they completed. The report must be approved by the company management before the submission to the department to avoid disclosure of any confidential or proprietary information of the company. The report must include daily journals that the student completed during the practice, approval page signed by the supervisor, and should include the following sections:

**Title Page** (In accordance with the sample title page provided)

**Signature page**

1. **Table of Contents** (with the corresponding page numbers)
2. **Description of the Company**

(Maximum 2 pages in length with exception of charts, figures, etc.)

This section should give a brief history of the company, full mailing address and relevant web links, sector that the company is operating in, specialty products that company is manufacturing.

1. **Analysis of Manufacturing Techniques**
	1. **Manufacturing Techniques At The Company.** Classification and a brief description of the manufacturing techniques employed in the organization (i.e. casting, chip removal processes, press work, welding, heat treatment, forging, foundry, plastic injection, etc. Which of these techniques are being used, how, and for what type of work?)
	2. **Analysis of Manufacturing Techniques:** Observation and analysis of manufacturing techniques in each production unit. Number of machines and machine tools (general purpose, special purpose) and their fields of use in the organization.
2. **Sample Work Pieces & Cost Analysis**
	1. A detailed explanation of every stage in the production of the samples, either closely observed or preferably performed by the student himself/herself should be given. The number of sampled parts or products to be analyzed should not be less than **five**.
	2. Cost analysis for at least **two** of the sampled parts produced by the student. Detailed tables should be provided with proper explanation on how the cost is calculated.
	3. Technical drawings of sample work pieces produced on different machine tools in each production unit. Drawings should be printed in A4 size with proper frames and title boxes. The number of parts to be drawn should not be less than **two**.
3. **Conclusions and Observations** (**500 Words minimum**)
4. **References**
5. **Appendices** (The appendix shall consist of your hand-written notes (journal), photos, technical drawings, etc.)

Text of the report should be 12pt Cambria, 1.5 line spacing. Spacing after the paragraphs can be 6 pt. Headings should be 14pt Cambria, 1.5 line spacing with no additional line brakes/spacing. Page margins should be 2.54 cm from all sides. Pictures/figures that are larger than 6 cm in height should be placed in Appendices.

Upon editing the internship report, students should submit their softcopy in MS Word format to the Turnitin assignment at the course LMS page. **Students should use formal language to write their reports and use their own words.** Copy/paste from other sources should be prohibited. All sources should be properly cited in the references.

The deadline to submit the summer practice report is the last day of add/drop period of the following semester (typically the second week of the classes). Failure to meet this deadline will result in an F grade, and the student will have to repeat the internship.



**Department of Mechanical Engineering**

**ME300 Summer Training/Internship I**

Notes summarizing the highlights of each day of your work::

Name of the Supervisor:

Signature:

Stamp of the Factory:

Student Name:

Company Name:

Date:

Training Day Number:

**Sample report title page.**

**DO NOT PUT COMPANY LOGO TO COVER PAGE!**

**Özyeğin University logo should be 10 cm in wide.**

**Only use 14pt Cambria font for the cover page.**

**No page number on cover page**



Department of Mechanical Engineering

ME300 Summer Training/Internship I

**The Name of the factory that I worked**

01.07.2018 – 30.07.2018

Student’s Full Name

S000000

Sample signature page. Page number should start from 2.

# Approval of Supervisor

This is to certify that I have examined this copy of summer practice report by [write your name here as it appears on the Title Page] and have found that it is satisfactory in all respects.

Factory Manager : [Hand written name of the factory manager]

Signature :

Date :

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# Description of the Company

Description of the Company is no more than 2 pages long (with exception of charts, figures, etc.).

This section should give a brief history of the company, full mailing address and relevant web links, sector that the company is operating in, specialty products that company is manufacturing.

# Analysis of Manufacturing Techniques

i. Manufacturing Techniques At The Company

Classification and a brief description of the manufacturing techniques employed in the organization (i.e. casting, chip removal processes, press work, welding, heat treatment, forging, foundry, plastic injection, etc. Which of these techniques are being used, how, and for what type of work?)

ii. Analysis of Manufacturing Techniques

Observation and analysis of manufacturing techniques in each production unit. Number of machines and machine tools (general purpose, special purpose) and their fields of use in the organization.

# Sample Work Pieces & Cost Analysis

# i. Production of the samples

A detailed explanation of every stage in the production of the samples, either closely observed or preferably performed by the student himself/herself should be given. The number of sampled parts or products to be analyzed should not be less than **five**. DO NOT copy/paste it from company documents.

Technical drawings of sample work pieces produced on different machine tools in each production unit should be prepared and placed after the appendix. Drawings should be in A4 size. They should have proper frames and title boxes. The number of parts to be drawn should not be less than **two**.

# ii. Cost analysis

Perform a cost analysis for at least **two** of the sampled parts produced during your internship. Provide detailed tables with a clear explanation of how the costs are calculated. Ensure each table is accompanied by a thorough explanation of the cost calculation process. Additionally, provide a written explanation of the cost table detailing the factors considered and methodologies used in determining the costs.

# Conclusions and Observations

Conclusions and Observations should be at least 500 words-long and should provide insight about your internship experience.

# References

Cite academic work/trusted web pages only. All sources should be properly cited in the references. Reference list should be numbered, such as [1], [2], and they should be used in the text to cite the references. You may use IEEE style for references:
<https://ieee-dataport.org/sites/default/files/analysis/27/IEEE%20Citation%20Guidelines.pdf>

# Appendices

# Appendix 1.

(The appendix shall consist of your hand-written notes (journal), photos, etc.)

# Appendix 2.

# Appendix 3.