

YILDIZ TECHNICAL UNIVERSITY
DEPARTMENT OF INDUSTRIAL ENGINEERING
STUDENT GUIDE TO TECHNICAL INTERNSHIP 2

Instructions

- ✓ The following explanations and instructions are for the 20-day Industrial Engineering Management Internship 2.
- ✓ The instructions given below must be followed.
- ✓ Internship reports have to be written in English.
- ✓ The instructions given below must be written in a way not to exceed an internship booklet. In cases where it is necessary to exceed this booklet, a blank page of the booklet must be photocopied and added to the end of the booklet. The attached pages must also be approved by the relevant enterprise.
- ✓ In filling the internship booklet, the practical applications are evaluated, not the theoretical information. Copying the reports from the internet is the reason for rejecting the internship booklet.
- ✓ Each page of the internship booklet and the relevant parts at the beginning of the internship booklet must be approved (signed and stamped) by the internship authority of the enterprise.

ASSESSMENT OF TECHNICAL INTERNSHIP 2
1) Information describing the enterprise
1.1) Where is it located? What type of company is it?
1.2) Explain the vision and the mission of the enterprise.
1.3) What are the products or services of the enterprise?
2) Macro Factors
2.1) Please specify the location of the enterprise with the help of a sketch. Briefly evaluate this location according to criteria such as proximity, ease of transportation, material supply, labor potential and energy need.
2.2) Investigate the sector in which the enterprise is located and its links with other sectors.
2.3) Take a problem you have encountered in the business and bring a solution to this problem with an industrial engineering approach. In the solution phase, use one of the methods you learned in the lessons. (Engineering economics, mathematical modelling, statistics, decision making, etc.). Explain which data you need in the solution phase of the problem and how you obtained this data.
2.4) Draw the breakeven chart for the business. In cases where you cannot receive data from the company due to confidentiality, you should take action with estimated data.
3) Production / service systems
3.1) What type of production / service system does the company have?
3.2) Demonstrate materials or information flow within the structure of enterprise production / service system systematically.
3.3) Examine the management system of the enterprise and draw the organization chart and evaluate the organizational structure.
3.4) Provide information about planning and control activities in the enterprise.
3.5) What are the manufacturing methods for the products produced in the enterprise? Please explain. (Production)
3.6) Examine the facility layout structure of the enterprise, sketch the department layout and provide information. (Production)
3.7) Examine material handling systems in the enterprise. (Production)
3.8) Provide information about the project planning operations of the enterprise.

(Service)
3.9) Provide information about the customer segmentation of the enterprise. (Service)
3.10) Examine marketing strategies of the enterprise. (Service)
3.11) Examine the Quality Management System and Quality Policy of the enterprise and give information about applied quality improvement and management techniques.
3.12) Examine the work and techniques used for the analysis & development of business processes and for the development of efficiency & effectiveness in the enterprise.
4) Activities Related to Human Resources
4.1) How many industrial engineers work in the company?(if there is) What are their departments and job descriptions? If there is no industrial engineer in the company, please describe the jobs, daily work, and situations in which an employee you have observed within the company takes part in the company. In addition, if there is no industrial engineer in the company, which of the current jobs do you think an industrial engineer should be employed for?
4.2) Examine the workplace safety policy of the enterprise. Identify at least 3 situations that may pose a potential risk within the company.
4.3) Examine the human resources recruitment and selection process.
4.4) Evaluate the performance evaluation system and wage system in the enterprise.
4.5) Explain the training planning and career planning activities in the enterprise.
5) Conclusion and Assessments
5.1) What experiences have you gained as a result of your work? Evaluate your experiences. Please share your opinions on the deficiencies you have seen in the company and how they can be eliminated. What is the level of your internship meeting your expectations? (The answer to this question should be at least 1 page.)

Application 1: Perform a standard time calculation by addressing a work component.

Application 2: Examine an ergonomically problematic workplace and suggest some improvements for these problems.

Notes about Internship Book:

- 1) Students are responsible for examining the items related to PRODUCTION or SERVICE according to the enterprise type. Trainees in a production-oriented enterprise are obliged to examine at least two of the instructions 3.5, 3.6 and 3.7; those who do their internship in a service-oriented enterprise are obliged to examine at least two of the instructions 3.8, 3.9 and 3.10. Other instructions must be examined by everyone.
- 2) The sketch must be used in the instruction 2.1 to indicate the location of the enterprise. This sketch can either be drawn by hand or obtained from the web and pasted into the booklet as printout.
- 3) For the breakeven chart specified in the instruction 2.4, all parameters, formulas and calculations must be clearly indicated and the chart must be drawn completely. If the company cannot share its information in accordance with the confidentiality policy, the calculations with estimated values must be carried out in accordance with the formulas and should be shown by graph.
- 4) In the instruction 3.2, show the material or information flow in the format of a flow chart. Pay attention to the methodology when drawing flowcharts. Keep in mind that simple directed arrows are not a flow chart.
- 5) When performing time study in Application 1, all measured values must be written, and all steps of the standard time calculation must be clearly displayed.
- 6) When describing the ergonomics study mentioned in Application 2, make a detailed analysis with reference to the information you have processed in the course. Use numerical values when performing analysis. Instead of vague expressions such as *“insufficient light in the work area”*, use phrases similar to the following: *“Plastic forming and sheet work should be performed under 400 lux lights. But the light intensity in the work environment is 250 lux. Therefore, the lighting should be rearranged. For this purpose, 80 watt bulbs should be replaced with 120 watt bulbs.”*
- 7) Carry out at least 2 cases for application 2.

Notes on the Internship Regulation:

- 8) Internships should be done in enterprises that provide the desired features.
- 9) The student provides the internship place as a result of his own initiatives.
- 10) The internship of students who do not submit their internship book to the internship office within 1 (one) month from the end of the internship will be deemed invalid.
- 11) The internship book should be filled in the order determined in the directive.
- 12) The internship work plan on the first page of the internship book should be filled in by specifying the dates and the departments studied.
- 13) Internship notebooks that are highly similar to each other (more than 50%) are both rejected.
- 14) Internship notebooks copied from another internship book are rejected.
- 15) The internship book, which contains mostly book information, is rejected.
- 16) The internship book is filled in English for students enrolled in a 100% English program, and in Turkish for students enrolled in a 30% English program.
- 17) The internship book is delivered to the internship office within 1 (one) month at the latest following the completion of the internship. The internship book that is not delivered

within a month is not evaluated (Yıldız Technical University Undergraduate Education Internship Application Directive, Article 4.7).

18) The internship book is evaluated by an internship commission member within 1 (one) month, taking into account the headings specified in the internship directive. As a result of the evaluation;

- The notebooks that do not comply with the internship directive are rejected.
- Corrections are given to make up for the deficiencies in the headings in the internship directive.
- A book with no missing parts is accepted.

19) The student whose internship book is requested to be corrected has to make the requested correction within 1 (one) month at the latest. Otherwise, the internship is deemed to be rejected (Yıldız Technical University Undergraduate Education Internship Application Directive, Article 5.5).

ORGANIZED BY: TECHNICAL INTERNSHIP 2 COMMISSION

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