Atilim University
Department of Mechatronics Engineering

MECE 499 SUMMER PRACTICE REPORT II – GUIDELINES

(Pre-requisites: MECE 399)

The main objective of MECE 499, the second in the series of summer internships, is to give students industrial experience in mechatronics engineering. Students must complete their full time training comprising of 20 working days in a company where mechatronics engineering practices are already in place.

Students are expected to exercise on the mechatronics related processes and encounter the challenges of the working environment. They are also supposed to utilize their engineering knowledge in order to gain some experience related to decision making and problem solving.

Important note: The aim of MECE 499 is more tilted towards the practical knowledge/experience as compared to MECE 399.

Getting ready for summer practice (Spring semester)

1. When choosing a company, you must ensure following criteria:
    a. The number of full time employees working at the company must not be less than 10.
    b. There is a supervisor/training officer assigned to you who will guide you throughout your internship.
    c. The research and developments activities must be an integral part of the company.

2. Some companies request for the letter with the information that summer practice is mandatory for the student. If you need such a letter, you can get it from Department's Secretary Office and then get it signed from Internship Coordinator.
3. Once the company is decided, you must get it approved from the department's Internship Coordinator on prescribed form (…\499\F1). The brief introduction of the company along with job description must be provided.
4. After getting the approval from the department, following documents need to be submitted to the Internship Coordinator at-least **three weeks** before the internship start date. Without the submission of these documents, your case will not be considered for social security insurance.
    a. Acceptance letter from the company (if Saturdays are considered as working, it must be mentioned in the letter).
    b. Copy of student's identification card along with T. C. Kimlik.
    c. One photograph (passport size)
    d. Intern information form https://goo.gl/Q37D3J, signed by the student.

Submission of Summer Practice Internship report (Fall semester)

1. After the completion of summer internship, the student must register in MECE 499 course (6 ECTS) in order to obtain their grades.
2. The evaluation of summer practice will be done based upon the 'summer practice report' that includes the details of the work they conducted during their 4 weeks (20 days) of internship.
3. Before submitting the report to the department, the company representative should review and sign in order to avoid disclosure of any confidential or proprietary information of the company.
4. The report must include the technical work summary by emphasizing specifically on the projects that you were involved in. The summer practice report must adhere to the following content's requirement:
   Title Page (sample title page is provided)

   Abstract Provide a short summary of the company, project where you worked. Please highlight the role that was assigned to you by highlighting the challenges that you faced and how did you overcome those challenges. Briefly describe what did you learn through the summer practice.
   Table of Contents (page numbers must be specified against each section/heading)

I. Description of the Company

Briefly describe the company and the department where you worked (at-most 2 pages).

The following factors can be highlighted when stating description of the company:

- Company's history, background and/or vision,
- Location and company's website,
- Specify company's sector such as food, cement, oil etc., and products that are manufactured,
- Structure of the company (organization, size, hierarchy etc.)

II. Introduction

In this section you will detail complete picture of the internship. Provide an overview of the department/section where you were placed and what specific role did you perform during your internship. In order to perform the process, what knowledge, skills were required. Were you in possession of those skills already? How do you summarize the learning outcomes of the internship?

A. Problem Statement

- Were you given any specific problem/task in order to work on?
- How do you define your task/role during the summer practice in the company?

B. Tools and Techniques Used

Depending upon the nature of the task assigned to you, you can address some or all of the issues mentioned below:

- Programming languages: Why did you choose a specific language (give reasons)? Was that the only possible choice available?
- Software: Any software tools that you used and for what purpose? What are the main highlights of that tool? How much time did you spend in order to learn that software tool?
- Hardware: Was there any hardware involved in your task? What were the challenges that you faced in order to learn about that hardware?
- Techniques: Any specific technique/algorithm did you employ? What was the reason for selecting this technique? How did this technique help you in order to find the solution?

III. Analysis of Production / R&D Projects (Maximum 5 pages – no more than 2000 words)

- Analysis of manufacturing techniques, assessment of production, assessment of the control processes involved,
- Overview of the mechatronics engineering related projects
- Detailed analysis of the production line, which key software and hardware are used by the company
- What are the standards followed by the company related to Health, Safety, Quality and any other(s)? Has the adoption of these standards helped the company to make it a better place to work?
- Highlight the area/department in the company where mechatronics engineer can be more productive as compared to other engineers, also discuss as how mechatronics engineer can improve the efficiency or quality of the overall process.
- Assessment of future plans of the company

IV. Internship Project (At least 05 pages long)

- To which of the company's projects you have contributed, provide detailed explanation. Have you developed or proposed any solution? What challenges did you face during the development of the solution? How do you think that the proposed solution will benefit company's production/progress?
- Cost analysis must be provided for at-least one documented products or processes.

V. Conclusion (500 Words minimum)

In this section you can provide summary of your report. What you have achieved, learned during the summer practice? What topic, course that helped you most during the internship? What do you think about the usefulness of summer practice? Based upon your observation, what are our lacking areas that can be improved?

VI. References (if any)

Please follow IEEE citation style.

In the text, source can be referred to as [1], that will then correspond to the full citation in your reference list.

Example:

Journal article

[4] J. U. Duncombe, "Infrared navigation - Part I: An assessment of feasability," *IEEE Trans. Electron. Devices*, vol. ED-11, pp. 34-39, Jan. 1959.
Book
[1] B. Klaus and P. Horn, *Robot Vision*. Cambridge, MA: MIT Press, 1986.

VII. Appendices (supplementary material like schematics, drawings, photos, design, etc.,)

5. A4 page size should be chosen. Body text should be 12pt Times New Roman with 1.5 line spacing. The spacing between the paragraphs should not be lesser than 6 pt. Headings should be 14pt, page margins should be 1 inch from all sides. There will be no page number on the title page, roman page numbers should be defined such as i,ii,… till introduction. After that Arabic numerals will be introduced starting from Introduction as 1, 2, …..

6. Upon completion of the report, students must submit it to Turnitin assignment at Moodle course page in PDF format. You are advised to make use of the formal language and technical terms wherever applicable. The material which is not yours should be properly cited in the references.

7. You must ask your supervisor at the company to fill the Evaluation form and send it directly to the department in a sealed envelope.

8. The last date for submission of the report is the last day of add/drop period of the Fall semester. The late submissions will not be accepted, and the student will have to repeat the internship.

Sample report title page

Department of Mechatronics Engineering

MECE 499

Summer Practice II

Company's Name

01.07.2018 – 30.07.2019

Student's Full Name

Fall 2018-2019