

# **ELE 402 - GRADUATION PROJECT II FINAL REPORT**

**HACETTEPE UNIVERSITY  
DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

**GROUP NAME (Optional)**

**PROJECT TITLE:** (The title of the ELE 401 – ELE 402 project)

**PROJECT GROUP MEMBERS:** (The names of the students who work together in the same project group)

**PROJECT SUPERVISOR:** (Academic title and name of the supervisor)

**SUBMISSION DATE:**

SPRING 2016-2017

## ABSTRACT

The Abstract is the first section of the final report which contains a short summary of the entire project report. A single paragraph composed of 5-6 sentences up to half a page is usually considered a decent size for the Abstract section. The purpose and the content of the report should be clearly mentioned. A brief explanation of the work carried out throughout the first few weeks and the results obtained in this period should be included.

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## 1. INTRODUCTION

This template aims to help the students prepare their final report for the ELE 402 Graduation Project II course. The students are required to follow the exact formatting of page setup, page, section and subsection numbering, referencing, tables and figures as given in this template, as well as the specific instructions regarding the content of the report. The grading of this report will be both over style and content. This report must be submitted by the **last day of the final exams**.

The report, along with its attachments should be printed one-sided and punched and placed in a soft binder. The electronic copy of this submission should also be sent to the project supervisor in a single pdf file through e-mail. The pdf file should be named in the format as:

**ELE402\_semesteryear\_FR\_groupname or studentname.pdf**

**Example: ELE402\_Spring2017\_FR\_GroupAlpha.pdf (for group projects)**

**ELE402\_Spring2017\_FR\_CanYazar.pdf (for individual projects)**

Similar to the interim reports, this section is expected to provide general information about the overall project, the progress made during previous report terms, as well as what has been accomplished specifically throughout the remainder of the semester. It should clearly mention the additional work that has been carried out after the interim report has been submitted. A summary of the information given in the following sections should also be included at the end. Recall that the Introduction section is usually *not* comprised of subsections.

## 2. PROJECT DESCRIPTION

The main body of the final report starts here. The subsections of this report are a combination of the previous reports. The following sections and subsections are expected to be included in this report; more sections may be added, if necessary. Although these sections appear to be identical to those in the previous reports, they are expected to contain more detail and should be written with more care than before. If any information provided in the corresponding subsections of the previous reports has been found incomplete or incorrect, this report will be the opportunity to present the latest and most up to date result and overall progress.

## 3. ENGINEERING STANDARDS AND DESIGN CONSTRAINTS

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### 3.1. ENGINEERING STANDARDS

...

### 3.2. DESIGN CONSTRAINTS

...

## 4. SUSTAINABLE DEVELOPMENT GOALS

The Sustainable Development Goals (SDGs), also known as the Global Goals, were adopted by all United Nations Member States in 2015 as a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030.

There are 17 SDGs which are; Goal 1: *No poverty*, Goal 2: *Zero hunger*, Goal 3: *Good health and well-being for people*, Goal 4: *Quality education*, Goal 5: *Gender equality*, Goal 6: *Clean water and sanitation*, Goal 7: *Affordable and clean energy*, Goal 8: *Decent work and economic growth*, Goal 9: *Industry, Innovation, and Infrastructure*, Goal 10: *Reducing inequalities*, Goal 11: *Sustainable cities and communities*, Goal 12: *Responsible consumption and production*, Goal 13: *Climate action*, Goal 14: *Life below water*, Goal 15: *Life on land*, Goal 16: *Peace, justice and strong institutions*, Goal 17: *Partnerships for the goals*. You may find detailed information about the goals at <https://www.undp.org/content/undp/en/home/sustainable-development-goals.html>.

Clearly state which Goals are satisfied by your project and how. Elaborate on your reasoning by providing sufficient detail for the Goals you mention.

## 5. BACKGROUND

...

### 5.1. BACKGROUND ACQUIRED IN EARLIER COURSE WORK

...

### 5.2. BACKGROUND ACQUIRED THROUGH ADDITIONAL RESEARCH

...

## 6. METHODS

...

6.1. METHOD 1 (YOU MAY REPLACE WITH THE NAME OF THE METHOD)

...

6.2. METHOD 2 (YOU MAY REPLACE WITH THE NAME OF THE METHOD)

...

7. PRELIMINARY DESIGN

...

8. PROTOTYPE

...

9. DESIGN PROCESS

9.1. ITERATION 1 (YOU MAY REPLACE WITH THE NAME OF THE PROCESS)

...

9.1.1. TESTING AND RESULTS

...

9.1.2. EVALUATION

...

9.2. ITERATION 2 (YOU MAY REPLACE WITH THE NAME OF THE PROCESS)

...

9.2.1. TESTING AND RESULTS

...

9.2.2. EVALUATION

...

## 10. FINAL DESIGN

Describe the final design in detail.

- Indicate the methods used in the final design, and explain the reasoning behind your choice. Use figures, flow charts, etc. in order to describe the final design.
- Clearly identify the parameters and design choices in the final design.
- Provide the results of testing for the final design.
- Assess the strengths and weaknesses of your final design, and discuss whether the requirements are met in the final design.

### 10.1. MEETING THE CONSTRAINTS AND ENGINEERING STANDARDS

Discuss how the final design satisfies the engineering standards and multiple constraints identified previously.

### 10.2. COST ANALYSIS

Itemize the cost of each component of the final product, and discuss the cost effectiveness of the project.

## 11. TEAM WORK

...

## 12. COMMENTS AND CONCLUSIONS

...

## REFERENCES

(When a reference, such as a book [1-2], handbook [3], report [4], journal [5], or conference paper [6], or any other document is cited in the text, it should be properly listed in the References section. Use the [IEEE Citation Reference](#) format.)

- [1] J. K. Author, "Title of chapter in the book," in *Title of His Published Book*, xth ed. City of Publisher, Country if not USA: Abbrev. of Publisher, year, ch. x, sec. x, pp. xx-xx.
- [2] B. Klaus and P. Horn, *Robot Vision*. Cambridge, MA: MIT Press, 1986.
- [3] *Motorola Semiconductor Data Manual*, Motorola Semiconductor Products Inc., Phoenix, AZ, 1989.
- [4] J. H. Davis and J. R. Cogdell, "Calibration program for the 16-foot antenna," Elect. Eng. Res. Lab., Univ. Texas, Austin, Tech. Memo. NGL-006-69-3, Nov. 15, 1987.



- [5] R. E. Kalman, "New results in linear filtering and prediction theory," *J. Basic Eng.*, ser. D, vol. 83, pp. 95-108, Mar. 1961.
- [6] C. Berrou, A. Glavieux, and P. Thitimajshima, "Near Shannon limit error-correcting coding and decoding: Turbo-codes. 1," in *Proc. Int. Conf. Commun.*, Geneva, Switzerland, May 1993, pp. 1064–1070.