ELE 401 - GRADUATION PROJECT I
FIRST INTERIM 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:

FALL 2016-2017

TABLE OF CONTENTS

1. INTRODUCTION

This report template aims to help the students prepare their first interim report for the ELE 401 Graduation Project I 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 **end of the 5th week** of the semester.

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:

ELE401_semesteryear_IR1_groupname or studentname.pdf

Example: **ELE401_Fall2016_IR1_GroupAlpha.pdf (for group projects)**

ELE401_Fall2016_IR1_CanYazar.pdf (for individual projects)

This section serves as an introduction for the topic at hand and is expected to provide brief information about the project, its extent and the aim of the work; the objectives of the project and the justification of these objectives should be briefly but clearly explained. Finally, the summary of the information given in the remaining sections should also be presented. The Introduction section is usually *not* divided into subsections. The following sections may have subsections.

2. PROJECT DESCRIPTION

This section provides a thorough and detailed description of the design project, as well as the motivation for the work and possible utilization schemes for the intended outcome in practice. The steps that are considered to be taken throughout the design and implementation of the project need to be clearly presented in this section. Visual elements such as schematic depictions, illustrations, block diagrams and photographs of the intended design steps and those of similar or related previous designs should be utilized in order to provide the reader with a better understanding of the overall project. These should be first mentioned in the text and then appear later in the report, as shown in Figure 1. Finally, a weekly schedule proposal should be given in tabular form or as a Gantt chart. Table 1 presents an example for such a chart.

At this point, it is important to emphasize that your design experience should be based on the knowledge and skills acquired in earlier course work and incorporating appropriate engineering standards and multiple realistic constraints.

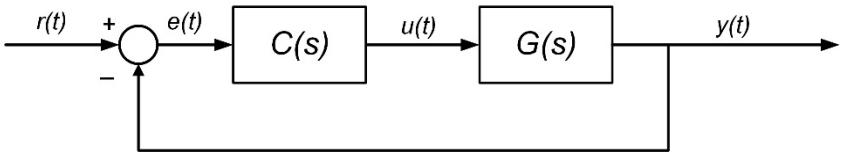

FIGURE 1 BLOCK DIAGRAM OF A UNIT FEEDBACK CONTROL SYSTEM

TABLE 1 A GANTT CHART EXAMPLE

Project Timeline	**2016 – 2017**													
Task List	**W1**	**W2**	**W3**	**W4**	**W5**	**W6**	**W7**	**W8**	**W9**	**W10**	**W11**	**W12**	**W13**	**W14**
Task 1														
Task 2														
Task 3														
…														

3. ENGINEERING STANDARDS AND DESIGN CONSTRAINTS

The design should be subject to engineering standards and/or multiple realistic constraints. There should be at least one standard and one constraint mentioned in this report. These chosen standards and constraints must be followed and applied throughout the rest of the project, so it is important that they be identified accordingly at this point.

3.1. ENGINEERING STANDARDS

This section of the report aims to clarify which engineering standards that apply to this design project and how the design project is expected to satisfy these standards.

Include the necessary standards and indicate their possible relevance to your project. As an example, if you are using IEEE 802.11 standard in your design you are expected to go through that standard and include in your Interim Report how you will utilize this standard in your design. An example list of engineering standards is given below. More examples of standards can be found in the Project Design Constraints document.

- LOS ALAMOS National Labs Standards http://engstandards.lanl.gov/ESM_Chapters.shtml
- ANSI American National Standards Institute http://webstore.ansi.org/
- IEEE standards http://standards.ieee.org/
- IEEE standards university http://www.standardsuniversity.org/
- ISO searchable standards database http://www.iso.org/iso/home/standards.htm
- UL safety http://www.ul.com/
- ASTM Standards https://www.astm.org/Standard/
- NIST Standards https://www.nist.gov/
- TSE Turkish Standards Institute www.tse.org.tr/

3.2. DESIGN CONSTRAINTS

The design constraints should be identified and some discussion on how these apply to the design project and their realization are to be included in this section. You may refer to the list of some realistic design constraints that can be found in the Project Design Constraints document. Other constraints can be identified and discussed, if applicable.

4. BACKGROUND

4.1. BACKGROUND ACQUIRED IN EARLIER COURSE WORK

In this subsection, present the theoretical background obtained in courses taken in the first three years of the undergraduate program that will be used in the project. Provide the discussion of these topics such as available methods and tools, if necessary mathematical formulae and derivations. For example, the output of the system in Figure 1, i.e. $y(t)$ is given as in Eq. 1:

$$y(t) = \frac{C(s)G(s)}{1 + C(s)G(s)} r(t) \tag{1}$$

For each topic, state the related course name and number.

4.2. BACKGROUND ACQUIRED THROUGH ADDITIONAL RESEARCH

Typically, the theoretical background acquired in earlier course work is not sufficient to carry out the project work. Additional research is needed to complete each project such as literature review, advanced theoretical or practical studies, background in the specific field, software or hardware know-how, etc. Present any background knowledge that is required for the project but not acquired in earlier course work in this subsection.

5. CONCLUSION (OPTIONAL)

The conclusion should start with a brief summary of the report. It should also contain information regarding the current status of the design project and end with an elaboration on future work. The conclusion section is not mandatory in the first and second interim reports, but it might prove useful to plan ahead and lay out the remainder of the project work.

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, x*th 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.