

# DOGUS UNIVERSITY

## Computer Engineering Department

### Graduation Project Guidelines

#### Valid through 2013-14 Fall

Graduation projects are good opportunities for you that you can present the knowledge and skills you gained in your education. A high-quality graduation project may serve you as an excellent reference in your job interviews. Your implementations should be state of the art, elegant, and well documented. Furthermore, this is a valuable learning opportunity since you will implement large scale project possibly collaborating with group members under the supervision of your advisor. In a real world scenario consider your advisor as the customer of your project. In order to sell your project (or in our case in order to pass your class) you should satisfy the requirements of the customer. Thus, it is very important for you to meet your advisor regularly. Following guidelines are provided to prepare you for various phases of the project.

#### I. PROJECT STEPS

##### A. Selecting a Project

You can choose a project topic from the list of project topics given by your department or you can suggest a project to a particular advisor. If your advisor accepts your project idea you can prepare a proposal and submit it to the Department.

##### B. Regular Meetings

As soon as your proposal is submitted, discuss your class schedule with your project team members (if any) and your supervisor and select a time for regular meetings. Each meeting at the appointed time, you will be expected to report on your progress and your intended activity for the next week. You must meet with your advisor at least three times to pass your class. It is your responsibility to make these regular meetings productive. Meeting is an opportunity to get help and guidance from your advisor to be successful in your projects. Arriving empty-handed and without planning defeats this purpose. Although informal, these meetings require preparation. Some short documents you should prepare for the meetings are given in table below. Frequency and the productivity of the meetings will directly affect your grade.

##### C. Project Proposal

##### D. Project Progress Presentation (10<sup>th</sup> week)

The presentations should include the objectives of the project, what you are going to do in the project and how you are going to achieve these. In addition to these, the progress and the results of the project can be shown during the presentations.

##### E. Final Presentation (16 - 17<sup>th</sup> week)

##### F. Final Report

Your final report must be structured as defined in Thesis Writing Rules which is accessible via department web site. You must properly cite all the sources you used in your report such as

books, academic papers, and web sites. If you fail to do this you will get zero points from your Final Report grade. In addition to these formatting rules, your report should include all the components given in the table below.

**G. Poster Fair**

**H. Project Delivery**

This includes your final report, codes, interfaces, database files, and executables burned in a DVD and attached inside the back cover of your project report.

In each stage you should complete following components:

Project Phase	Components
A: Selection	1
B: Meetings	1, 2, 3, 4
C: Proposal	1, 2, 3
D: Progress Presentation	1, 2, 3, 4, 5, 6, 7, 8
E: Final Presentation	1, 2, 3, 4, 5, 6, 7, 10
F: Final Report	1, 2, 3, 4, 5, 6, 7, 11
H: Delivery	All

**II. PROJECT COMPONENTS**

**1. Project purpose and targets**

*You should be briefly and clearly explain your purpose and targets of the project in a single page.*

**2. Time plan**

*You should use Gantt chart or similar technique for your time planning.*

**3. Log**

*You should keep a time table during your project by writing date and # of hours spent on certain tasks after they finished. If this is a group project, names of the group members who is worked on certain tasks should be included. This log will be compared with your initial time plan during and at the end of the project to measure your progress.*

**4. Advisor Meeting Table**

*You must keep log of advisor meetings by writing #, date time, and brief results of the meeting.*

**5. Requirement Analysis**

*This is one of the most important parts of your project and especially project progress presentations. If you are working on a software project you should use Software Engineering techniques in this phase. Requirements are prepared by communicating your customer which is in general your advisor. Your requirements analysis document must be prepared based on template given in [http://www.ce.dogus.edu.tr/forms/gradproject/requirement\\_analysis\\_template.pdf](http://www.ce.dogus.edu.tr/forms/gradproject/requirement_analysis_template.pdf)*

**6. Software Design**

*This is again one of the most important parts of your project and project progress presentations.*

- a. Brief description of the development process you are planning to use and reasons for selecting it.*

- b. UML Use Cases
- c. UML Class diagrams
- d. UML Sequence diagrams (optional)
- e. Flowcharts (optional)

**7. Database Design**

You should use a RDMS that is appropriate for your project purposes and the programming language you are using. Please note that MS Access is NOT a RDMS.

- a. ER Diagram (Must show all relations and keys)

**8. User Interface Design**

This includes a presentation of basic design of your software application including forms, web pages, buttons, input and output components etc. This can be basic drawing or in form of a project including just visual components of the project without the code behind them.

**9. Test Plan (optional depending on the project)**

**10. Final Delivery & Demo**

This includes the properly working application according the requirements defined in the beginning of the project. You will be graded according to these requirements.

**11. Documentation and User Manual**

Your project should be well documented. This is especially the case for software projects. Properly commenting the code and writing clear code is also crucial and will affect your grade.

**III. GRADING**

Project Phase	Grade %
A: Selection	-
B: Meetings	10
C: Proposal	5
D: Progress Presentation	10
E: Final Presentation	10
F: Final Report	20
H: Final Delivery	45

**Extra Credit Policy**

You can earn extra credits if you satisfy following conditions:

1. Finding a real customer
2. Contribute to an open-source project (e.g. linux distributions such as Pardus, ubuntu, firefox add-ons, etc. )
3. Implementing your project in a completely open-source environment including OS, programming language, IDE, RDMS, web server, etc.
4. Developing a novel technique or algorithm or apply an existing one to a novel domain.
5. Publishing an academic research paper based on the project
6. Attend a competition or a contest such as coding contests or RoboCup.
7. Helping social benefit projects

#### **IV. ABOUT MEETINGS**

Weekly or bi-weekly meetings are suggested. Meeting frequency will be determined by your advisor. It is your responsibility to keep track of meetings and take an appointment from your advisor at least one week before the meeting. Before a meeting you should prepare following information, send it by email before coming to the meeting and bring a printed copy to the meeting. As a bare minimum it is recommended to meet with your advisor three times; one after you decided your topic and get information about how to proceed, one before project progress presentations to show your slides to get advice and approval, and one before final presentations to show your deliveries and slides.

- Short report (one or two pages)
  - List briefly completed tasks
  - List briefly remaining tasks
  - Gantt chart (*updated*)
  - Time log (*date and # of hours spent on certain tasks*)
- Demo of the completed parts of your project (include code fragments, user interfaces, or UMLs)
- Advisor Meeting table summarizing the results of previous meetings.

#### **V. MANDATORY CONDITIONS TO PASS**

If you don't to satisfy following steps and conditions you will fail from your class.

- Attend and take place in Project Progress Presentation
- Attend and take place in Final Presentation
- Meet with your advisor at least 3 times