



Bilkent University
Department of Computer Engineering

SUMMER TRAINING GUIDELINES

Document version: v2.9.1 May 24, 2016.

1. POLICIES and FAQs

1.1. Policies

Doing two Summer Trainings (ST) in the same place

CS299 and CS399 must be done in two different companies—doing them in the same company is not allowed. This means for example that doing CS299 and CS399 in two different branches of a company (like TUBITAK) or different departments of a company (like ASELSAN) is not allowed.

One purpose of ST is to get perspective and experience outside the university. You should see the working world, experience real-life projects, etc. Just writing code is not the aim. Seeing and working with two different sets of people, environments, organizations, teams, management, polices, products and services, etc. is important.

Doing an academic Summer Training

Doing an academic ST (for example at a university or research institution) is not allowed. Because of the high value of cross-cultural experience, an exception can be granted to do this kind of ST in a foreign country. But this exception can be allowed only once.

Doing Summer Training during the winter break

Doing ST in the winter is not allowed. The only exception is for a student that will finish all courses at the end of the Fall semester, and for some legitimate reason could not do both required STs earlier. Then such a student can do ST in January.

Doing two Summer Trainings in one summer

Only one ST can be done per summer: either CS299 or CS399, but not both. But in some special cases, an exception is granted and two STs can be done in one summer. For example, a student who did not satisfy the CS202 pre-requisite could not do CS299 in the normal summer time. Because of this, he or she can be allowed to do two STs in a later summer if he or she can finish the course work by the end of the following spring semester (before the next summer) and will be able to graduate. The student should write a petition letter, which a ST coordinator needs to sign. The student must show a transcript to the coordinator, proving that he/she is going to be graduating before the next summer.

1.2 Frequently Asked Questions (FAQs)

Can I do my ST for longer than 4 weeks (20 work days)? Yes you can. The minimum is 20 days, but longer work experiences are often better. Doing more than 4 weeks is optional, but it is encouraged. The University can provide health insurance. Consult the Dean's office for details.

Can I do a summer internship which is not CS299 or CS399? Yes you can do this. Such a voluntary internship is completely up to you. Of course, it would be in addition to the required CS299 and CS399. You can do such an internship whenever you like, even in a summer when you also do your mandatory ST. In some cases, the University can even provide a health insurance for this voluntary internship. Consult the Dean's office for details.

When is the earliest date that I can start my summer training? Normally, you can start the ST after final exams and submission of grades. Consult the Dean's office for the exact date.

When is the latest date that I can finish my summer training? Normally, you must finish the ST before the first day of classes in the Fall semester. Consult the Dean's office for the exact date.

How can I add a new company to the mfstaj system database?

- 1) You must create a new entry to the database, and add all the required information about the company.
- 2) You must *submit the information* explained below to one of the ST coordinators. Then the coordinator will review the information and will decide to approve or disapprove the proposed mfstaj entry. The coordinator may require additional information. Please make sure you provide the complete information and required details in your first request.

Information to Submit: You need to submit the answers of the following questions to an ST coordinator:

- 1) What is the name of the company, phone number, postal address and web address?
- 2) Is the company doing computer engineering work? Explain.
- 3) Will your supervisor be a person with a computer engineering degree? Explain.
- 4) Will the tasks that will be assigned to you satisfy the "Big-9" Performance Criteria listed on pages 5-7 in this document? Explain.

2. CRITERIA FOR SELECTING A PLACE FOR SUMMER TRAINING

Students should consider the following when selecting the company (or an institution) for summer training.

Required:

- The company must work on computer engineering applications and/or systems such as software/hardware design, development or testing.
- The supervisor of the summer intern must be a computer engineer.

Strongly Recommended:

- The company should use contemporary tools and techniques.
- The company should follow engineering standards and methods.
- The company should work on projects that have local or global impact.
- The student should be given opportunity to work on real-world problems.
- The student should be able to observe the organization of the company.
- The student should work in a team, and if possible a multidisciplinary team.

3. EXPECTATIONS FROM SUMMER TRAINING

The following are a partial list of expectations from summer training. It is important that students should be motivated about the summer training and know what is expected from it.

- Getting familiar with the work environment.
- Getting familiar with modern tools and systems.
- Participating in teamwork, preferably as part of a multi-disciplinary team.
- Getting familiar with the project development cycle: requirement analysis, design, development, and test.
- Improving oral and written communication skills.
- Being able to apply the knowledge and skills gained in engineering curriculum to real-life issues and problems.

- Learning new subjects.
- Learning about contemporary issues.
- Understanding of the professional and ethical responsibilities of an engineer.
- Making contacts for future employment.

4. RECOMMENDATIONS TO STUDENTS

Listed below are some recommendations for students who will do summer training.

Before Training:

- Verify that the company will satisfy all the Required Criteria from Section 2 above, and as many as possible of the Strongly Recommended Criteria.
- If needed, do not hesitate to contact your Academic Advisor or one of the Summer Training Coordinators.

During Training:

- Be active, enthusiastic, motivated, and energetic.
- Work hard.
- Be pro-active. Do not wait for somebody to tell you what to do.
- Try to plan your time and what you expect from summer training week by week.
- Keep a daily/weekly record of the progress of your training.
- Regularly compare the Performance Criteria (in Section 6.2 below, and in Appendix: Summer Training Grade Form) with your activities at work, to be sure that you are doing a summer training that will satisfy the evaluation requirements.

5. REPORT WRITING GUIDELINES

The guidelines are classified into two groups:

1. Content and logical organization guidelines,
2. Style and formatting guidelines.

5.1 Content and organization

Below are some guidelines describing what sections are expected in a summer training report and what each section should include. Your report should start with a Cover Page and Table of Contents Page. Then it should have the following sections.

Introduction: Have an introductory section that will make a smooth beginning to the document. In the introduction section include the following:

- The name of the company and department where you have done your summer training, the main focus area of the company, and your motivation for choosing this company as the place for your summer training.
- Brief summary of the work you have done, the motivation behind it, and the significance of the work that you have done in the overall project.
- Explanation of the organization of the rest of the report.

Company information: Have a section providing information about the company and department where you did your training, its hardware/software systems and resources, its focus and project area, its organization, etc. Do not write in too much detail. The name, address, telephone number, email address, and information about the education of your supervisor must be given (including the name of the university and department from which he/she graduated,

and the year of graduation). The required format for this section is given in Summer Training Report Template file.

Work Done: This is the most important part of your report. The number of sub-sections in this part, their titles, and their contents depend on the work that you have done and the information you would like to provide. This part should include at least the following:

- Information about the main project, if the work you have done is part of such a project.
- The significance of the work you have done.
- The motivation behind the particular work that you have done and why it is required.
- Detailed description of the work done, including for example:
 - The algorithms/pseudo-code developed.
 - Hardware/software environment used.
 - Software tools used.
 - Design methods used and learned.
 - Testing methods and tools used and learned.
 - Project management methods and processes followed or observed.
 - Any engineering standards that are followed or observed.
 - Design, development, documentation and testing participated in or observed.
 - Any configuration and/or maintenance tasks performed.
- Detailed description of your own contribution and clearly identification of the distinctions from others' work.
- When writing this section, do not forget that the reader may not be familiar with the topic of the work that you have done. Therefore, explaining too much is better than not enough. But long code sections should be in the Appendix, not in the body of the report.

Performance and Outcomes: You should also write and discuss the outcomes of your summer training by writing the following 9 sections in your report, each corresponding to one of the 9 Evaluation criteria:

- A section titled: **Applying Knowledge and Skills Learned at Bilkent** in which you explain in detail what knowledge and skills learned in school you were able to apply to real-world problems during your summer training, and specifically where and how the knowledge or skills were useful.
- A section titled: **Solving Engineering Problems** in which you explain in detail the engineering problems related to computer systems and applications that you solved.
- A section titled: **Team Work** in which you explain in detail the teamwork you were involved in during the summer training, including (for each team you participated in) the team role or function of each team member, the training in their background and current work area, and some information about the team dynamics as you worked together. You should clearly explain how you related to the others on the team. If you were not involved in a formal team, the definition of the term could be interpreted loosely to mean working together with others on a shared task.
- A section titled: **Multi-disciplinary Work** in which you explain how you worked with team-mates from other disciplines (multi-disciplinary work). If you did not engage in a multi-disciplinary work or team, indicate this in this section clearly.
- A section titled: **Professional and Ethical Issues** in which you explain in detail which professional issues and work-related ethical issues you saw or became aware of during your summer training, and how the issue was handled or managed at the company.

- A section titled: **Impact of Engineering Solutions** in which you explain specifically what you learned or understood about the economic, environmental, societal and global impact of the engineering solutions in the projects developed at the company.
- A section titled: **Locating Sources and Self-Learning** in which you explain the self-learning that you did during your summer training. You should mention any sources that you located and how you found them (this would include Web sites, books, journals, experts, etc), and what part of your summer training task you needed them for. Also, mention any that you made regular use of, and any that you are continuing to use.
- A section titled: **Knowledge about Contemporary Issues** where you write about the contemporary issues that are related with computer engineering, as you understand them from, and related to, your summer training.
- A section titled: **Using New Tools and Technologies** in which you explain in detail any new tools or technologies that you encountered and used during your summer training, how you learned to use them, and what level of proficiency you came to by the end of your summer training.

The required format for this section is given in the Summer Training Report Template file.

Conclusion: Have a conclusion section where you summarize the work you have done. Clearly re-state your contribution, what you have learned, experienced and acquired. Be specific in relating these to what you have learned at Bilkent.

5.2 Style and formatting

Please strictly follow the formatting guidelines and be consistent throughout your document.

Listed below are some style-related guidelines.

- Use correct English syntax and vocabulary. Pay attention to sentence structure, verb tense, plurality endings, articles, spelling, capitalization of proper nouns, etc.
- Be consistent with the use of your abbreviations and state their long form when they are used for the first time.
- Do not copy and paste information from other documents. Always write in your own words.
- Be correct, consistent, and complete.
- Number each figure/table, add a meaningful caption to each figure/table, and refer to the figures/tables inside the text using their figure/table numbers.
- List references (to papers, documents, manuals, web pages, etc.) at the end of your report (after the conclusion and before the appendix) in a separate section entitled *References*. Make sure that you follow a specific citation style and be consistent in the format that you cite your references throughout the text.
- Give citations to each of these references inside the text in a standard way. When you need to include information from other sources, properly quote or paraphrase, and make sure to give citations.
- Spell-check your report.
- Number the pages.
- Bind your report.
- Do not include source code in your document unless it is very important. If you decide to put source code, consider putting it into the appendix section.
- Read and edit your report several times before you submit it.
- Refer to the Web-posted document “Technical Writing Style” for more details.

The format for the cover page and the structure of the report body are given in the Summer Training Report Template file (Report Template.dotx), found on the CS299/CS399 course Web

pages. The Template file includes a "Checklist" that you should have at the end of your report and must check before submitting your report. **You must use the Template file directly to form your Summer Training Report**, not modifying its format, section and sub-section headings, etc.

6. CRITERIA FOR EVALUATION OF SUMMER TRAINING AND REPORT

6.1 Faculty members evaluating the summer training and reports will use the Summer Training Grade Form (see Appendix: Grade Form) and apply the following criteria:

- The Required Criteria given in Section 2 (about the company doing computer engineering work, and the supervisor being a computer engineer) will be checked. If these criteria are not met, the summer training is unsuccessful (grade is U) and must be repeated.
- The average of the grades given in the "Summer Training Grade Form" by the supervisor at the summer training company must average 7.0 or higher. If this criteria is not met, the summer training is unsuccessful (grade is U) and must be repeated.
- The Summer Training Report must be of a high standard in terms of its content, organization, style and language. If the total Performance Criteria grade for the report is not 50 or higher, or the assessment score of the Report Quality is less than 7, the report will be rejected and returned to the student for revision, until the standard is met.

6.2 The Performance Criteria are:

1. Able to apply knowledge and skills learned in school to real-world problems
2. Able to solve engineering problems related to computer systems and applications
3. Able to function in a team work
4. Able to work with teammates from other disciplines
5. Aware of professional and ethical issues in the work environment
6. Able to explain the impact of engineering solutions, developed in a project, in a global, economic, environmental, and societal context
7. Finds relevant sources (e.g., library, Internet, experts) and gathers information
8. Demonstrates knowledge of contemporary issues related with computer engineering in general
9. Able to use new tools and technologies

6.3 The Report Quality expectation is:

Able to prepare reports with high standards in terms of content, organization, style and language (the Summer Training report itself is to be evaluated)

Appendix

Summer Training Grade Form (pages 9-10)



BILKENT UNIVERSITY
Engineering Faculty
Computer Engineering Department

Summer Training Grade Form

Confidential

Name, Surname :

Company name and department:

Course : CS 299 ☐ CS 399 ☐

Part-A: Work place

Average of the grades on the Summer Training Evaluation Form
(Staj Değerlendirme Formu) filled by the employer : _____
To be satisfactory, average of the grades on the "Staj Değerlendirme Formu" must be at least 7.

Is the work done related to computer engineering? [Y/N] : _____

Is the supervisor a computer engineer or
has a similar engineering background? [Y/N] : _____

..... If all conditions in Part-A are satisfied, continue to Part-B, else mark Unsatisfactory in Overall Evaluation

Part-B: Report **Satisfactory ☐** **Revision required ☐**

If revision is required, changes needed must be stated on the report. The report is returned to the student until satisfactory.

Due date for resubmission:/...../20....
Student is given two weeks for each revision. To be set by the department secretary

..... If the report in Part-B is Satisfactory, continue to Part-C, else return it to the student for Revision

Part-C: Final version of the report

Based on the final version of the report, as evaluated on the back side of this form:

Sum of the Assessment/quality scores of Performance Criteria : _____
To be satisfactory, the sum must be at least 50.

The Assessment/quality score of Report Quality : _____
To be satisfactory, the score must be at least 7.

Overall Evaluation

Satisfactory¹ ☐

Unsatisfactory² ☐

Evaluator:

Name, Surname:

Signature

Date

...../...../20....

Evaluation of the Company/Department

- ☐ I strongly recommend this place for future students
☐ I am satisfied with this place
☐ I recommend this place not be allowed for future students.

¹ In order for the Summer Training be satisfactory, all the conditions in Part-A, Part-B and Part-C must be satisfied.

² In this case, the Summer Training has to be repeated.

Performance Criteria	On what page(s) of the report is the evidence of this found? ³	Assessment/quality score (from 0=missing to 10=full)
1. Able to apply knowledge and skills learned in school to real-world problems		
2. Able to solve engineering problems related to computer systems and applications		
3. Able to function in a team work		
4. Able to work with teammates from other disciplines		
5. Aware of professional and ethical issues in the work environment		
6. Able to explain the impact of engineering solutions, developed in a project, in a global, economic, environmental, and societal context		
7. Finds relevant sources (e.g. library, Internet, experts, seminars) and gathers information		
8. Demonstrates knowledge of contemporary issues related with computer engineering in general		
9. Able to use new tools and technologies		

Report Quality	On what page(s) of the report is the counter evidence of this found?	Assessment/quality score (from 0=missing to 10=full)
Able to prepare reports with high standards in terms of content, organization, style and language (the Summer Training report itself is to be evaluated)		

³ If you think that a question does not apply to this particular summer training, please write NA (not applicable).