# **SENG 399 Summer Training – Assessment Guideline**

## **Assessment**

Assessment is based on the following criteria:

1. Student Evaluation by Company Supervisor (**SE**)
2. SENG 399 Summer Training Report (**STR**)
3. Format and Style of the Report (**FSR**)
4. Oral Presentation (**OP**)

## **Grading**:

Students are supposed to receive **at least 3 points** from each of Questions **1.a, 1.b, and 1.c** of SE, to complete their summer training successfully. Students who fail to do so are considered as “Unsuccessful” and receive F letter grade without further evaluation. Unsuccessful students are not required to submit a report or make oral presentations. Successful (who receive at least 3 points from each of Questions 1.a, 1.b, and 1.c of SE) are eligible to submit their summer training reports and make an oral presentation of their summer training experience.

**STR, FSR and OP are marked out of 90, 10 and 100 points**, respectively according to the pre-specified guidelines. **To succeed, the student should obtain 55 or more from both the report and the oral presentation.** The total grade will be calculated using 70% of the report + 30% of the oral presentation.

Oral presentation will be done in multiple sessions as classroom presentations. Attendance to presentations will be decided by the advisor, it is recommended to attend at least 50% of the presentations.

## **STR and FSR Content**

Your report should include below sections. Please see corresponding explanations in the next page.

### Introduction

* Student’s overall goal
* Expected Learning Outcomes (LOs)

### The Company Information

* General
  + Address of the company
  + Name, background and contact info. of the supervisor
  + Historical background
  + Engineering Units
* Products and Services
* Work Environment

### Assigned Tasks and Projects

* Problem Definition
* Knowledge Integration
  + Knowledge Integration with Course Work
  + Learned Tools and Technologies
  + Self-Learning
* Work Plan and Timeline
* Implementation
  + Literature review and Data Collection
  + Implementation
* Evaluation & Impact Analysis

### Conclusions & Recommendations

* Achievement of Expected LOs
* Recommendations
  + Recommendations to enhance future training in this company
    - Ethical Issues
  + Recommendations to enhance future training of TEDU engineering students

### Written Communication Skills

* Presentation of technical content
* Format
  + Formatting
  + Language Proficiency
  + Graphical communication skills
* Credibility & authenticity

## Explanations and Expectations for Each Part

* **Student’s overall goal** 
  + *A simple, clear, brief, positive, and correctly written statement, that describes the "big-picture" idea of why the student is interested to have training, what he wants to focus on, and what he needs to accomplish.*
* **Expected Learning Outcomes (LOs)** 
  + *Three or more correctly written learning outcomes that describe specific, measurable, and realistic achievements to accomplish during the training experience. They relate to the job, represent the job functions and duties, assist in professional growth and development, relate to the student's course of study or major, and help to reach the overall goal of student's training experience. Please be aware that this section should rely not only the below written (see Fig. 1) LOs on but also your own expectations from this summer practice.*
* **Historical background** 
  + *Correctly written short description of the company/ establishment history.*
* **Engineering Units** 
  + *Engineering units are described in details with their functions and organizational structure.*
* **Products and Services** 
  + *The products / services of the company are clearly described and compared to similar products / services in the market.*
* **Work Environment** 
  + *The nature of the activities carried out by the department(s) or unit(s) where the major part of the training experience took place, is clearly described. Whether the function of the department is design, maintenance, R&D, project management, or anything else, the student is able to relate it to the activities of the whole company / establishment.*
* **Problem Definition** 
  + *The problem to be solved is clearly stated. Objectives are complete, specific, and concise. Customer needs are correctly identified and transformed into project requirements. All potential customers are identified and their needs are taken into consideration.*
* **Knowledge Integration with Course Work** 
  + *The problem to be solved is logically formulated. Prior knowledge of mathematics, science and engineering principles as well as discipline related courses and collected information are successfully integrated to address the problem.*
* **Learned Tools and Technologies** 
  + *Detailed explanation of any new tools or technologies (e.g. libraries, software tools, programming environments) that were encountered during the summer training. Includes discussion on how these tools were learned, with the level of proficiency achieved.*
* **Self Learning** 
  + *Demonstration of self-learning during the summer training. Includes the mention of any sources and explanation of the sources discovered (e.g. Web sites, books, journals, experts, etc), and the part of the assigned task that these sources were used. Includes an evaluation why these sources were selected among the alternatives*. *Please be careful about citations and giving proper references, i.e. credibility and authenticity.*
* **Work Plan & Timeline**
  + *A time plan of the whole training activity is presented using standard project planning techniques such as Gantt charts, deployment charts, and critical path analysis. An effective work strategy is developed, including a plan of attack, decomposition of work into sub-tasks, balanced responsibilities of team members, an executable timetable and a justified project budget.*
* **Literature review and Data Collection** 
  + *All pertaining information (including regulations, standards, and operational experiences) are identified and collected from a variety of credible sources. Information are reviewed and assessed with respect to their quality, validity and accuracy and presented using a standard and ethically referenced literature review format. Please be careful about citations and giving proper references, i.e. credibility and authenticity.*
* **Implementation** 
  + *The work carried out represents an engineering contribution similar to that carried by a professional engineer in the field and is well described*
* **Evaluation & Impact Analysis** 
  + *Performance of the final work compares favorably to customer requirements, pre-set outcomes, operational constraints, and existing products if any.* *Related environmental, social, health and safety issues as well as anticipated hazards are deeply evaluated. Local and global, long term as well as short term benefits and risks on users and non-users are analyzed and how they might impact the general acceptance of the results of the work done.*
* **Achievement of Expected LOs** 
  + *The student is able to present convincing evidences that all of his Learning outcomes were achieved by the end of the training period. Please see* Expected Learning Outcomes section, too, for making a proper relationship.
* **Recommendations to enhance future training in this company** 
  + *Analysis of the achievement of the student’s learning outcomes are used to develop specific rational recommendations to enhance the future student’s training experience in this company.*
* **Ethical Issues**
  + *Ethical issues related to the work done are presented and discussed. Concrete examples of work-related ethical issues are demonstrated.*
* **Recommendations to enhance future training of TEDU engineering students** 
  + *The student’s training experience is used to develop a set of rational, clear and precise recommendations to TEDU in order to enhance the future training of the engineering students.*
* **Presentation of technical content** 
  + *Demonstrate an excellent understanding of all major topics presented and argued with clear links between successive ideas using superb organization from a capturing introduction to a clear conclusion that builds on and provides support to the subject matter.*
* **Formatting** 
  + ***Document is accurately and professionally formatted specified by the guidelines (appropriate cover page, single line spacing, Times New Roman font sz. 12, sections and subsections are organized properly and each section starts in a new page, table of contents is given initially, pages are numbered, text alignment is justified)***
* **Language Proficiency**
  + *Document uses a range of advanced level formal vocabulary accurately, uses business terminology, is free of grammatical errors.*
* **Graphical Communication Skills** 
  + *The information is displayed adequately with appropriate techniques (e.g., graphs, tables, figures)*
* **Credibility & authenticity** 
  + *Use reliable and credible references/citations that follow standard format (IEEE, AIAA, ASME, etc.) to support the credibility and authenticity of the information presented without any sort of plagiarism or dishonestly copied material.*

## Learning Outcome Table

|  |  |
| --- | --- |
| **LO** | **Description** |
| LO1 | Communicate with technical and non- technical people orally and in writing to share knowledge. |
| LO2 | Interpret foundational scientific, engineering, management and artistic concepts and principles. |
| LO3 | Apply mathematical, statistical, computing and engineering concepts and tools to model and solve problems. |
| LO4 | Follow current trends and developments in their fields to adapt to the changing environment, with and without guidance. |
| LO5 | Act professionally by following social, ethical and cultural responsibilities. |
| LO6 | Design and implement a computer system, be it software or hardware or both, to serve specific needs in an efficient, interdisciplinary team work context. |
| LO7 | Evaluate feasible solutions to complex engineering projects, based on economic, social and ethical constraints. |

Table 1: Learning Outcome (LO) Table

Oral Presentation (OP)

Each student is required to present his/her report in front of an audience within given time duration, including questions and answers section. Attendance to the presentations will be decided by the advisor considering the physical conditions.

Please remember that you will collect your presentation points from following items:

* Demonstrating an excellent understanding of the technical content
* Capturing the interest of audience and focus on their needs
  + Incorporating graphical material with appropriate explanations
  + Keeping the visual appeal of your presentation high
* Using reliable references to copied material