# Dar es salaam Institute of Technology

# Electronics and telecommunications Department

## Communication Switching Systems ETU07420

## Assignment Report Writing Guideline

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**Table of Contents**

## 1.  Introduction

A project report is required to be submitted by each student as one of the assessment items for this unit. The report will be assessed and marked out of 20%. Group work is permitted with one project topic per group of six (6) students maximum. The format of the report is that of an engineering/scientific report. All aspects of your report must be your group's own original work. You must acknowledge any assistance that you received, and must provide appropriate referencing for any copyright information that you include in your report.

One of the primary goals of the project is to get you to perform "inquiry or problem-based learning" through this project. You investigate the problem, and when you reach the limit of your knowledge, you will need to backtrack and re-examine the problem. You should determine explicitly what you need to know at each stage, and then search for information from the sources at your disposal – the lecture notes, textbook, other references, the library, the internet, etc. We understand that you may not know everything you need to know at this stage, but your learning should accelerate as you progress through the project.

Note that during the assignment/lab sessions you performed a number of experiments that are directly related to this project, and if relevant, you can use the information and your analyses from these experiments as part of your project. For example, if you want to measure a load between 0 and 10kg, then obviously you will incorporate your load cell results into your project – you don't have to repeat the load cell characterization.

## 2. What Report Should Contain

You are required to include the following information, and structure your report as described:

1) Assignment Cover Sheet.
2) I&M Project Report Template:
    i.   Edit the Word file and adjust it to your project realization.
    ii.  Keep the number of words within the limits indicated next to each paragraph title.
    iii. Follow the guidelines below and keep the report as professional as possible.
    iv.  Achieve as much as you can of the measurement system.

### 2.1. Introduction

1) Short summary of the purpose or function of your proposed system – what goals are you trying to achieve. Not "to measure temperature", but to "monitor and control engine temperature in a motor vehicle".
2) Include background information on previous work, including references.

### 2.2. Project Description

### 2.2.1. Assignment 01 [5 marks]

Write a technical report to compare Signalling System number 7 (SS7) and signaling transport (SIGTRAN) hint in your report consider/discuss the following

    i.    Introduction (brief explanation of both ss7 and SIGTRAN)
    ii.   describes the concept of an SS7- over-IP network and the protocols it uses
    iii.  SS7 limitations
    iv.   Protocol stack
    v.    explain the principal objectives of the work by Sigtran
    vi.   Role of SIGTRAN
    vii.  examines the reasons for transitioning
    viii. Discuss the Transition from SS7 to IMS

**2.2.2. Assignment 02 [15 marks]**

Develop and deploy an Interactive Voice Response (IVR) for [ *choose an organization/institute of your choice*] for [*enter the reason for the choice*] for example Interactive Voice Response System for DIT automation.

**3. Overall Organization and Presentation**

Use a word processor – this makes editing and rewriting easy and efficient – it also allows you to submit the report electronically. This also allows you to pass copies of the report between group members so that everyone can contribute to the editing. Your report must be submitted individually as a Microsoft Word formatted file or a PDF file (preferred).

1) **Length:** The length of your report should have a maximum of twenty A4 pages, 1.5 spaced, including figures (diagrams and graphs). Do not make it too long – use appendices if needed.
2) **Page Size and Margins**: Page size should be A4, with margins of 1 inch (2.5 cm) all round.
3) Font: Font size should be 12 fonts either Times Roman, Arial, Courier or similar – that is, readable.
4) **Page Numbers:** Already at the bottom of the page of the template file.
5) Section Headings: Be consistent in the labelling of sections, whether you use section numbers and a heading or just a section heading.
6) Where appropriate, use footnoting within the text.
7) Spell correctly, and use correct grammatical structure.
8) Neutral (third) or second person ("we") – neutral is preferred.
9) Do not use dot points – write proper sentences (dot points are OK in laboratory notebook, but not in reports).

**3.1. Paragraphs:**

There are two conventions for defining a paragraph: (1) Begin paragraphs on the left margin and have a blank line between paragraphs, or (2) indent the first line of a paragraph (0.25 to 0.5 cm) with no blank lines between paragraphs (or a half line between paragraphs). Be consistent in the method you choose.

### 3.2. Equations

1) Create equations using an *equation editor*.
2) Equations should be on a new line, numbered sequentially on right, with the
3) line right justified. The number should be in brackets, e.g. (1).
4) Identify symbols when they first appear.
5) Express numbers clearly – e.g. $6 \times 10^{23}$, not 6e23 or 6*10^23.
6) Use appropriate units on all numerical values.
7) Express numerical values to the appropriate number of significant figures.
8) Equations form part of the text; that is, the presence of an equation should appear as if it is part of a sentence, even though it is on a separate line and is numbered. If the equation is at the end of a sentence, it should be followed by a full stop; if it is in the middle of a sentence, then a comma may be required.
9) In the text, refer to the equation by its number. "As discussed earlier, Equation (1) indicates that …"

### 3.3. Tables

1) Numbered in sequence – e.g. "Table 1.1".
2) Title at top of table – to right of or under table number. Again, the title is actually
3) a caption that describes what the table is displaying.
4) Results presented with errors (uncertainties) and units.
5) Literature values (footnoted) may be included for comparison.
6) Make sure that all captions stay with the appropriate table on the same page.
7) Refer to all tables appropriately with their numbers in the text; i.e. "Table II shows data on …" not "in the table below".
8) Tables are separate from the text.

### 3.4. Figures

1) Create graphs with a graphing program (e.g. Excel, MATLAB).
2) Numbered (using Arabic numerals) – e.g. Fig. 1.
3) Include figure caption – a description of what the figure shows.
4) Figure number and caption centred at the bottom of the figure.

5) Provide a "key" or "legend" for each graph, including curve fits (this can be included in the figure caption).

6) Axes clearly labelled, including units – use appropriate ranges, scales and number formats for axes data labels.

7) The data should fill the graph.

8) Data appears as symbols, trend lines appear as lines.

9) You only need a legend if you plot more than one set of data.

10) Refer to all figures appropriately with their numbers in the text; i.e. "as shown in Figure 1" not "in the diagram below".

11) Make sure that all captions stay with the appropriate figure on the same page.

12) Figures are separate from the text; embedded into the text.


## 3.5. *Referencing Techniques:

Use the Harvard system if you prefer, the Harvard system works like this: (Smith, 2014). Then in the reference section you have the list in alphabetical order of the first author. The advantage of this is that you don't need to keep track of numbers.

However, the Vancouver referencing system is the preference in scientific and engineering publications. A reference number is used in text with square brackets [1]. The reference section is then a list of the references in numerical order. You can number them in the order they appear in your report (the easiest) or you can have them numbered in alphabetical order in the reference list, then use the appropriate number where the reference occurs in text (much more complicated).

If you take a diagram or image from another copyright source, you must include a reference to the source of this material. Failure to do so is plagiarism and copyright violation.

## 3.6. References

Reference all material that you use from other sources. Use the correct referencing method (*To be discussed during lecture*)

## 3.7. Appendix

Include any information that you feel is important for interpreting the report that does not actually belong in the body of the report; i.e. important datasheets and other equipment information.