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HUM231 - Presentation Skills and Technical Writing

Lecture 1 : Introduction

Course Learning Outcomes

- **Learning Outcomes**

CLO 1: To distinguish different types of technical reports.

CLO 2: To compose process documents, whitepaper, and project requirements documents.

CLO 3: To create visuals for report writing and presentation illustrations.

CLO 4: To develop persuasive writing for pitching projects and products.

CLO 5: To design written technical manuals and instructions.

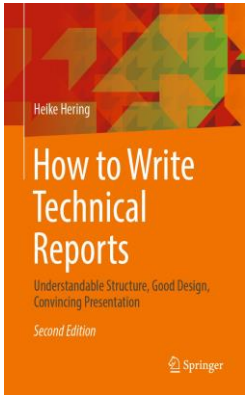
Course: HUM231 - Presentation Skills and Technical Writing

Course work grades

Class work		Mid-Term	Final exam
Assignments	Project (Report + Presentation)		
10	30	20	40

References:

- Hering, H, 2018, How to Write Technical Reports, Springer, e-book.



Lecture contents

- Introduction
- What is Technical reports
- Types of Technical Reports
- Planning the Technical Report

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Introduction

Introduction

- Technical Reports are usually written according to **general standards**, **corporate design standards of the current university or company**, **logical rules**, and **practical experiences**.

What are technical reports?

- **A scientific or Technical Report describes a research process or research and development results or the current state-of-the-art in a certain field of science or technology**.

- A Technical Report can be defined as follows:

Technical Report = **report about technical subjects, written in the "language of science and technology"** (special terms and phrases, display rules etc.).

Importance of technical reports

Majority of engineering tasks include the writing of technical reports because :

- It helps students to present the reports in a professional format.
- Prepare students for the writing of technical reports and papers in engineering practice.

Types of technical reports

The following list are Technical Reports, if they deal with a technical subject:

Technical Reports	
• Report about laboratory experiments	• Construction and design report
• Article or report about research work in scientific journals	• Project report, intermediate or final report etc.
• Report about testing and measurements	• Testing regulations
• Report about internships	• Work report
• Various theses like project, diploma, magister, bachelor, and master thesis, doctorate thesis/dissertation, habilitation treatise	• Functional specifications and functional requirements
• Business plan	• Patent
• Expertise	functional description, user manual, software documentation etc.

Before you write.....

Before you write, ask yourself the following questions:

- Who are your readers?
- How is the technical report organized?
- Where are technical reports written?
- Who are your stakeholders?
- Why is the report written?

Characteristics of Effective Technical Writing

The four C's:

Clarity : it is easily understood by your intended audience

Comprehensiveness : all of the necessary information is present

Conciseness : it is clear without verbiage

Correctness : it is grammatical and follows conventions

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Work Steps and Time Planning

Required Work Steps to Create Technical Reports

This section outlines the crucial steps in creating a Technical Report, providing a roadmap for your work:

Accept and Analyze the Task:

- Understand the specifics of what you need to accomplish.
- Clarify any ambiguities with your supervisor or stakeholders.

Check or Create the Title:

- Ensure the title is engaging and accurately reflects the report's content.
- A good title should encapsulate the main idea and attract interest.

Design a 4-point Structure:

- Create a simple outline that includes the main sections of your report (e.g., introduction, methods, results, conclusion).

Design a 10-point Structure:

- Develop a more detailed outline that breaks down each main section into subsections.

Search, Read, and Cite Literature:

•Conduct thorough research to gather relevant literature.

•Make sure to note all bibliographic details for citations.

Required Work Steps to Create Technical Reports

Elaborate the Text:
Begin writing the report, focusing on clarity and coherence.
Create or Select Figures and Tables:
Visual elements should complement the text and enhance understanding.
Develop Detailed Structure:
Flesh out your outline into a comprehensive structure for your report.
Perform Final Check:
Review your work for errors, inconsistencies, and overall clarity.
Print Copy Originals or Create PDF:
Prepare the document for distribution in a professional format.
Copy, Bind, and Distribute:
Ensure the report reaches all intended recipients, whether through printed copies or digital formats.

Time Planning Tips

Underestimating the time required for each step can lead to stress and rushed work. To help manage your time effectively:

- **Double Your Estimates**: If you think a step will take two days, plan for four. This gives you a buffer for unexpected challenges.
- **Start Early:** Aim to start your report at least one-third of the way into your project timeline to allow for revisions and feedback.
- **Use a Rule of Thumb**: For instance, if you can write about three pages a day, factor that into your planning to set realistic deadlines.

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Checking or Creating the Title

Importance of the Title

- **The title is your report's first impression and sets the stage for the reader's expectations**.It should **Create interest:** spark curiosity about the content.
- **Be Accurate**: Reflect the main topics and themes of your report.
- **Be Concise**: Aim for brevity while maintaining clarity.

Steps to Create a Title

The following overview of work steps summarizes the process to find **a good title for your Technical Report**:

- **Write Down the Task**: Clearly articulate what the report will cover.
- **Identify Keywords:** List key terms that encapsulate the report's focus.
- **Combine Keywords:** Experiment with different arrangements to form potential titles.
- **Optimize for Sound:** Read titles aloud to ensure they are easy to pronounce and sound appealing.
- **Select the Best Option:** Choose a title that effectively conveys the report's content and grabs attention.

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The Structure as the "Backbone" of the Technical Report

Importance of a Good Structure

A well-crafted structure provides:

- A quick overview of the report's contents.
- Assistance to both the writer (for organizing thoughts) and the supervisor (for reviewing and evaluating the work).
- A tool for guiding the reader through complex content, making it easier to understand.

Rules for the Structure in ISO 2145

The ISO 2145 standard governs the numbering and subdivision of technical documents, emphasizing three levels: main divisions, subdivisions, and further levels of subdivision. The hierarchy of document parts must be logical, with no fewer than two sections at each level to maintain clarity.