**ET.PM4 – CONCEPT DESIGN REPORT (SW3)**

**Eight Dimensions of Academic Writing:**

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| INFORMATION DENSITY | Use of expert terminology, relevant vs. interesting, from general to specific, abstract vs. concrete, etc. |
| STRUCTURE / COHERENCE | Selection of information, logical order of information, clarification of essentials, explication and justification of concepts/ideas, use of linking devices, etc. |
| PRECISION / CONCISENESS | Accurate and appropriate use of technical terms, being concise, precise, and clear; formulating simple sentences, avoiding ambiguity/vagueness |
| TEXT TYPES | Norms such as structure, phrases, etc. |
| VISUALISATION | Text-image relations, use of layout/lists, etc. |
| RECIPIENT DESIGN | Writing for various audiences, communicating in a persuasive, purposeful, and targeted manner |
| ACCURACY | Spelling, punctuation, grammar |
| WORKING STRATEGIES | Reading strategies, writing strategies, collaborative writing, revising texts, use of tools etc. |

**Exercise:**

*Assess the following three texts in terms of information density, structure/coherence and precision/conciseness. Provide a score for each category (1=very poor / 6= very good) and highlight relevant phrases/passages in the text and make comments in the box. [Please note: These are uncorrected texts from students]*

*Example 1:*

This report will cover all the hardware specific topics. First an overview will be given, to set the

perspective. Then the report will go into more details, for the specification needed to provide for the

functions. Furthermore, it will discuss the development with different solutions, calculations and the

final implementation. After the product has come to reality it had to be tested. The results and their

meaning will also be discussed in a separate section of the report. Finally, it will summarize the

project, discussing the team effort and the final product.

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| **Score (1-6):**  INFORMATION DENSITY: 4 STRUCTURE / COHERENCE: 4  PRECISION / CONCISENESS: 5 |

*Example 2:*

This device is able to measure the distance up to 200mm to a wire but also the current that flows

through that wire. It is compact portable and powered by two 1.5V batteries. By now it is only a very

useful prototype of a device, because those measurements are only precise in a strict environment

such as a laboratory. If it gets further developed, it would be possible to find wires and cables which

are hidden in walls or ceilings. This can be very useful to be sure not to hit those wires before drilling

a hole in a wall. Every big project is followed by a possibility of serious problems. There is, for example,

the possibility that the first schematic is not correct because of a careless mistake. Or some steps later

if the soldering was not done properly enough, it could cause serious issues with amplifying the signal.

A third option could be that the board could fall to the ground and fall apart. To the other hand there

is no possibility for any significant problems with the software. Because, if something does not work

as planned, it is always a possibility to rewrite the software and eliminate that problem. To reduce the

possible risks with the hardware components, two boards will be produced. In this way even if one is

defect or breaks, there will be a second one to continue.

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| **Score (1-6):**  INFORMATION DENSITY: 4 STRUCTURE / COHERENCE: 5  PRECISION / CONCISENESS: 4 |

*Example 3:*

As part of the third semester project it is required to create a cable monitor. A cable monitor is a device to determine the current and its angle in a wire via measuring the electromagnetic and electrostatic field. The sensor board was designed via circuit examples and descriptions provided. To verify the functionality, a series of simulations were conducted and the results analysed. The simulations showed/demonstrated that the designed circuit fits the desired functionality. After the assembly a series of hardware tests were performed to verify the cable monitor’s functionality: In a visual comparison, the graphs of the cable monitor approximately matched those of the provided example and in the tests outlined in the hardware checklist the tests yielded similar results. Therefore, the conclusion is that the hardware meets the specifications outlined. In the following steps, the software part will be written as it is currently running on a provided code not to be used for the final product.

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| **Score (1-6):**  INFORMATION DENSITY: 4 STRUCTURE / COHERENCE:  PRECISION / CONCISENESS: |