# Writing Style and Organization

First and foremost, thank you for helping.

The School of Mathematical Sciences is committed to delivering a high-quality degree program that equips students with problem solving techniques and tools, mathematical ways of thinking and solving problems, and the ability to communicate technical content clearly and well. That commitment includes making a good-faith effort to monitor the efficacy of the degree program by evaluating students’ abilities at key points along their educational path. Toward this end, you are asked to identify one or more problems or assignments that provides insight into the learning outcome identified below, and to the best of your ability, to characterize the work of each SMS student as *exemplary, accomplished, developing,* or *fair/poor* (described below).

* These categories are akin to standard grades in the sense that they communicate a holistic evaluation of student work, but the scope of this evaluation is more restricted than a course grade. Here we are focused on a particular learning objective, and the extent to which it is achieved on a particular problem, assignment, or project.
* You may find it helpful to evaluate different aspects of a student’s work in order to arrive at a conclusion, but in the end, your evaluation should place the artifact in a single category.
* Hallmarks of the four categories are listed in the table below, but because the evaluation is holistic, student work need not exhibit all the hallmarks of *accomplished-*level work in order to be evaluated as *accomplished*.

When you are done with this assessment, please report your findings in a spread sheet that includes students’ names and the evaluation of their work.

**Student Learning Outcome:**

Students write formal reports that are clear, correct, and well organized, including proper use of mathematical notation, equations, figures, and tables.

This worksheet is meant to help you evaluate student work within the scope of the student learning outcome identified above.

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| **Category** | **Element** | **Strongly Agree** | **Somewhat Agree** | **Somewhat Disagree** | **Strongly Disagree** | **N/A** |
| **Writing Efficacy: Communication of Content** | The scenario is explained/the problem is stated clearly |  |  |  |  |  |
| Variables and parameters are clearly explained and have appropriate units/dimensions (as appropriate) |  |  |  |  |  |
| Central concepts are explained clearly and thoroughly (including results from other researches, as appropriate) |  |  |  |  |  |
| Mathematical equations are motivated and explained (when relevant to an application domain, equations are dimensionally consistent) |  |  |  |  |  |
| Analytical methods are clearly explained |  |  |  |  |  |
| Computational methods are clearly explained |  |  |  |  |  |
| References are cited as needed |  |  |  |  |  |
| **Writing Style: Presentation** | Mathematical equations are incorporated into sentences, including proper punctuation. |  |  |  |  |  |
| Visual aids such as figures and tables are easily readable and easy to understand, and are referenced clearly |  |  |  |  |  |
| The incorporation of visual aids benefits the presentation |  |  |  |  |  |
| Language is used correctly, and is easy to understand |  |  |  |  |  |
| The level of technical detail is appropriate to the audience |  |  |  |  |  |
| The document is appropriately formal and professional (including details of spelling, grammar, and formatting) |  |  |  |  |  |
| **Writing Style: Organization and Flow** | Overall, the presentation is well organized |  |  |  |  |  |
| Overall, the presentation flows smoothly, passing naturally from one idea to the next |  |  |  |  |  |

Student work will typically exhibit a blend of characteristics, but its overall quality––whether indicated by a prevailing body of evidence or a small collection of essential elements––is often apparent.

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| --- | --- | --- | --- |
| Writing Style and Organization | | | |
| Satisfactory | | Unsatisfactory | |
| Exemplary | Accomplished | Developing | Fair/Poor |
| * Author makes a deliberate and successful effort to help the audience understand the central problem and the concepts used to find the solution. * Each section of the presentation includes only the necessary information. * Mathematical statements are integrated within the text and are justified and interpreted. * The reader is guided through the logical development of arguments, with calculations presented and interpreted correctly in context. * Visual aids (if appropriate) are well chosen and easy to interpret. * There are few or no spelling, grammatical, or formatting errors. * The presentation is well-organized and writing exhibits appropriate level of formality. * Suitable references are cited. | * Report may lack focus on the central problem and may lack adequate explanation of central concepts used in the solution. * Structure is present but needs streamlining. * Mathematical statements may not be fully integrated into the text or may lack sufficient justification. * Logical development may be lacking at times, with aspects of the solution presented either inconsistently or in a way that’s difficult to understand. * Visual aids are relevant but may lack features that would make them accessible or useful to the reader. * The writing is generally clear, but may include minor spelling, grammatical, or formatting errors. * The presentation is relatively-well organized. * Writing exhibits appropriate level of formality, and suitable references are cited. | * Report exhibits a narrative form but is neither focused on presenting the central problem nor explains concepts used in the solution. * The purpose of each section of the report is not clear. * Mathematical statements may be missing or not explained. * Results are stated in no logical order. * Visual aids are either missing, irrelevant, or not explained. * The report exhibits a lack of proofreading. * Presentation may exhibit a lack of thoughtful organization about presentation. * Writing may lack appropriate level of formality, or citation of suitable references. | * Reports in this category lack narrative structure, perhaps presenting equations as a list unsupported by guiding text. * Parameters may lack appropriate definition, dimensional analysis, or units. * The reader may have to infer the relevance of figures, and what steps were taken to solve a problem. * The report exhibits a haphazard feel, with little or no evidence of an effort to communicate clearly. * Writing may lack appropriate level of formality. * References may be unsuitable or neglected altogether. * The presentation may be poorly organized. |