

DRAFT Rubric for Mech 309 lab reports 7/18/16 by Dave Kim

Definitions:

Audience – Mechanical engineering peers, engineers, and professionals in engineering firms.

Genre – Lab report

Modalities – text, tables, plots, pictures, etc.

1. Rhetorical Knowledge

Emerging		Developing		Mastering	
1	2	3	4	5	6
The writer shows little awareness of the context or audience, and the report is unsuccessful in most places. The writer's choices are sometimes appropriate to the assignment or may be limited or oversimplified responses to the assignment. The writer demonstrates little or no control over the various modalities that are attempted in the report, and seems only minimally aware of the demands of mechanical engineering engaged in the assignment. Overall, the writer shows little awareness of the audience's needs, and treatment of the task and purpose are basic or inadequate.		The writer's understanding of the context and audience supports a generally successful report. Overall, the writer makes choices that are appropriate to the assignment, but the writer's understanding and application of the lab report genre may seem incomplete or inconsistent. The writer shows a general awareness of the demands of mechanical engineering and makes a generally successful use of the field's characteristic methods. Attention to task, purpose, context, and audience are generally appropriate, with some lapses (e.g., the writer may invoke the wrong audience, or provide irrelevant information, etc).		The writer analyzes the context and audience and uses that analysis to comprehend and/or create the report. In approaching the task and purpose, the writer makes choices that are appropriate to the assignment and the lab report genre. In developing the response to the assignment, the writer employs the methods commonly used for communication in mechanical engineering. The writer considers task, purpose, context, and audience in setting a style and usage appropriate to the assignment.	

2. Organization

Emerging		Developing		Mastering	
1	2	3	4	5	6
The report's structure may be incomplete, inappropriate, or missing. The writer does not establish objective (or a central hypothesis) or may provide one that is oversimplified. Contextual information is missing, inconsistent with the objective (or hypothesis), or incomplete. The report frequently wanders away from the central idea, and the arrangement of evidence may seem random or purposeless. The writer does not seem to be in control of the report.		The writer provides a structure appropriate for a lab report. As the report begins, the writer establishes objective (or a hypothesis) that acts as the focus for the report. The writer forecasts a structure for the report that may be oversimplified or inadequately described. Overall, the objective (or hypothesis) is central to the report, but in places the writer may wander away from that central idea. The writer appropriately arranges ideas, data, and analysis, though in places the arrangement may be superficial. The writer's control over the shape of the report may be inconsistent.		The writer provides a purposeful structure that clearly articulates the experiment's purpose. As the report begins, the writer provides foundational background and context for that central idea; clearly states the objective of the report; establishes the writer's perspective or approach; and engages the subject matter in a way that addresses the appropriate audience. The writer's formulation of the objective (or hypothesis) is consistently at the center of the developing analysis. The organization supports not only the writer's development of ideas, evidence, data, and analysis, but also the reader's understanding throughout the report.	

3. Evidence (results of experiments and/or simulations, data tables, plots, diagrams, etc.)

Emerging		Developing		Mastering	
1	2	3	4	5	6
The writer relies on information that is not relevant to the report or that is narrow or trivial. Evidence is missing, mislabeled, or is not clearly connected to the experiment's central hypothesis. Evidence may not sufficiently support or clarify the writer's claims.		Most of the time, the writer provides appropriate evidence to support and clarify the analysis. In places, the connections between some of the evidence and the objective (or hypothesis) being explored may be weak or missing. The evidence sometimes lacks substance or variety.		The writer clearly establishes connections between the objective (or hypothesis) and the evidence in the report. Evidence is accurate, credible, and portrayed fairly. As appropriate, reports include statistical, analytical, numerical, visual (including data tables, plots, pictures, etc.), multimodal, or observational evidence to fully explore the objective and supporting analyses. Evidence is presented and interpreted appropriately to the targeted audience.	

4. Critical Thinking

Emerging		Developing		Mastering	
1	2	3	4	5	6
The writer oversimplifies ideas. Analysis, evaluation, or interpretations may be missing or underdeveloped. The writer may provide a shallow or basic analysis of the topic. The report provides little guidance to the reader, or the writer seems unaware of the audience. If there is a conclusion, it may be irrelevant to the analysis or provide little or no closure. The writer's analysis is limited, or the writer may "let the data do the talking."		The writer analyzes, synthesizes, interprets, or evaluates ideas and texts to develop an approach to the task that addresses the existing knowledge (theory or hypothesis) and supports an analysis of the topic and the writer's perspective. Overall, the writer accommodates the reader's need to understand the topic and the development of the analysis. The writer provides closure by summarizing the analysis, but may draw limited or inconsistent conclusions from the analysis.		The writer synthesizes, analyzes, interprets, and evaluates significant and well-chosen ideas, information, and data. The writer addresses the existing knowledge (theory or hypothesis), providing an in-depth analysis consistent with the complexity of the experiment. The writer guides the reader to understand the complexities of the experiment and its central theory or hypothesis. The writer draws meaningful conclusions and reflects on the experiment as a whole, in ways that provide closure and bring the analysis to a satisfying ending.	

5. Knowledge of Conventions

Emerging		Developing		Mastering	
1	2	3	4	5	6
Choices of style, diction, tone, and voice are inconsistent with or inappropriate for a lab report. The writer's stylistic choices may seem random. Errors are frequent and seriously detract from meaning or prevent the reader from adequately understanding the writer's meaning. The writer omits some citations for sources, and may inconsistently label tables, figures, and other visual material.		The writer's sentences are generally appropriate to the topic, but in cases may seem random or uncontrolled. Style, tone, and voice are generally appropriate, with some lapses. Errors in mechanics and grammar are generally minor, but may be sufficiently frequent to distract a reader. The writer's diction and syntax are sometimes effective. Voice and perspective may vary in ways that detract from the writer's treatment of the task. Source citations are uniformly included, but may be incomplete. Figures, tables, and other illustrative material is generally well formatted and labeled.		The writer employs sentence structures and appropriate language to ensure that ideas are clear throughout the report. Writer uses style, tone, and voice that are appropriate for a lab report. Errors in mechanics and grammar are minor and infrequent. The report employs a syntax and diction appropriate to the lab report genre. Throughout the report, the writer's voice and perspective remain consistent with each other and with the task. Citations of source material are clear and consistent, and citation style is appropriate to mechanical engineering and the lab report genre. Figures, tables, and illustrations are correctly and usefully labeled.	

6. Holistic: Overall, impressionistic evaluation of the lab report as a whole.

Emerging		Developing		Mastering	
1	2	3	4	5	6

OK. We're not rating on this, but I left it here for future reference. Including something like this in a course rubric would allow you to try assigning some reflective writing, or to have students revise their work before turning it in, etc. It's also a good dimension for portfolio-based grading.

Use of Composing Processes

Emerging		Developing		Mastering	
1	2	3	4	5	6
The report reveals little use of strategic planning or of composing processes. The writer demonstrates little or no control over the various modalities that are attempted in the report, and seems only minimally aware of the demands of mechanical engineering engaged in the assignment. The report seems like a first or early draft/version, rather than something that has benefited from extended attention.		The report displays the effects of limited strategies or composing processes to conceptualize, develop, and finalize the report. The writer plans the use of various modalities to design the report and develop ideas, but control over design of the document or development may be insecure in places. The writer shows a general awareness of the demands of mechanical engineering, and makes a generally successful use of the field's characteristic processes. The report reveals some evidence of revision or other kinds of extended development.		The report shows evidence of extended attention. The writer used multiple strategies or composing processes to conceptualize, develop, and finalize the report. The report employs the kinds of modalities that indicate a deliberative process of document design and incorporation of material, or the writer adapts composing processes to a variety of modalities. The report displays evidence of good document design decisions, and careful revision. In developing the response to the assignment, the writer employs the methods commonly used for communication within mechanical engineering.	