

All memos will be graded using this rubric.

Technical Content Attributes	Excellent – 8 pts	Very Good – 6 pts	Adequate – 4 pts	Weak – 2 pts	Poor – 0 pts
Repeatability of the analysis (using the memo and a supplementary appendix).	N/A	N/A	Taken together, the memo and the appendix allow one to follow the author's work very easily.	There are a few places where one has to work to figure out what the author did to get from one step to the next, but overall the process is traceable.	Little to no work is shown such that it is nearly impossible to determine how the author arrived at their results and conclusions.
Modeling of the problem/choice of analysis method	All assumptions made were necessary and/or reasonable, and the method of analysis chosen is both tractable and sheds light on the problem at hand. Also, good reason is used to justify the assumptions/choice of method over any other candidates.	All assumptions made were necessary and/or reasonable, and the method of analysis chosen is both tractable and sheds light on the problem at hand. Also, some attempt is made to justify the assumptions made/choice of analysis method.	Most assumptions made were necessary and/or reasonable, none are completely unjustifiable, and the method of analysis chosen is both tractable and sheds light on the problem at hand.	At least one assumption is completely unjustifiable, or the chosen method of analysis is only mildly relevant to the problem at hand.	Multiple unnecessary and unreasonable assumptions are made OR chosen method of analysis is not at all relevant to the question at hand OR what assumptions were made and what analysis was done is nearly impossible to ascertain.
Technically correct calculations	No errors in executing the chosen method of analysis.	A few minor computational errors that result in a reasonable answer.	A major conceptual error that results in a reasonable answer OR A few minor computational errors that result in a wholly unreasonable answer.	A major conceptual error that results in a wholly unreasonable answer.	Multiple major conceptual errors OR wholly unreasonable answer that is not supported by any work.
Interpretation of Results	Conclusions are completely consistent with data analysis, and take uncertainties and potentially inaccurate	Conclusions are completely consistent with the data analysis results.	Conclusions mostly follow from the data analysis, but there are one or two questionable statements.	There are one or more statements that do not seem to square with the results of the data analysis at all.	Conclusions drawn are non-existent or completely contradictory to the data analysis conducted.

	assumptions into account.				
Writing Attributes	Excellent – 4 pts	Very Good – 3 pts	Adequate – 2 pts	Weak – 1 pts	Poor – 0 pts
Length and tone	The memo is an appropriate length, and is written in an appropriate tone for the given audience.	See Adequate. Is weak on only one of the two criteria.	The memo is a little long (not concise enough) or a little short (not detailed enough) AND tone is acceptable, but could be better.	The memo is much too long or much too short OR tone is wholly inappropriate for the audience	The memo is much too long or much too short AND tone is wholly inappropriate for the audience
Organization	The memo has an obvious beginning, middle and end that depend logically on one another.	There are less than four sentences that would be better placed somewhere else.	There are four or more sentences OR an entire paragraph that would be better placed somewhere else.	There are many sentences/paragraphs that could be better placed, but there is still some sense of moving logically from beginning to end.	The memo is either very disorganized and scattered, or a whole section is missing (introduction, development, or conclusion).
Transition	Well spaced and well-written transition sentences make sure that the reader always knows where they have been, where they are going, and why each piece of the memo is relevant and necessary.	There are one or two places in the memo where the reader may feel a bit unsure about how the current point being discussed is relevant to the rest of the memo (upon first reading).	There are three or four places in the memo where the reader may feel a bit unsure about how the current point being discussed is relevant to the rest of the memo (upon first reading).	There are one to two extremely abrupt transitions such that a reader feels completely lost for a few sentences.	Almost all transitions are made abruptly, with no attempt made to tie the preceding idea to the following idea, such that the reader is often feels completely lost as the author moves from one idea to another.
Presentation of numerical results	All numerical results are directly pertinent to the decision at hand and all presentations of data are concise, easy to read, and well labeled.	There are one or two pieces of extraneous numerical information or one or two minor flaws in the tables, plots, etc. (poor labeling, difficult to read, non-optimal choice of display method)	A few pieces of extraneous information are presented, and/or there are a few minor flaws in the tables, plots, etc.	A good deal of extraneous information is given OR the results are difficult but not impossible to read and understand.	No results are given OR the bulk of the results don't shed light on the problem at hand OR the results are extremely hard to understand due to bad labeling or a very awkward choice of display method.
Concreteness of recommendations	After reading the memo the reader knows what	After reading the memo the reader knows what	Recommendations are made, but they are not	Recommendations are made, but they do not	No clear recommendations are

	decision the author would make at that moment, and if they have any major reservations about it (that might indicate the need for further study).	decision the author would make at that moment.	very concrete (give two or three possible decisions but don't indicate their own preference, or only recommend further study).	speak directly to the problem at hand.	made, or they do not follow at all from the preceding discussion.
Frequency of spelling and grammatical errors	No major errors of any sort and only one or two minor grammatical errors.	Only a few spelling errors and/or minor grammatical errors are present.	There are several spelling and/or grammatical errors, but they are mostly minor, and do not exceed the frequency of one per paragraph.	Almost every paragraph contains a major spelling and/or grammatical error.	Memo is rife with spelling and/or grammatical errors.