

<b>Course (Prefix and Number):</b>		<b>Course Section Number:</b>			<b>Instructor:</b>	
<b>Student Name:</b>		<b>Student ID:</b>				
<b>EMPIRICAL &amp; QUANTITATIVE SKILLS VALUE RUBRIC</b>						
SLO: Students will be able to make and communicate informed conclusions and predictions based on the interpretation, manipulations, and analysis of empirical and/or quantitative data.						
	<b>Capstone</b>	<b>Milestone II</b>	<b>Milestone I</b>	<b>Benchmark</b>	<b>Below Benchmark</b>	<b>Score</b>
	4	3	2	1	0	
<b>Interpretation</b> Ability to explain information presented in quantitative or qualitative forms (e.g., equations, graphs, diagrams, tables, words)	Provides accurate explanations of information presented. Makes appropriate inferences based on that information. <i>For example, accurately explains the trend data shown in a graph and makes reasonable predictions regarding what the data suggest about future events.</i>	Provides accurate explanations of information presented. <i>For instance, accurately explains the trend data shown in a graph.</i>	Provides somewhat accurate explanations of information presented, but occasionally makes minor errors.	Attempts to explain information presented, but draws incorrect conclusions about what the information means. <i>For example, attempts to explain the trend data shown in a graph, but will frequently misinterpret the nature of that trend, perhaps by confusing positive and negative trends.</i>	Fails to meet benchmark requirements.	
<b>Representation</b> Ability to convert relevant information into various forms (e.g., equations, graphs, diagrams, tables, words)	Skillfully converts relevant information into an insightful portrayal in a way that contributes to further or deeper understanding.	Competently converts relevant information into an appropriate and desired portrayal.	Completes conversion of information but resulting portrayal is only partially appropriate or accurate.	Completes conversion of information but resulting portrayal is inappropriate or inaccurate.	Fails to meet benchmark requirements.	
<b>Calculation</b> <i>*Assessing this can be optional, if desired</i>	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem. Calculations are also presented elegantly (clearly, concisely, etc.)	Calculations attempted are essentially all successful and sufficiently comprehensive to solve the problem.	Calculations attempted are either unsuccessful or represent only a portion of the calculations required to comprehensively solve the problem.	Calculations are attempted but are both unsuccessful and are not comprehensive.	Fails to meet benchmark requirements.	
<b>Application /Analysis</b> Ability to make judgements and draw appropriate conclusions based on the quantitative and/or qualitative analysis of data, while recognizing the limits of this analysis	Uses the analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses the analysis of data as the basis for competent judgments, drawing reasonable and appropriately qualified conclusions from this work.	Uses the analysis of data as the basis for basic (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Uses the analysis of data as the basis for tentative, simplistic judgments, although is hesitant or uncertain about drawing conclusions from this work.	Fails to meet benchmark requirements.	
<b>Assumptions</b> Ability to make and evaluate important assumptions in estimation, modeling, and/or data analysis <i>*Assessing this can be optional, if desired</i>	Explicitly describes assumptions and provides compelling rationale for why each assumption is appropriate. Shows awareness that confidence in final conclusions is limited by the accuracy of the assumptions.	Explicitly describes assumptions and provides compelling rationale for why assumptions are appropriate.	Explicitly describes assumptions.	Attempts to describe assumptions.	Fails to meet benchmark requirements.	
<b>Communication</b> Expressing quantitative and/or qualitative evidence in support of the argument or purpose of the work (in terms of what evidence is used and how it is formatted, presented, and contextualized)	Uses quantitative and/or qualitative information in connection with the argument or purpose of the work, presents it in an effective format, and explicates it with consistently high quality.	Uses quantitative and/or qualitative information in connection with the argument or purpose of the work, though data may be presented in a less than completely effective format or some parts of the explication may be uneven.	Uses quantitative and/or qualitative information, but does not effectively connect it to the argument or purpose of the work.	Presents an argument for which quantitative and/or qualitative evidence is pertinent, but does not provide adequate explicit numerical support. (May use quasi-quantitative words such as "many," "few," "increasing," "small," and the like in place of actual quantities.)	Fails to meet benchmark requirements.	