

Rubric Inter-rater Reliability Testing Directions:

Scoring Directions: For each of the sample responses provided in a separate document, please use a separate sheet and circle or check the cell representing the score to be given for each row in the rubric. There is no need to provide the total score (that will be done automatically). Thus, each response item being scored should have an attached rubric, with five cells circled or checked. When finished, return the marked rubric sheets to: Dr. Neal Grandgenett, 406P Roskens Hall, University of Nebraska at Omaha, Omaha, Nebraska 68182, or scan them and email them to: ngrandgenett@unomaha.edu.

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“What is Bioinformatics?” Scoring Rubric

Introduction: The following is a rubric for scoring responses to the question: What is bioinformatics? This rubric is intended to help quantify responses in a pretest-posttest environment and to provide a numeric score for a specific response. The definition being used for bioinformatics in this context is as follows:

Definition of bioinformatics:

“An interdisciplinary field that is concerned with the development and application of algorithms that analyze biological data to investigate the structure and function of biological polymers and their relationships to living systems.”

Scoring Rubric:

Criteria	0	1	2	3
<u>Computer Science:</u> Development and application of algorithms	Does not mention computers	Mentions use of computers	Mentions application of algorithms/tools	Mentions the development and application of algorithms/tools
<u>Computer Science:</u> Recognition of data analysis	Does not mention data	Mentions data	Mentions mass data	Mentions mass data analysis
<u>Biology:</u> Recognition of analysis at the molecular level	Does not mention molecules or molecular level	Mentions molecules	Mentions a biological polymer	Generalizes to multiple biological polymers
<u>Biology:</u> Recognition that bioinformatics enhances the understanding of living systems	Does not mention relationship to biological function	Mentions biological function	Mentions biological function with an example	Generalizes the integration of biological function to living systems
<u>Bioinformatics:</u> Recognition of the interdisciplinary nature of bioinformatics	Does not recognize that bioinformatics uses concepts of other disciplines	Recognizes that bioinformatics uses concepts from different disciplines	Recognizes that bioinformatics is a discipline	Recognizes that bioinformatics generates new interdisciplinary concepts

Score