

### Revised UK Core Statistical Inferential Reasoning Rubric

**UK Core Learning Outcome 3:** Students will demonstrate an understanding of and ability to employ methods of quantitative reasoning.

**Outcomes and Assessment Framework:** Students will (a) demonstrate how fundamental elements of mathematical, logical and statistical knowledge are applied to solve real-world problems; and (b) explain the sense in which an important source of uncertainty in many everyday decisions is addressed by statistical science, and appraise the efficacy of statistical arguments that are reported for general consumption. Students will take one 3-hour course on the application of mathematical, logical and statistical methods, and one 3-hour course devoted to a conceptual and practical understanding of statistical inferential reasoning.

	<b>Exceeds Standards 4</b>	<b>Meets Standard 3</b>	<b>Nearly Meets Standard 2</b>	<b>Does Not Meet Standard 1</b>	<b>No Evidence 0</b>	<b>Not Measured NA</b>
<b>Demonstrate how fundamental elements of statistical knowledge are applied to solve real-world problems.</b>	Uses statistical analysis of data as the basis for deep and thoughtful judgments, drawing insightful, carefully qualified conclusions from this work.	Uses statistical analysis of data as the basis for workmanlike (without inspiration or nuance, ordinary) judgments, drawing plausible conclusions from this work.	Uses statistical analysis of data as the basis for tentative, basic judgments, although is hesitant or uncertain about drawing conclusions from this work.	Uses statistical analysis of data incorrectly or inappropriately, unable to draw conclusions, or draws incorrect conclusions from this work.	Inadequate/ Incomplete	Not Measured
<b>Explain the sense in which an important source of uncertainty in many everyday decisions is addressed by statistical science</b>	Uses statistical science to appropriately and thoughtfully explain everyday decisions with inherent uncertainty.	Uses statistical science to basically explain everyday decisions with inherent uncertainty.	Uses statistical science to explain everyday decisions with inherent uncertainty, but may not be appropriate.	Incorrectly uses statistical science to explain everyday decisions, or explanations may not be coherent.	Inadequate/ Incomplete	Not Measured

<b>Appraise the efficacy of statistical arguments that are reported for general consumption</b>	Skillfully and thoughtfully evaluates statistical arguments that are reported for general consumption	Completes evaluation of statistical arguments, and is appropriate/accurate.	Presents an argument that is pertinent, but does not provide adequate explicit statistical justification.	Presents an argument that is irrelevant, or provides an inadequate statistical justification.	Inadequate/ Incomplete	Not Measured
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