2021-2022 GENERAL EDUCATION ASSESSMENT REPORT

Office of Strategic Planning & Institutional Effectiveness

UK CORE DESIGN AND OVERSIGHT

The University's general education program, UK Core (Core), was approved by the University Senate in May 2009 and was implemented in the Fall 2011 semester. The Core curriculum was designed to foster student achievement in four overarching learning outcomes:

I. Students will demonstrate an understanding of and ability to employ the process of intellectual inquiry (Intellectual Inquiry).

II. Students will demonstrate competent written, oral, and visual communication skills both as producers and consumers of information (Composition & Communication).

III. Students will demonstrate an understanding of and ability to employ methods of quantitative reasoning (Quantitative Reasoning).

IV. Students will demonstrate an understanding of the complexities of citizenship and the process of making informed choices as engaged citizens in a diverse, multilingual world (Citizenship).

These broad learning outcomes are further defined through the Outcomes and Assessment Framework (see Appendix 1). Moreover, they have been mapped to the statewide learning outcomes, as shown in Appendix 2. To fulfill the Core requirements, students must complete a minimum of 30 credit hours within specific Knowledge Areas mapped to one of the four learning outcomes. Table 1 illustrates this curricular framework.

Table 1. UK Core Curricular Framework

Knowledge Area by Outcome	Credits
I. Intellectual Inquiry	
Arts & Creativity	3
Humanities	3
Social Sciences	3
Natural/Physical/Mathematical Sciences	3
II. Composition & Communication	
Composition & Communication I	3
Composition & Communication II	3
III. Quantitative Reasoning	
Quantitative Foundations	3
Statistical Inferential Reasoning	3
IV. Citizenship	
Community, Culture, & Citizenship in the USA	3
Global Dynamics	3
Total	**30***

**Some UK Core courses may exceed three credit hours, most notably for Natural/Physical/Mathematical Sciences and Quantitative Foundations.*

Students can complete courses that fulfill Core credit and pre-major or major requirements. Core-approved courses for the 2021-2022 academic year are listed online, and UK's Registrar's website provides information about their availability.

The UK Core Education Committee (UKCEC), a standing committee of the University Senate, oversees the Core. The UKCEC's primary responsibilities include the following:

I. Review and approve course proposals for inclusion in the Core.

II. Conduct ongoing reviews of courses to ensure continued alignment with the Core outcomes and assessment framework.

III. Work collaboratively with the Office of Strategic Planning & Institutional Effectiveness (OSPIE) to conduct assessment and program review of the Core.

UK CORE ASSESSMENT PROCESS

Cycle

Core learning outcomes are assessed in two-year cycles, with Core courses scheduled to participate in the assessment process at least once every four years. Intellectual Inquiry and Quantitative Reasoning outcomes were evaluated in 2021-22 and were previously assessed in 2018-19. Appendix 3 includes the courses scheduled for assessment this cycle.

The following Core outcomes and associated Knowledge Areas were targeted for assessment during the Fall 2021 and Spring 2022 semesters:

I. Intellectual Inquiry
- i. Arts & Creativity (ACR)
- ii. Humanities (HUM)
- iii. Social Sciences (SSC)
- iv. Natural, Physical, and Mathematical Sciences (NPM)

II. Quantitative Reasoning
- i. Quantitative Foundations (QFO)

Artifact Collection

The assessment process relies on course-embedded assignments designed by faculty within the departments that teach the course. Course instructors identify assignments for assessment and map them to Core outcomes in the Canvas Learning Management System and AEFIS (Assessment, Evaluation, Feedback & Intervention System). Instructors provide either a single assignment or multiple assignments that collectively address all the learning outcomes. After mapping is completed, AEFIS extracts students' work from each course's mapped assignment(s) for OSPIE staff to review.

Table 2a and Table 2b summarize the course and artifact information for the 2021-22 assessment cycle. Of the courses that mapped to Core outcomes, OSPIE staff identified artifacts and assignments that were not usable for reasons including missing pages or parts of the assignment, missing instructions, group work, or inaccessible file types.

Table 2a. Fall 2021 Course Participation by Core Area

Core Area	Number of approved Core Courses	Courses offered	Courses that mapped and had usable artifacts
Intellectual Inquiry	107	76	41 (54%)
ACR	24	18	13
HUM	47	31	12
NPM	19	14	6
SSC	17	13	10
Quantitative Reasoning	8	8	5 (63%)
QFO	8	8	5

Table 2b. Spring 2022 Course Participation by Core Area

Core Area	Number of approved Core Courses	Courses offered	Courses that mapped and had usable artifacts
Intellectual Inquiry	107	66	33 (50%)
ACR	24	16	8
HUM	47	24	10
NPM	19	15	6
SSC	17	11	9
Quantitative Reasoning	8	6	3 (50%)
QFO	8	6	3

Evaluators

The UKCEC Chair recruited evaluators by sending an invitation to Associate Deans, who disseminated the message within their colleges. Interested individuals completed a survey to determine their availability for attending a pre-scheduled norming session and scoring their artifacts within a two-week period. Instructors who taught a Core course in their Knowledge Area in the past three years were prioritized. Part-time instructors and graduate students could

volunteer; however, faculty took priority.

The final evaluators were selected in consultation with the UK Core Education Committee Chair. Of those who indicated they could serve, 20 were formally invited to be a UK Core evaluator. All 20 accepted the invitation and were added to a Microsoft Teams site where they completed asynchronous training modules. The asynchronous training modules contain videos describing the assessment process and how to score artifacts using AEFIS. Evaluators also reviewed copies of the associated Core rubrics in their Teams site and submitted personal information so they could receive their $1,000 payment.

All the final evaluators held faculty roles and reflected a diverse academic background (see Table 3 for a breakdown of the colleges and departments represented). Additionally, 16 had taught a UK Core course previously, and eight had been an evaluator in an earlier assessment cycle.

Table 3. Evaluators' College and Department Breakdown

Colleges Represented	Departments Represented
College of Agriculture, Food, and Environment	Community & Leadership Development Landscape Architecture Plant & Soil Sciences
College of Arts & Sciences	Anthropology Earth & Environmental Sciences English Gender & Women's Studies Hispanic Studies History Linguistics Physics & Astronomy Sociology Writing, Rhetoric, & Digital Studies
College of Communication & Information	Department of Integrated Strategic Communication School of Information Science
College of Engineering	Department of Mechanical & Aerospace Engineering
College of Fine Arts	School of Art & Visual Studies School of Music*
The Lewis Honors College	

**Department had two faculty evaluators*

Process

OSPIE scheduled five synchronous virtual norming sessions (one for each Knowledge Area) and one in-person norming session featuring attendees from each Knowledge Area. Scores generated by the evaluators were normed during the synchronous sessions to increase consistency and interrater agreement. The virtual sessions were recorded and made available for evaluators to review again if needed. After norming, evaluators were given access to their assigned artifacts and asked to complete their scoring in two weeks.

Evaluators were randomly assigned courses from the same Knowledge Area they taught and assessed a random sample of 20 artifacts from each course within AEFIS. Artifacts were drawn across available sections if multiple sections were taught, and evaluators scored all samples from a course when fewer than 20 artifacts were available. In total, each evaluator was assigned approximately 100 artifacts to score.

Student artifacts were scored using standardized rubrics. Intellectual Inquiry rubrics (see Appendix 4) contain a five-point rating scale: 0=no evidence; 1=does not meet expectations; 2=nearly meets expectations; 3=meets standard; and 4=exceeds standards. Evaluators could also respond with N/A (Not Measured) if they believed a criterion did not apply to an assignment.

Quantitative Foundations relies on two rubrics; one for math (QFOM) and non-math (QFON) courses. The math rubric uses a four-point scale to score student work: 1=benchmark; 2 and 3=milestones; and 4=capstone. Meanwhile, the non-math rubric relies on a three-point scale: 1=does not meet expectations, 2=meets expectations, and 3=exceeds expectations. Evaluators could score artifacts as N/A for both math and non-math samples. Because the two rubrics use different scales to score student performance, the results are broken out by math and non-math at the Core and Knowledge Area levels.

2021-22 INTERRATER AGREEMENT ANALYSIS

Within each course, 10% of artifacts were scored by two evaluators to determine interrater agreement, meaning two artifacts from each course were scored twice under the sampling method unless a class had fewer than 20 artifacts. Evaluators scored all artifacts independently and could only view their scores.

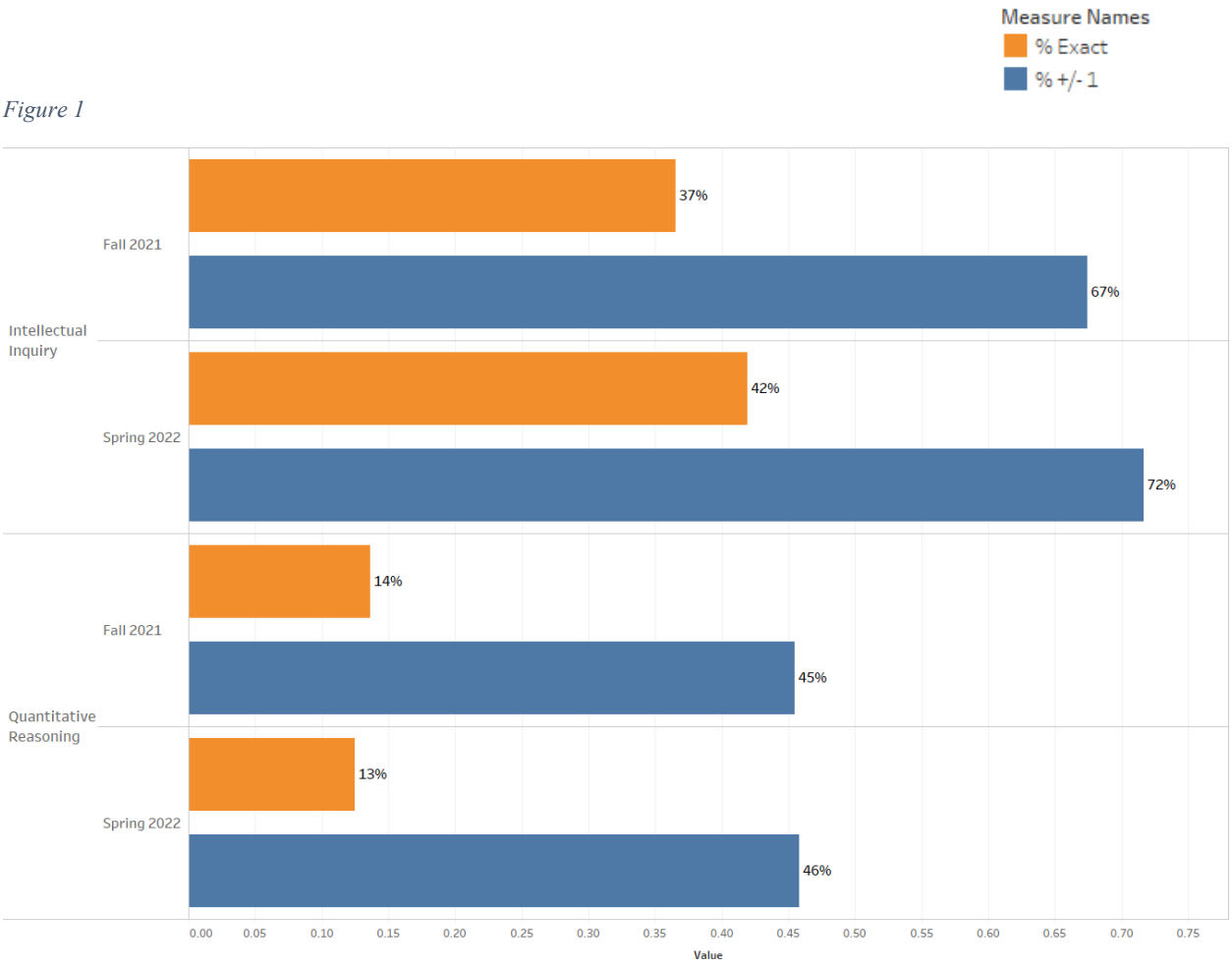
OSPIE assessed interrater agreement (IRA) by determining if two evaluators scored their overlapping artifact either the same or within one point for each Core outcome, Knowledge Area, and rubric criterion. Examining Core outcomes and Knowledge Areas provides evidence of broad trends concerning evaluator agreement, while criterion-level results reveal specific disagreements and potential outliers.

For this analysis, if both evaluators scored an artifact as N/A, they were identified as having the same score. However, if one evaluator scored N/A while the other scored 0 in Intellectual Inquiry or 1 in Quantitative Reasoning, they were not counted as within one point because of differences in measurement. The numbered scales measure students' ability to satisfy criteria. N/A indicates that the assignment did not provide an opportunity for the student to meet a

criterion, making it unwise to include on a scale for student performance. This decision resulted in 27 of the 710 scores not being labeled as 'within 1 point.'

Figure 1 illustrates IRA for the assessed Core outcomes. Across semesters, evaluator agreement remained relatively consistent within each outcome. Intellectual Inquiry saw noticeable increases in agreement from Fall to Spring, while Quantitative Reasoning remained nearly the same for both semesters. However, when comparing the two Core outcomes against each other, evaluators agreed more often in Intellectual Inquiry than Quantitative Reasoning.

Figure 1



Breaking out the data by Knowledge Area allows for a more granular picture (see Table 4). In two instances, evaluators 'exactly' agreed in over 50% of artifacts (Fall – NPM and Spring - SSC). However, most of the exact scores ranged from 29% - 39%, with Quantitative Foundations having the lowest exact agreement in both Fall and Spring.

In all but two cases, over 50% of evaluators scored within one point of each other. Excluding Quantitative Foundations, agreement ranged from 57% (Fall - ACR) to 85% (Spring – SSC), with several scores near or above the 70% mark. Although Quantitative Foundations evaluators' 'within one-point' agreement did not reach 50%, they came close. In Fall, 45% of evaluators scored within one-point, and Spring saw a slight improvement, with evaluators scoring within one-point 46% of the time.

Table 4

Core Area	Knowledge Area	Term	Exact Score	+/- 1 Point
Intellectual Inquiry	21-22 Arts and Creativity	Fall 2021	29%	57%
		Spring 2022	39%	59%
	21-22 Humanities	Fall 2021	37%	73%
		Spring 2022	37%	77%
	21-22 Natural, Physical, and Mathematical Sciences	Fall 2021	52%	70%
		Spring 2022	35%	58%
	21-22 Social Sciences	Fall 2021	33%	69%
		Spring 2022	55%	85%
Quantitative Reasoning	21-22 Quantitative Foundations	Fall 2021	14%	45%
		Spring 2022	13%	46%

The interrater agreement at the criteria level is presented in Table 5. In several cases, there was a sizeable gap between the exact and within one-point categories, suggesting that when evaluators disagreed, the disagreement was typically within one rubric point. This pattern was not observed for several criteria items in Quantitative Foundations, suggesting that attention needs to be given to these rubric items in the future.

Table 5 Criteria Level Interrater Agreement

Term	Knowledge Area	Rubric Criteria	Exact	Within 1.0
Fall 2021	Arts and Creativity	Ethics: Reflects on and communicates the impact and effectiveness of their own creative work.	42%	58%
		Inquiry: Defines and distinguishes approaches to creativity.	25%	58%
		Methods/Approaches: Uses appropriate methods and techniques to analyze, interpret, and critique the creative works of others.	29%	54%
		Problem Solving: Actively engage in the creation of an object, installation, presentation, or performance.	21%	58%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**

		Ethics: Explore the historical, contextual, or ethical implications revealed through the use of differing approaching methodologies, or arguments [Critical Framework] when analyzing information or texts.	52%	78%
		Evaluate: Evaluate theses and conclusions (of other scholars) based on existing knowledge, information, or evidence from credible sources.	35%	48%
Fall 2021	Humanities	Inquiry: Identify contextualized, critically-developed, and coherent open-ended questions or topics to guide informed explorations and evidence-based evaluations.	35%	91%
		Methods/Approaches: Analyze different points of view, issues, or problems within the humanities using a variety of evidence, information and/or approaches.	35%	65%
		Problem Solving: Articulate and sustain an original interpretation or argument based on sound evidence and reasoning.	30%	83%

Term	Knowledge Area	Rubric Criteria	Exact	Within 1.0
Fall 2021	Natural, Physical, and Mathematical Sciences	Ethics: Demonstrate understanding of a significant discovery in a given branch of inquiry and the impact on society.	75%	92%
		Evaluation: Select and use appropriate information to support a conclusion.	58%	75%
		Inquiry: Define a problem and/or clearly formulate a problem statement.	25%	58%
		Methods/Approaches: Develop and/or apply a rigorous methodology to investigate a hypothesis or a problem.	50%	50%
		Problem Solving: Apply fundamental principles to solve a problem or to explain observed phenomena.	50%	75%

Term	Knowledge Area	Rubric Criteria	Exact	Within 1.0
Fall 2021	Social Sciences	Ethics: Explore how a social science discipline influences society.	47%	59%
		Evaluation: Identify and use appropriate information resources to substantiate evidence-based claims.	29%	82%
		Inquiry: Demonstrate an ability to identify a well-formulated question pertinent to a social science discipline and to employ the discipline's conceptual and methodological approaches in identifying reasonable research strategies that could speak to the question.	35%	53%
		Methods/Approaches: Demonstrate an understanding of methods and ethics of inquiry that lead to social scientific knowledge.	12%	65%
		Problem Solving: Propose potential solutions to problems based on sound evidence and reasoning.	41%	88%

Term	Knowledge Area	Rubric Criteria	Exact	Within 1.0
Fall 2021	Quantitative Foundations (Math)	Interpretation: Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).	17%	33%
		Representation: Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words).	17%	33%
		Calculation	0%	67%
		Application / Analysis: Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis.	17%	17%
		Assumptions: Ability to make and evaluate important assumptions in estimation, modeling, and data analysis.	17%	17%
		Communication: Expressing quantitative 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).	17%	83%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**
Fall 2021	Quantitative Foundations (Non-Math)	Problem Solving: Demonstrate how fundamental elements of mathematical and/or logical knowledge are applied to solve real-world problems	25%	75%
		Evaluation: Construct or evaluate numerical, logical, or statistical arguments that are applied to real-world problems	0%	50%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**
Spring 2022	Arts and Creativity	Inquiry: Defines and distinguishes approaches to creativity.	29%	50%
		Ethics: Reflects on and communicates the impact and effectiveness of their own creative work.	36%	50%
		Methods/Approaches: Uses appropriate methods and techniques to analyze, interpret, and critique the creative works of others.	36%	64%
		Problem Solving: Actively engage in the creation of an object, installation, presentation, or performance.	57%	71%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**
Spring 2022	Humanities	Ethics: Explore the historical, contextual, or ethical implications revealed through the use of differing approaching methodologies, or arguments [Critical Framework] when analyzing information or texts.	39%	89%
		Evaluate: Evaluate theses and conclusions (of other scholars) based on existing knowledge, information, or evidence from credible sources.	56%	61%

		Inquiry: Identify contextualized, critically-developed, and coherent open-ended questions or topics to guide informed explorations and evidence-based evaluations.	44%	72%
		Methods/Approaches: Analyze different points of view, issues, or problems within the humanities using a variety of evidence, information and/or approaches.	17%	83%
		Problem Solving: Articulate and sustain an original interpretation or argument based on sound evidence and reasoning.	28%	78%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**
Spring 2022	Natural, Physical, and Mathematical Sciences	Ethics: Demonstrate understanding of a significant discovery in a given branch of inquiry and the impact on society.	50%	67%
		Evaluation: Select and use appropriate information to support a conclusion.	33%	58%
		Inquiry: Define a problem and/or clearly formulate a problem statement.	33%	50%
		Methods/Approaches: Develop and/or apply a rigorous methodology to investigate a hypothesis or a problem.	42%	50%
		Problem Solving: Apply fundamental principles to solve a problem or to explain observed phenomena.	17%	67%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**
Spring 2022	Social Sciences	Ethics: Explore how a social science discipline influences society.	63%	81%
		Evaluation: Identify and use appropriate information resources to substantiate evidence-based claims.	56%	94%
		Inquiry: Demonstrate an ability to identify a well-formulated question pertinent to a social science discipline and to employ the discipline's conceptual and methodological approaches in identifying reasonable research strategies that could speak to the question.	63%	81%
		Methods/Approaches: Demonstrate an understanding of methods and ethics of inquiry that lead to social scientific knowledge.	50%	81%
		Problem Solving: Propose potential solutions to problems based on sound evidence and reasoning.	44%	88%
Term	**Knowledge Area**	**Rubric Criteria**	**Exact**	**Within 1.0**
Spring 2022	Quantitative Foundations (Math)	Interpretation: Ability to explain information presented in mathematical forms (e.g., equations, graphs, diagrams, tables, words).	0%	50%
		Representation: Ability to convert relevant information into various mathematical forms (e.g., equations, graphs, diagrams, tables, words).	25%	50%

	Calculation	25%	50%
	Application / Analysis: Ability to make judgments and draw appropriate conclusions based on the quantitative analysis of data, while recognizing the limits of this analysis.	0%	50%
	Assumptions: Ability to make and evaluate important assumptions in estimation, modeling, and data analysis.	25%	25%
	Communication: Expressing quantitative 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).	0%	50%

ASSESSMENT RESULTS

Intellectual Inquiry rubrics use a five-point scale ranging from 0 (No Evidence) to 4 (Exceeds Standards). The Quantitative Foundations – Math (QFOM) rubric has a four-point scale to score student work: 1=benchmark; 2 and 3=milestones; and 4=capstone, while the Quantitative Foundations – Non-Math (QFON) rubric relies on a three-point scale: 1=does not meet expectations, 2=meets expectations, and 3=exceeds expectations. Evaluators could score rubric criteria as N/A for samples in each Knowledge Area.

Fall 2021

Figures 2-5 show the average student score for Core Outcomes and their Knowledge Areas. The overall student performance in Intellectual Inquiry, Quantitative Reasoning (Math), and Quantitative Reasoning (Non-math) was 2.4, 3.1, and 1.9, respectively. The scores indicate that students performed, on average, at levels between ‘nearly meet expectations’ and ‘meets expectations’ in Intellectual Inquiry. Average student performance exceeded milestone 3 in Quantitative Reasoning (Math), while the non-math average approached ‘meets expectations.’

Figure 2. Student performance averages by Core outcome using a 0-4 rubric scale

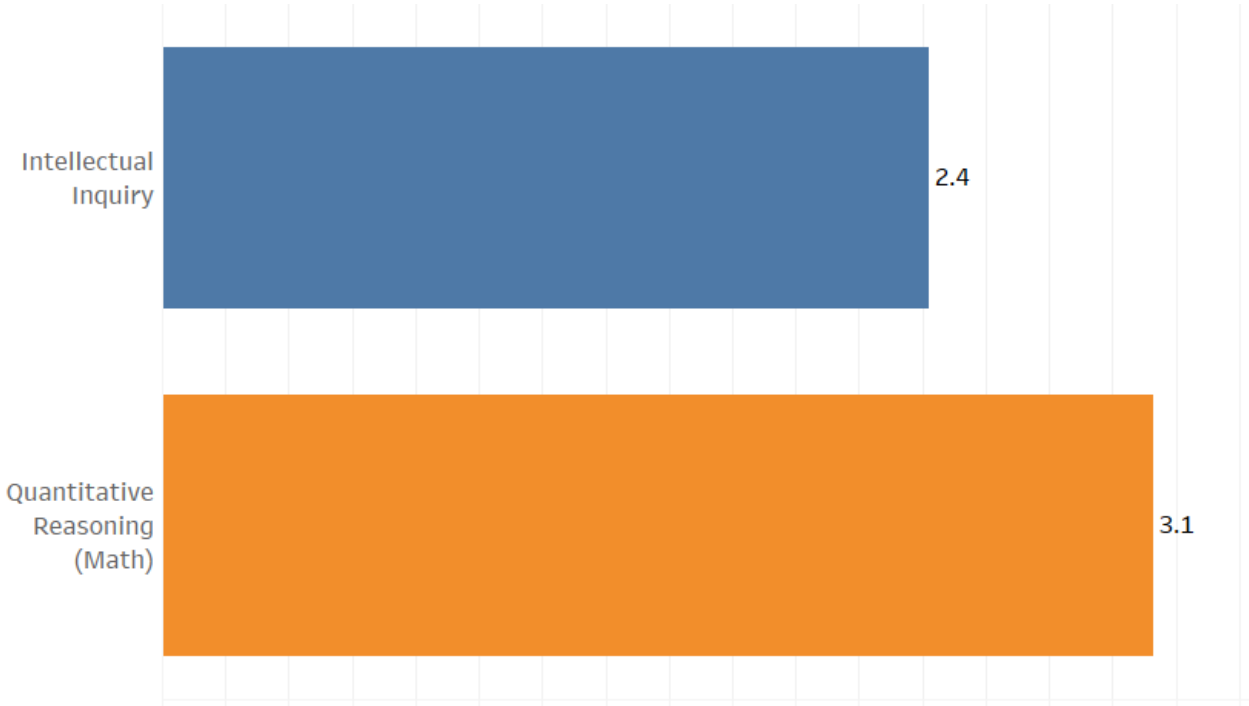


Figure 3. Student performance average by Core outcome using a 1-3 rubric scale

Breaking out average scores by Knowledge Areas demonstrates how performance varied. Within Intellectual Inquiry, performance averages ranged from a high of 3.2 in Natural/Physical/Mathematical Sciences to a low of 2.1 in Arts and Creativity. The means suggest that student performance fell above the 'nearly meet standard' level for the ACR, HUM, and SSC Knowledge Areas. However, for the NPM Knowledge Area, average student performance 'met the standards' in the rubric. Because Quantitative Foundations Math and Non-Math were the only knowledge area assessed within Quantitative Reasoning, the results are the same as their Core level averages. Average student performance exceeded milestone 3 in Math, and the Non-Math mean approached 'meets expectations.'

Figure 4. Student performance averages by Knowledge Area using a 0-4 rubric scale

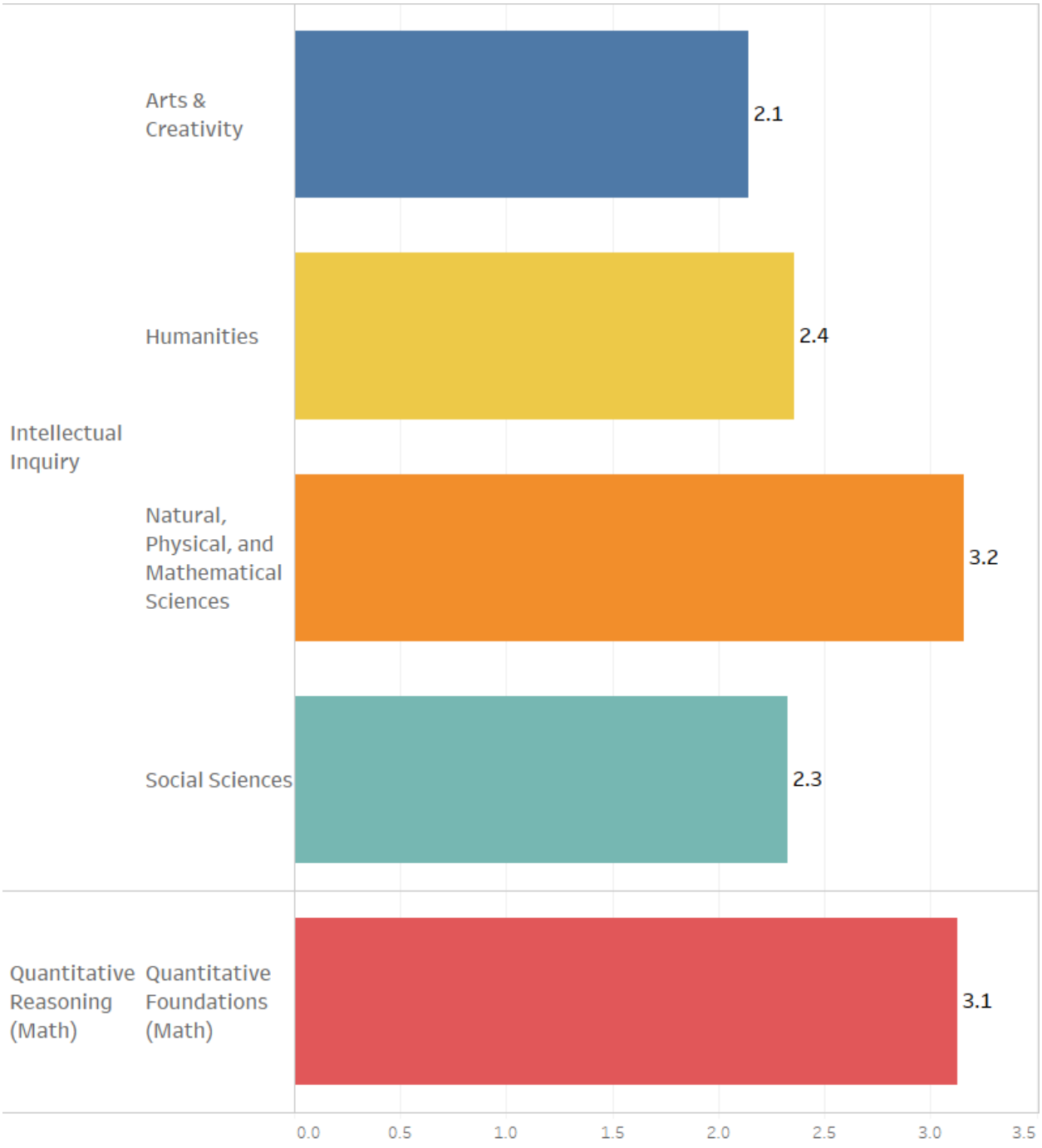
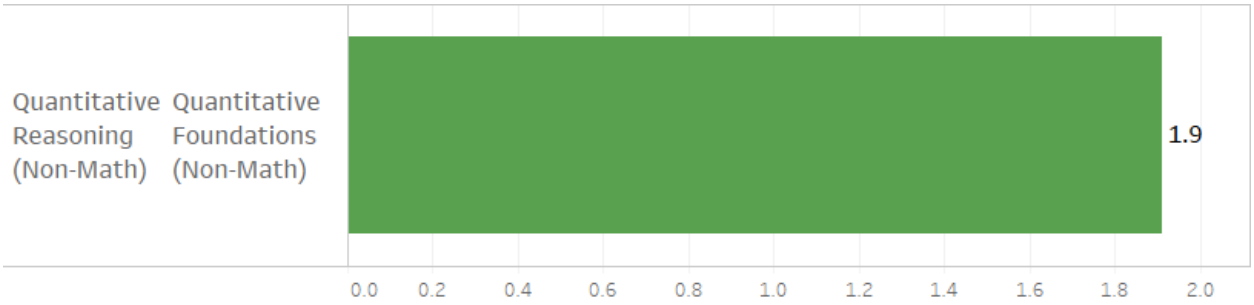


Figure 5. Student performance average by Knowledge Area using a 1-3 rubric scale



The rubric criteria provide better insight into students' specific strengths and weaknesses in each knowledge area (see Figures 6 and 7). Within Humanities and Natural/Physical/Mathematical Sciences, performance was relatively consistent, with scores ranging from 2.2 (Evaluate) to 2.5 (Inquiry) in Humanities and 3.0 (Inquiry) to 3.3 (Methods/Approaches) in NPM. While the remaining Knowledge Areas experienced more variability, the overall picture is positive. Of the 25 criteria, 23 had average scores of over 2.0 (nearly meets expectations). NPM and QFOM were particularly strong, with all but one criterion average meeting expectations.

Figure 6. Criteria averages using a 0-4 rubric scale

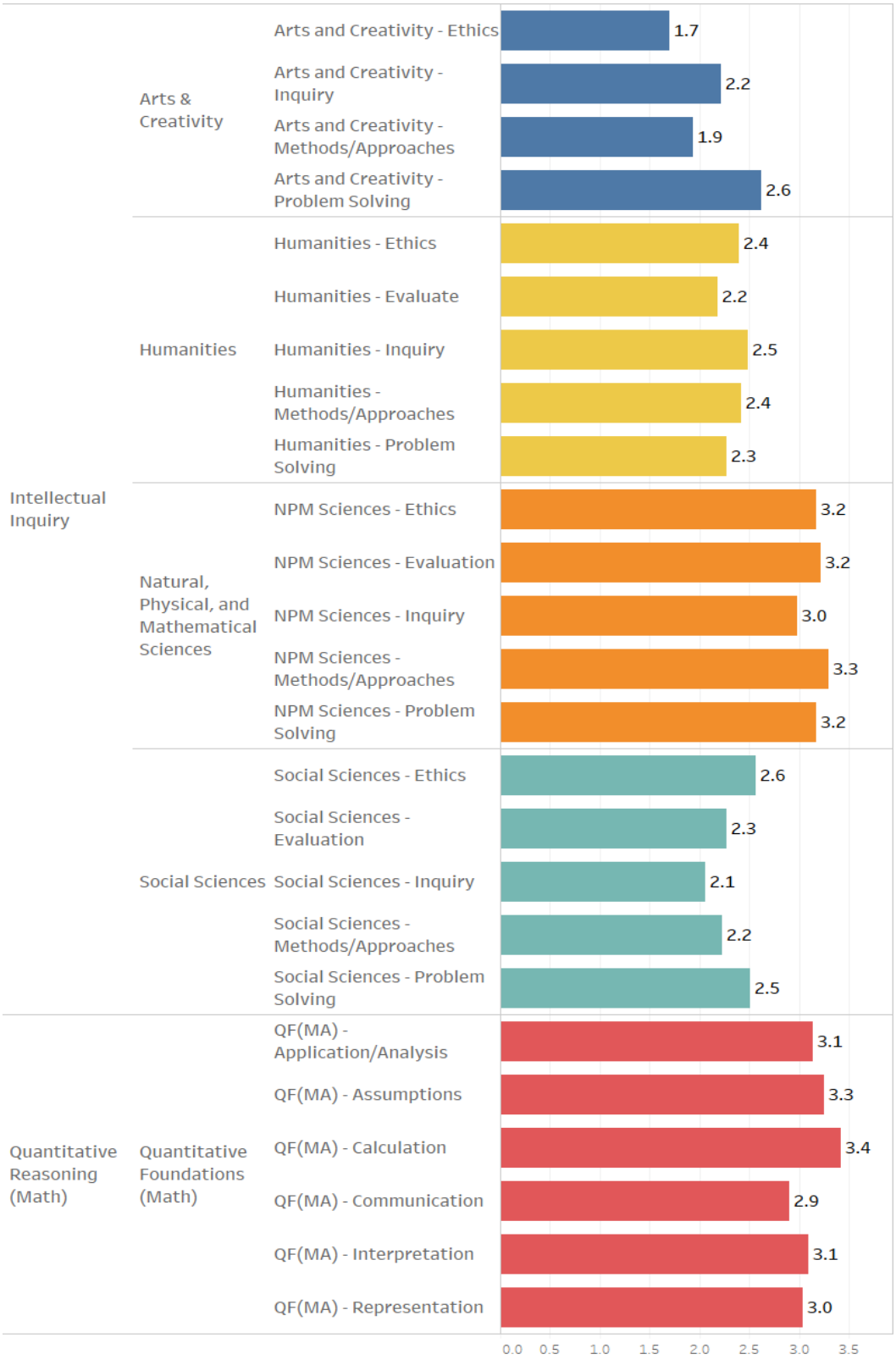
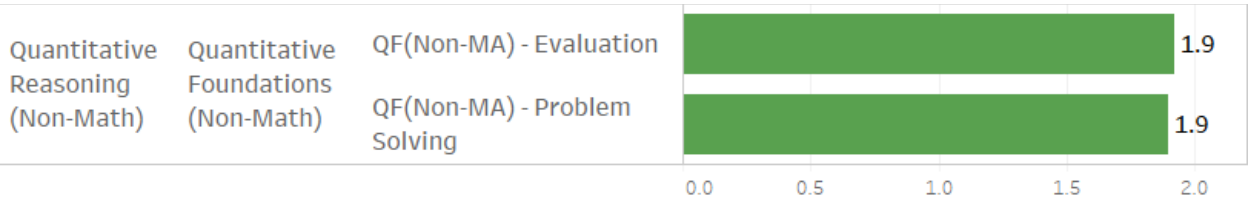


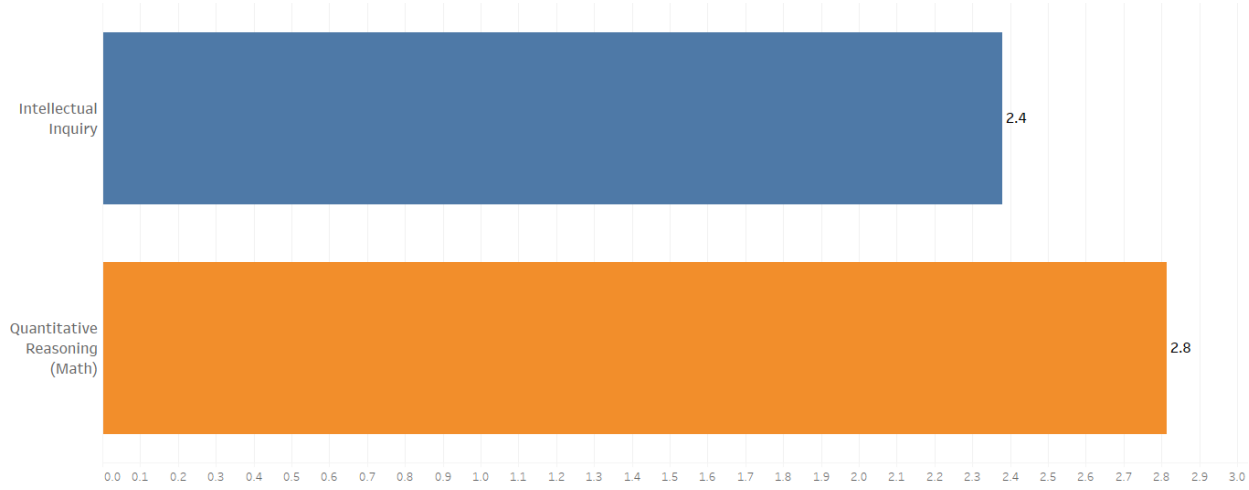
Figure 7. Criteria average using a 1-3 rubric scale



Spring 2022

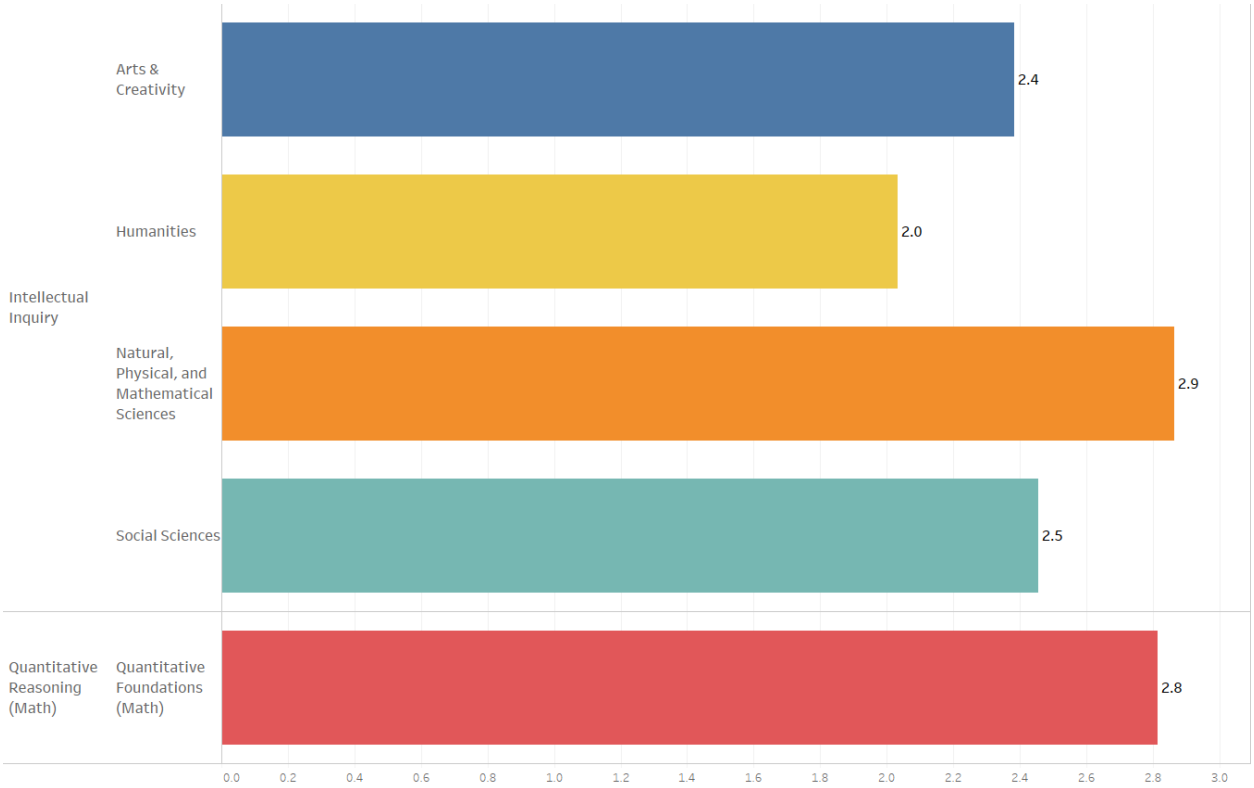
In the Spring 2022 term, the average student performance within Intellectual Inquiry remained at 2.4 (slightly above 'nearly meet standard'), and the Quantitative Reasoning (Math) average dipped to 2.8, staying near the meets standard level (see figure 8). No Quantitative Reasoning (Non-Math) artifacts were available to score in Spring 2022.

Figure 8.



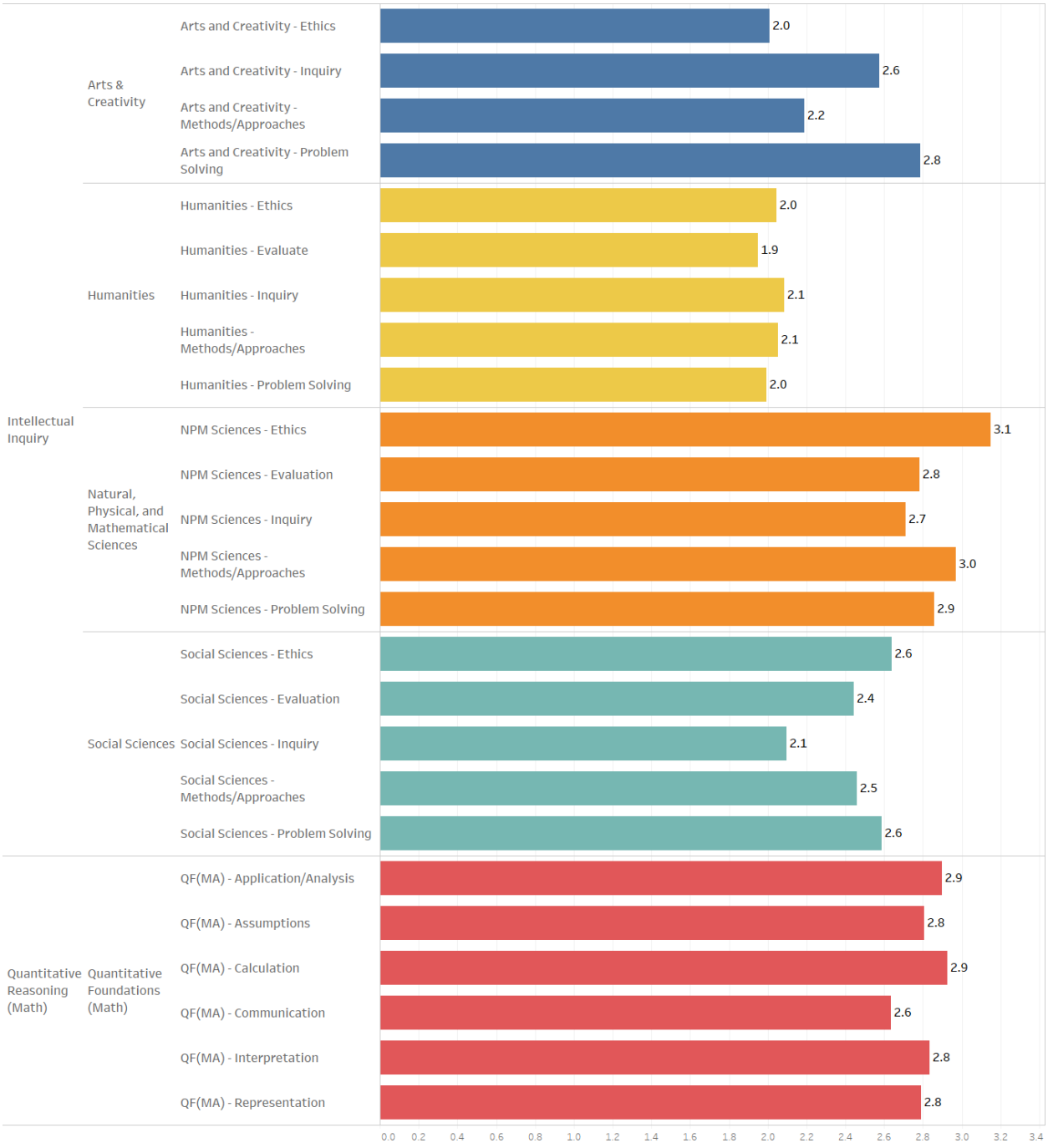
Student performance remained steady at the Knowledge Area level (see Figure 9), with averages between 2.0 (Humanities) and 2.9 (Natural/Physical/Mathematical Sciences). Averages saw little change compared to the Fall semester. No Knowledge Area saw its mean student score change by more than 0.4 in either direction from Fall to Spring. However, HUM's average score decreased by 0.4, giving it the new lowest mean, while ACR saw a 0.3 improvement. Social Sciences and Arts and Creativity were the only Knowledge Areas that improved from Fall to Spring.

Figure 9.



Student achievement at the criteria level (see Figure 10) remained comparable to the Fall averages, with no criteria average changing from one semester to the next more than 0.5. Additionally, nearly all criteria averages were 2.0 or higher. Only 'Evaluate – Humanities' fell below 2.0 with an average score of 1.9. Like the Fall semester, Quantitative Reasoning (Math) and Natural/Physical/Mathematical Sciences had strong average scores with means approaching or exceeding 3.0.

Figure 10.



DISCUSSION

The 2021-2022 Core assessment results provided valuable insight into student achievement. Students performed between the levels ‘nearly meets expectations’ and ‘meets standards’ in Intellectual Inquiry across semesters. Within Quantitative Reasoning (Math), average student performance was at or slightly above the ‘Milestones’ level, while the Quantitative Reasoning (Non-Math) average nearly reached the level of ‘Meets Expectations.’

The Core assessment results and process present growth opportunities to further expand student achievement. Particular attention should be paid to assignment alignment with Core outcomes. In total, 12.5% of evaluators' scores were N/A. Ideally, mapped assignments should align with all the related Core outcomes; however, the sizable percentage of N/As suggests that assignments could be better aligned.

Interrater agreement is another area where improvements can be made. Quantitative Reasoning's exact and within one-point agreement lagged far behind that of Intellectual Inquiry. And while several Knowledge Areas had strong levels of agreement, more can be done to produce greater consistency across Core outcomes and semesters. Specifically, UKCEC members can review the rubrics to ensure that the criteria are clear for future evaluators.

In response to the concerns described above, OSPIE, in collaboration with the UKCEC, will implement a strategy to assist faculty with mapping assignments that align with all the related Core outcomes. As a result, student samples from better-aligned assignments should more clearly demonstrate Core outcomes and elicit higher-quality data regarding student performance.

Additionally, OSPIE will review evaluators' feedback from the post-assessment survey. The survey asked for constructive feedback on artifact quality, norming sessions, the overall process, and Core rubrics. The comments could provide beneficial information concerning how we might increase alignment and improve interrater agreement.

After submitting this report, OSPIE will create dashboards that visualize each department's 2021-2022 assessment results and ask that departments review the assessment result to determine how the assessment results can be used to improve students' performance. Moreover, colleges and departments can review how previous changes might have affected their results and create an action plan for future assessment cycles, ultimately helping them close the loop.

APPENDIX 1

Learning Outcomes of General Education

(Approved by the University Senate December 8, 2008)

I. *Students will demonstrate an understanding of and ability to employ the processes of intellectual inquiry.* [12 credit hours]

Outcomes and Assessment Framework

Students will be able to identify multiple dimensions of a good question;[1] determine when additional information is needed, find credible information efficiently using a variety of reference sources, and judge the quality of information as informed by rigorously developed evidence; explore multiple and complex answers to questions/issues problems within and across the four broad knowledge areas: arts and creativity, humanities, social and behavioral sciences, and natural/ physical/mathematical sciences; evaluate theses and conclusions in light of credible evidence; explore the ethical implications of differing approaches, methodologies or conclusions; and develop potential solutions to problems based on sound evidence and reasoning.

Curricular Framework

Students will take four 3-credit courses, one in each of the four broad knowledge areas defined above.

II. *Students will demonstrate competent written, oral, and visual communication skills both as producers and consumers of information.* [6 credit hours]

Outcomes and Assessment Framework

Students will demonstrate the ability to construct intelligible messages using sound evidence and reasoning that are appropriate for different rhetorical situations (audiences and purposes) and deliver those messages effectively in written, oral, and visual form. Students will also demonstrate the ability to competently critique (analyze, interpret, and evaluate) written, oral, and visual messages conveyed in a variety of communication contexts.

Curricular Framework

Students will take one 3-hour course focusing on the development of effective writing skills, and one 3-hour integrated communications course focusing on oral and visual communication skills, along with continued development of written communication skills.[2]

III. *Students will demonstrate an understanding of and ability to employ methods of quantitative reasoning.* [6 credit hours]

Outcomes and Assessment Framework

Students will (a) demonstrate how fundamental elements of mathematical, logical and statistical

[1] i.e., interesting, analytical, problematic, complex, important, genuine, researchable...

[2] This proposal assumes the continuation of the Graduation Writing Requirement currently in place.

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.

Curricular Framework
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.

IV. *Students will demonstrate an understanding of the complexities of citizenship and the process for making informed choices as engaged citizens in a diverse, multilingual[3] world.* [6 credit hours]

Outcomes and Assessment Framework
Students will recognize historical and cultural differences arising from issues such as ethnicity, gender, language, nationality, race, religion, sexuality, and socioeconomic class; students will demonstrate a basic understanding of how these differences influence issues of social justice, both within the U.S. and globally; students will recognize and evaluate the ethical dilemmas, conflicts, and trade-offs involved in personal and collective decision making.

Curricular Framework
Students will take two courses, each with a topical or regional focus. The first course will include critical analysis of diversity issues as they relate to the contemporary United States. The second will be a non-US based course that includes critical analysis of local-to-global dynamics as they relate to the contemporary world. In addition, each course must address at least 2 of these 4 topics: societal and institutional change over time; civic engagement; cross-national/comparative issues; power and resistance.[4]

[3] Current University of Kentucky entrance requirements include 2 years of second-language study in high school; this knowledge requirement should be assessed upon students' entrance to the University, as a prerequisite for the fulfillment of Learning Outcome IV.
[4] This proposal recognizes also that such issues will be addressed throughout the students' course of study, building effectively upon the foundation of the General Education Core curriculum.

APPENDIX 2

Table 6 Map of UK Core Outcomes to Kentucky Statewide Learning Outcomes

UK Core Outcome Category	Statewide Learning Outcome Category	Rationale
Intellectual Inquiry	Arts & Humanities Natural Sciences Social and Behavioral Sciences	Intellectual Inquiry courses establish a foundation for critical and thoughtful approaches to solving problems and promoting intellectual development in the following areas: Arts & Creativity, Humanities, Natural/Physical/Mathematical Sciences, and Social Sciences. This outcome area promotes the development of evidence-based thinkers: students capable of understanding what critical argument demands and what it offers as a way of understanding ourselves, others, and the world around us.
Composition & Communication	Written & Oral Communication	Both outcomes address communicating in a variety of forms and contexts with an emphasis on information literacy and critical analysis.
Citizenship	Social & Behavioral Sciences	The UK Core and statewide outcomes overlap in asking students to analyze problems pertinent to human experience. The UK Core area outcome is particularly focused on historical and cultural differences arising from a variety of human dynamics and experiences. This is one of two UK Core area outcomes that map to the statewide outcome.
Quantitative Reasoning	Quantitative Reasoning	Quantitative Reasoning courses cover areas of Quantitative Foundations and Statistical Inferential Reasoning. Through these courses, students interpret, illustrate, and analyze information in mathematical and statistical forms.

APPENDIX 3

Table 7 Courses scheduled for assessment 2021-22 cycle

Core Outcome	Knowledge Area	Class	Class Title
Intellectual Inquiry	Arts & Creativity	BAE 402	BIOSYSTEMS ENGINEERING DESIGN I
		BAE 403	BIOSYSTEMS ENGINEERING DESIGN II
		CME 455	CHEM ENGIN PRODUCT AND PROCESS DESIGN I
		DST 200	DIGITAL LITERACY
		EGR 101	ENGINEERING EXPLORATION I
		EGR 103	ENGINEERING EXPLORATION II
		EGR 215	INTRO TO PRAC OF EGR TRANSFER STUDENTS
		ENG 107	INTRODUCTION TO CREATIVE WRITING
		ENG 130	LITERARY ENCOUNTERS
		ENG 168	JAZZ AND DEMOCRACY
		ENG 180	GREAT MOVIES: (SR)
		HON 252	HONORS ARTS & CREATIVITY: (SR)
		LIN 200	HOW TO CREATE YOUR OWN LANGUAGE
		MCL 312	THE ART OF ADAPTATION
		ME 411	ME CAPSTONE DESIGN I
		MNG 592	MINE DESIGN PROJECT II
		PHI 193	CIRCUS AND PHILOSOPHY
		PHI 393	PHIL OF FILM
		PLS 240	INTRODUCTION TO FLORAL DESIGN
		TA 110	THEATRE: AN INTRODUCTION
		TA 120	CREATIVITY & ART OF ACTING
		TA 150	CRTVTY & THE ART OF DESIGN & PRODUCTION
		TAD 140	INTRODUCTION TO DANCE
		WRD 307	WRITING COMICS
	Humanities	AAS 253	HISTORY OF PRE-COLONIAL AFRICA
		AAS 264	INTRODUCTION TO BLACK WRITERS
		AIS 228	ISLAMIC CIVILIZATION
		CHI 330	INTRO TO CHINESE CULTURE PRE-MOD TO 1840
		CHI 331	INTRO TO CHINESE CULTURE 1840 TO PRESENT
		CLA 135	GREEK/ROMAN MYTHOLOGY
		CLA 229	ANCNT NEAR EAST/GRECE DTH ALEX THE GREAT
		CLA 230	HELLENISTIC WRLD/ROME DTH OF CONSTANTINE
		ENG 142	GLOBAL SHAKESPEARE
		ENG 191	LITERATURE AND THE ARTS OF CITIZENSHIP
		ENG 230	INTRO TO LIT: (SR)

		ENG 260	INTRODUCTION TO BLACK WRITERS
		ENG 280	INTRODUCTION TO FILM
		ENG 290	INTRODUCTION TO WOMEN'S LITERATURE
		FR 103	FRENCH CINEMA
		GER 103	FAIRY TALES IN EUROPEAN CONTEXT
		GER 305	GERMAN FILM TODAY
		GWS 201	GENDER AND POPULAR CULTURE
		GWS 309	HEALTH, HISTORY, AND HUMAN DIVERSITY
		HIS 104	HIS EUR THRU MID-17 CENT
		HIS 105	HIS EUR MID 17 CENT-PRES
		HIS 108	HISTORY OF THE U.S. THRU 1876
		HIS 109	HISTORY OF THE U.S. SINCE 1877
		HIS 112	THE MAKING OF MODERN KENTUCKY
		HIS 121	WAR AND SOCIETY, 1914-1945
		HIS 202	HIST BRIT PEOPLE TO REST
		HIS 229	ANCNT NEAR EAST/GRECE DTH ALEX THE GREAT
		HIS 230	HELLENISTIC WRLD/ROME DTH OF CONSTANTINE
		HIS 253	HISTORY OF PRE-COLONIAL AFRICA
		HIS 296	EAST ASIA SINCE 1600
		HIS 328	REPRESENTING THE HOLOCAUST
		HJS 110	INTRO TO THE OLD TESTAMENT/HEBREW BIBLE
		HJS 328	REPRESENTING THE HOLOCAUST
		HON 151	HONORS HUMANITIES: (SUBTITLE REQUIRED)
		MCL 135	VAMPIRES: EVOLUTION OF A SEXY MONSTER
		MCL 270	INTRO TO FOLKLORE AND MYTHOLOGY
		MCL 328	REPRESENTING THE HOLOCAUST
		MCL 343	GLOBAL HORROR
		RUS 275	RUSSIAN FILM
		RUS 371	RUSSIAN CULTURE 900-1900
		RUS 372	RUSSIAN CULTURE 1900- PRESENT
		SPA 330	SPANISH AND GLOBALIZATION
		SPA 371	LATIN AMERICAN CINEMA (SR)
		SPA 372	SPANISH CINEMA (SR)
		TA 385	WORLD THEATRE I
		TA 386	WORLD THEATRE II
		UKC 117	HUM INQUIRY: SR
	Natural, Physical, Mathematical Sciences	ANT 105	HUMAN ORIGINS
		AST 191	THE SOLAR SYSTEM
		BIO 102	HUMAN ECOLOGY
		BIO 103	BASIC IDEAS OF BIOLOGY

		CHE 103	CHEMISTRY FOR HEALTH PROFESSIONALS
		EES 110	ENDANGERED PLANET INTR TO ENVRNMNTL GEOL
		EES 120	SUSTAINABLE PLANET GLY OF NAT RESOURCES
		EES 150	EARTHQUAKES AND VOLCANOES
		EES 170	BLUE PLANET: INTRO TO OCEANOGRAPHY
		EES 180	GEOLOGY OF THE NATIONAL PARKS
		EES 190	A CLIMATE FOR CHANGE
		HON 152	HONORS STEM: (SUBTITLE REQUIRED)
		MI 120	MICROBES AND SOCIETY
		PHY 130	SCIENCE AND TECHNOLOGY FOR THE FUTURE
		PHY 211	GENERAL PHYSICS
		PHY 231	GENERAL UNIVERSITY PHYSICS
		PHY 241	GENERAL UNIVERSITY PHYSICS LABORATORY
		PLS 104	PLANTS, SOILS, & PEOPLE: SCIENCE PERSPEC
		UKC 120	NS INQUIRY: SR
	Social Sciences	AEC 110	CURRENT ISSUES IN AGRICULTURAL ECONOMICS
		AIS 430	ISLAM IN AMERICA
		BSC 251	CULTURE AND HEALTH BEHAVIOR
		ECO 101	CONTEMPORARY ECO ISSUES
		EGR 120	TECHNOLOGY: BLESSING OR CURSE
		GEO 210	HOW INTERNET WORKS: DIG. PLACES & PEOPLE
		GWS 200	SEX AND POWER
		HON 251	HONORS SOC SCI: (SUBTITLE REQUIRED)
		KHP 230	HUMAN HEALTH & WELLNESS
		MCL 135	VAMPIRES: EVOLUTION OF A SEXY MONSTER
		MCL 270	INTRO TO FOLKLORE AND MYTHOLOGY
		PCE 201	INTRODUCTION TO PEACE STUDIES
		PPL 201	INTRODUCTION TO PUBLIC POLICY
		PS 230	INTRO TO INTERNAT'L RELATIONS
		PSY 120	THE SCIENCE OF HAPPINESS
		PSY 160	HUMAN SEXUALITY
		SOC 101	INTRO TO SOCIOLOGY
Quantitative Reasoning	Quantitative Foundations	FOR 200	BASICS OF GEOSPATIAL TECHNOLOGY
		GEO 310	DATA EXPLORATIONS AND APPLICATIONS
		MA 109	COLLEGE ALGEBRA
		MA 111	INTRO TO CONTEMP MATH
		MA 113	CALCULUS I
		MA 123	ELEM CALC & ITS APPLICS
		MA 137	CALCULUS I (LIFE SCI)
		PHI 120	AN INTRODUCTION TO LOGIC

APPENDIX 4

Revised UK Core Intellectual Inquiry Rubrics

UK Core Learning Outcome 1. Students will demonstrate an understanding of and ability to employ the processes of intellectual inquiry.

Outcomes and Assessment Framework. Students will:

(a) be able to identify multiple dimensions of a good question; determine when additional information is needed, find credible information efficiently using a variety of reference sources, and judge the quality of information as informed by rigorously developed evidence (***Inquiring***);

(b) explore multiple and complex answers to questions/issues problems within and across the four broad knowledge areas: arts and creativity, humanities, social and behavioral sciences, and natural/ physical/mathematical sciences (***Methods/Approaches***);

(c) evaluate theses and conclusions in light of credible evidence (***Evaluation***);

(d) explore the ethical implications of differing approaches, methodologies or conclusions (***Ethics***); and

(e) develop potential solutions to problems based on sound evidence and reasoning (***Problem Solving/Engagement***).

Inquiry in Arts & Creativity

Points	4	3	2	1	0	NA
Criteria	**Exceed standard**	**Meet standard**	**Nearly meet standard**	**Does not meet standard**	**No evidence**	**Not measured**
1. Define and distinguishes approaches to creativity.	Identifies, defines, and distinguishes multiple complex approaches to creativity within a specific field.	Identifies, defines, and distinguishes most complex approaches to creativity within a specific field.	Identifies, defines, and distinguishes some complex approaches to creativity within a specific field.	Identifies, defines, and distinguishes one complex approaches to creativity within a specific field.	Cannot identify, define, or distinguish any approaches to creativity within the field.	Not measured
2. Uses appropriate methods and techniques to analyze, interpret, and critique the creative works of others.	A thorough analysis, interpretation, and critique of peer work that demonstrates thoughtful and consideration of the creative work utilizing field specific methods and techniques.	The analysis, interpretation, and critique of peer work demonstrates thoughtful and consideration of the creative work using appropriate field specific methods and techniques but may be missing 1-2 elements.	The analysis, interpretation, and critique of peer work is adequate and uses appropriate field specific methods and techniques but may be missing key elements.	The analysis, interpretation, and critique of peer work is vague and/or does not use appropriate field specific methods and techniques.	Little or no attempt is made to analyze, interpret, or critique peer work.	Not measured
3. Reflects on and communicates the impact and effectiveness of their own creative work.	Demonstrates an open ability to self-appraise their own creative work by discussing both successes and challenges related to the creative process.	Demonstrates an open ability to self-appraise their own creative work by discussing some successes and challenges related to the creative process.	Begins to self-appraise their own creative work but has difficulty identifying both success and challenges related to the creative process.	Self-appraisal of their own creative work lacks meaningful reflection and depth.	Self-appraisal is superficial.	Not measured
4. Actively engage in the creation of an object, installation, presentation, or performance	Successfully implements field-specific methods and techniques for the creation of a creative work.	Implements field-specific methods and techniques for the creation of a creative work.	Implements some field-specific methods and techniques for the creation of a creative work but may need further refinement and development.	Is able to Implement at least one field-specific methods or techniques for the creation of a creative work but needs further refinement and development.	Is unable to create a field specific creative work.	Not measured

Inquiry in the Humanities

Points	4	3	2	1	0	NA
Criteria	**Exceed standard**	**Meet standard**	**Nearly meet standard**	**Does not meet standard**	**No evidence**	**Not measured**
1. Identify contextualized, critically-developed, and coherent open-ended questions or topics to guide informed explorations and evidence-based evaluations.	Effectively defines or identifies a creative, focused, and manageable open-ended question or topic that addresses potentially significant yet previously less-explored aspects. Question/topic to be considered critically is stated clearly and described comprehensively, delivering all relevant information necessary for full understanding.	Defines or identifies a focused and manageable open-ended question or topic that appropriately addresses relevant aspects. Question/topic to be considered critically is stated, described, and clarified.	Defines or identifies a question or topic that while manageable, is too narrowly focused or is in some way incomplete (leaves out relevant aspects, parts are missing,).	Has difficulty defining a question or topic; identifies a question or topic that is far too general and wide-ranging to be explored or evaluated; or question/topic is stated unclearly or not at all.	ASSIGNMENT PROMPT itself does not define or identity a question for exploration, or the question developed is a yes/no question, or the question leads only to a basic factual response.	Not measured
2. Analyze different points of view, issues, or problems within the humanities using a variety of evidence, information and/or approaches.	Is able to identify evidence and relations among parts to build a deep/analytical understanding of text that extends outward, working towards building knowledge or insight within and across texts and disciplines. Identifies multiple approaches or points of view that are supported by presented evidence, and evidence is synthesized to: (a) reveal insightful patterns, differences, or similarities, exploring multiple points of view, issues, or problems; and/or (b) evaluate approaches for	Is able to identity evidence and relations among parts or aspects of a text and is able to consider how these contribute to an analytical understanding of the text Identifies multiple approaches or points of view, but not all are supported by evidence presented. Effectively synthesizes evidence to support the varying approaches or points or view being analyzed Evidence is used to: (a) reveal important	Is able to identify evidence and relations among parts or aspects of a text, such as effective or ineffective arguments or literary features, and is able to consider how these contribute to a basic, superficial understanding of the text as a whole. Identifies an approach or point of view during analysis that applies within a specific context and supports it with evidence.	Is able to identify evidence such as various aspects of a text (e.g., content, structure, or relations among ideas, symbolism) but only uses evidence to respond to questions posed in assigned tasks. Identifies one or more approaches or points of view during analysis that do not apply within a specific context and/or that are not supported by evidence. Lists evidence, but it is	Does not identify evidence from within a text or identification is superficial and not used to contribute to any form of analysis. Does not attempt to explore a point of view during analysis. Evidence presented is unrelated to text or analysis.	Not measured

	relating ideas, text structure, or other textual features in order to build knowledge or insight within and across texts and disciplines.	patterns, differences, or similarities; and/or (b) identify approaches for relating ideas, structure, or other textual features, to support a deep understanding of the text as a whole.		unorganized and does not effectively support the analysis		
3. Evaluate theses and conclusions (of other scholars) based on existing knowledge, information, or evidence from credible sources	Synthesizes in-depth evaluation of theses and conclusions from other scholars representing various points of view. Demonstrates skillful use of high-quality, credible, evidence from credible sources to support evaluation.	Presents in-depth evaluation of theses and conclusions from other scholars representing various points of view. Demonstrates consistent use of evidence from credible sources to support evaluation.	Presents cursory evaluation of theses and conclusions from other scholars representing limited points of view. Demonstrates an attempt to use evidence from credible sources to support evaluation.	Presents some scholarship without identifying relevance of scholarship in any way, or theses and conclusions from irrelevant scholars representing unrelated points of view. Evidence cited lacks credibility and/or has questionable credibility but it presented authoritatively without support for credibility.	Does not refer to the work of other scholars (when expected to as part of the assignment)	Not measured
4. Explore the historical, contextual, or ethical implications revealed through the use of differing approaching methodologies, or arguments [Critical Framework] when analyzing information or texts.	All elements of the Critical Framework are skillfully analyzed for historical, contextual, or ethical implications. Analysis demonstrates the reasons behind the use of the particular Framework while also articulating an understanding of a range of potential interpretative strategies/ frameworks that could apply in the available contexts and how they may reveal differing historical, contextual, or ethical implications.	Critical elements of the approach, methodology or argument are appropriately analyzed; however, more subtle elements are ignored or unaccounted for. Analysis demonstrates the reasons behind the use of the particular Framework while also acknowledging that at least one other potential interpretative strategies/ frameworks could apply in the available contexts.	Analysis is centered in Critical Framework but critical elements of the Critical Framework are missing, incorrect, or unfocused during analysis. Analysis provides evidence for the value of using the framework within the contexts available.	Analysis demonstrates a misunderstanding of the approach, methodology or arguments [Critical Framework] Analysis does not provide information to understand why the Critical Framework was chosen or is appropriate within the particular contexts available (the text, the analysis, the course, etc.).	*Assignment* does not invite analysis or comparison of various approaches, methodologies or arguments	Not measured

5. Articulate and sustain an original interpretation or argument based on sound evidence and reasoning.	[In the course of written analysis of a text or texts,] Proposes one or more original interpretations or arguments that are sensitive to contextual factors and multiple ethical, logical, and cultural dimensions of the topic. Builds argument throughout text with each section of analysis providing evidence that supports original interpretation. Explores competing interpretations and evaluates original interpretation within larger disciplinary conversation.	[In the course of written analysis of a text or texts,] Proposes one or more original interpretations or arguments that are sensitive to contextual factors and some ethical, logical, and/or cultural dimensions of the topic. Builds argument throughout text with each section of analysis providing evidence that supports original interpretation. Explores competing interpretations but may not evaluate original interpretation and competing interpretation.	[In the course of written analysis of a text or texts,] Proposes one original interpretation or argument that is "off the shelf " rather than individually designed to address the specific contextual factors of the topic. Builds argument throughout text but some evidence presented may not support primary argument. Does not explore competing interpretations.	[In the course of written analysis of a text or texts,] Proposes an original interpretation or argument that is difficult to evaluate because it is vague or only indirectly addresses the topic. Written analysis strays from primary argument in irrelevant directions.	Does not attempt to articulate an interpresentation or argument.	Not measured

Inquiry in the Natural, Physical, and Mathematical Sciences

Points	4	3	2	1	0	NA
Criteria	**Exceed standard**	**Meet standard**	**Nearly meet standard**	**Does not meet standard**	**No evidence**	**Not measured**
1. Define a problem and/or clearly formulate a problem statement.	Demonstrates the ability to construct a clear and insightful problem statement with evidence of all relevant contextual factors.	Demonstrates the ability to construct a problem statement with evidence of most relevant contextual factors, and problem statement is adequately detailed.	Begins to demonstrate the ability to construct a problem statement with evidence of most relevant contextual factors, but problem statement is poorly written or superficial.	Demonstrates a limited ability in identifying a problem statement or related contextual factors	Inadequate/insufficient/does not attempt	Not measured
2. Develop and/or apply a rigorous methodology to investigate a hypothesis or a problem.	The experimental methodology was carried out correctly and resulted in the collection of useful data.	The experimental methodology was attempted and largely successful. Technical difficulties may have compromised a small subset of the data.	The experimental methodology was attempted but largely unsuccessful. Several technical issues compromised a large subset of the data.	Demonstrates a limited ability to understand or implement experimental methodology. Collected data is not useful.	Inadequate/insufficient/does not attempt	Not measured
3. Select and use appropriate information to support a conclusion.	States a well written conclusion that is a logical extrapolation from the inquiry findings.	Conclusion appears to be correct, or nearly correct, but language is not crisp or clear enough to be certain.	States a general conclusion that, because it is so general, also applies beyond the scope of the inquiry findings.	States an ambiguous, illogical, or unsupportable conclusion from inquiry findings.	Inadequate/insufficient/does not attempt	Not measured
4. Demonstrate understanding of a significant discovery in a given branch of inquiry and the impact on society.	The principles behind the discovery are correctly and clearly summarized. The evaluation of the impact on society is broad and considers multiple aspects, including social, religious, political and economic effects.	The explanation of the principles behind the discovery are incomplete but the evaluation of the impact on society is broad and considers multiple aspects, including social, religious, political and economic effects.	The explanation of the principles behind the discovery and the implications for society are incomplete.	Explanation of the principles behind the discovery are incorrect or incomplete. The discussion on impacts to society is superficial.	Inadequate/insufficient/does not attempt	Not measured

5. Apply fundamental principles to solve a problem or to explain observed phenomena.	Correctly identifies and applies the appropriate natural laws and/or principles needed to solve a problem or explain an observation.	Correctly identifies the appropriate natural laws and/or principles needed to solve a problem or explain an observation, but application is incomplete or partially incorrect.	Identifies an incomplete set of principles needed to solve a problem or explain an observation.	Unable to identify the appropriate natural laws and/or principles needed to solve a problem or explain an observation.	Inadequate/insufficient/does not attempt	Not measured

Inquiry in the Social Sciences

Points	4	3	2	1	0	NA
Criteria	**Exceed standard**	**Meet standard**	**Nearly meet standard**	**Does not meet standard**	**No evidence**	**Not measured**
1. Demonstrate an ability to identify a well- formulated question pertinent to a social science discipline and to employ the discipline's conceptual and methodological approaches in identifying reasonable research strategies that could speak to the question.	Employ a well-formulated question based on solid understanding of conceptual and methodological approaches to social science inquiry and an effective research strategy to critically analyze or carefully evaluate a social phenomenon.	Identify a well-formulated question based on sufficient understanding of conceptual and methodological approaches to social science inquiry as well as an effective research strategy to evaluate or analyze some elements of a social phenomenon.	Identifies a well-formulated question based on sufficient understanding of conceptual and methodological approaches to social science inquiry as well as different research strategies; fail to evaluate or analyze a social phenomenon	Acknowledges a question, various conceptual and methodological approaches to social science inquiry, and different research strategies; fail to explain the relationship among these three elements of social science inquiry.	Acknowledges a question, various conceptual and methodological approaches to social science inquiry, or different research strategies; fail to link the relationship among these three elements.	Not measured.
2. Demonstrate an understanding of methods and ethics of inquiry that lead to social scientific knowledge	Explains how different methods of a social science discipline raise a different set of ethical challenges and how these challenges can be addressed in social science inquiry.	Identifies at least two methods of a social science discipline and unique ethical issues facing social science inquiry; explains broadly the relationship between methods of a social science inquiry and ethics of social science inquiry.	Identifies at least one method of a social science discipline and unique ethical issues facing social science inquiry; recognize the relationship between the methods and ethics of social science inquiry; does not explain the relationship between the two.	Identifies either at least one method of a social science discipline or ethical challenges in social science inquiry; suggests that they may be a relationship between different methods of a social science discipline and ethics of social science inquiry.	Acknowledges that there are methodological and ethical challenges in social science inquiry; fail to identify a method of a social science discipline or ethics of social science inquiry; and fail to recognize the relationship between the two.	Not measured.

3. Identify and use appropriate information resources to substantiate evidence- based claims.	Reaches to conclusions in social inquiry based on the careful analysis of empirical evidence with a well-organized set of coherent arguments and appropriate citations of the information resources employed.	Reaches to conclusions in social science inquiry based on the analysis of sufficient empirical evidence with clearly articulated arguments and appropriate citations of the information resources employed.	Reaches to conclusions in social inquiry based on the analysis of sufficient empirical evidence with stated positions (not arguments) and appropriate citations of the information resources employed.	Reaches to conclusions in social inquiry based on the analysis of some empirical evidence with some stated positions and appropriate citations of the information resources employed.	Reaches to conclusions in social inquiry with stated position, but without adequate analysis of empirical data or appropriate citations of the information resources employed.	Not measured.
4. Explore how a social science discipline influences society.	Critically analyze or evaluate how a social science discipline simultaneously influences and is influences by society.	Explains how a social science discipline influences a society.	Acknowledges that a social science discipline influences every elements of society.	Recognize that a social science discipline may influence society in some areas, but not other areas.	Fails to recognize the impact of a social science discipline on any parts of society.	Not measured.
5. Propose potential solutions to problems based on sound evidence and reasoning	Propose well thought-out, practical (or realistic) solutions to multiple issues/problems, covered in the course, based on careful analysis of empirical evidence and reasoning grounded in theories/concepts of a social science discipline	Propose potential solutions to at least one issue/problem, covered in the course, based on empirical evidence and reasoning grounded in theories/concepts of a social science discipline.	Explore a potential solution to at least one issue/problem, covered in the course using evidence and reasoning. The quality of evidence and reasoning is uneven.	Recognize there are potential solutions. But the proposed solution(s) are not based on sound evidence/reasoning or do not match with the evidence/reasoning presented.	Fails to recognize the need of evidence or reasoning to generate a solution to an issue/problem. Fails to recognize a possibility of generating potential solutions to an issue/problem covered in the course.	Not measured.