

High School Preparatory Course Certification

Mathematics Rubric

School:

Course:

Evaluators:

Working Definition:

A “high school-ready” course consists of intellectually rigorous coursework that covers sufficient content and requires students to demonstrate the higher-order thinking skills and develop the academic and personal behaviors that will enable them to be successful in high school.

Thank you for helping the DOE to evaluate middle school courses for HSPCC certification.

The HSPCC certification process is designed to recognize high school courses that are preparing students for high school and to reward schools with credit on the high school readiness metric of the Progress Report for all students who pass one these courses. In order to earn HSPCC certification, a course must pass both a quantitative and a qualitative evaluation.

This packet is designed to help you make a qualitative determination of the high school-readiness of a course. The qualitative evaluation focuses on two main areas: **Content** and **Academic Rigor**.

What you should have

In addition to this evaluation packet, you should also have received a complete application for the course you are evaluating. That application should include the following:

1. A syllabus, curriculum map, scope and sequence, or equivalent document
2. A list of all key texts that are used in the course
3. Copies of all major assignments that students are expected to complete (including rubrics, scoring guides, etc.)
4. Copies of graded student work for two major assignments
5. An explanation of the grading policy
6. An explanation of any prerequisite requirements for student to enroll in the course
7. Written responses to short answer questions

Where you can confidently make a decision on the course's qualitative evaluation outcome (in either direction), please do so. If you require the submission of an additional course artifact or document, please contact Valerie Samn (vsamn@schools.nyc.gov).

What is included in the application review packet

1. **Two worksheets**, one for each category – these worksheets are intended to help you focus on aspects of the application that pertain to the categories covered in the rubric.
2. A **rubric** with 2 categories.
3. A **matrix** that demonstrates how the Rubric Determinations will be used in the Overall Determination.
4. A **guide** for your school observations.
5. A **reviewer recommendation** section where you will provide a recommendation based on your overall impression of the course.
6. An **application feedback form** where you will provide concrete strengths and areas for growth that will be shared with the school.

Recommended use of the packet

1. Read the application.
2. Fill out the rubric.

The category worksheets are included to assist in your rubric determination. While they are not officially “counted” as part of the evaluation, we ask that you complete them as part of your review process.

3. Complete the Reviewer Recommendation.

Based on your review of the entire application, would you recommend that this course be certified as High School-Ready? Why or why not?

4. Complete the Application Feedback form.
 - a. What are some strengths of the course that emerge from the application?
 - b. What are some areas for growth that emerge from the application?

Content Worksheet -- Mathematics	Very Often	Often	Somewhat Often	Infrequent /Never
<p><i>Based on the evidence provided, are students prepared for the content knowledge expectations of students who enroll in a high school Mathematics course in the specific subject?</i></p> <ul style="list-style-type: none"> • Students understand the KEY concepts or big ideas of the subject. (See attached subject-specific concept lists to help you guide your determination.) 				
<p><i>Based on the evidence provided, are students asked to and prepared to demonstrate the Mathematical Practices from the New York State Common Core Learning Standards (NYS-CCLS)?</i></p> <ul style="list-style-type: none"> • Students make sense of problems and persevere in solving them. (MP.1) • Students reason abstractly and quantitatively. (MP.2) • Students construct viable arguments and critique the reasoning of others. (MP.3) • Students model with mathematics. (MP.4) • Students use appropriate tools strategically. (MP.5) • Students attend to precision. (MP.6) • Students look for and make use of structure. (MP.7) • Students look for and express regularity in repeated reasoning. (MP.8) 				

Content Demand (Grade 8 Overview of the NYS-CCLS)	YES	NO	NOTES
<p>The Number System</p> <ul style="list-style-type: none"> Students are expected to know that there are numbers that are not rational, and approximate them by rational numbers. 			
<p>Expressions and Equations</p> <ul style="list-style-type: none"> Students work with radicals and integer exponents. Students are expected to understand the connections between proportional relationships, lines, and linear equations. Students analyze and solve linear equations and pairs of simultaneous linear equations. 			
<p>Functions</p> <ul style="list-style-type: none"> Students are expected to be able to define, evaluate, and compare functions. Students use functions to model relationships between quantities. 			
<p>Geometry</p> <ul style="list-style-type: none"> Students are expected to understand congruence and similarity using physical models, transparencies, or geometry software. Students are expected to understand and apply the Pythagorean Theorem. Students are expected to solve real-world and mathematical problems involving volume of cylinders, cones, and spheres. 			
<p>Statistics and Probability</p> <ul style="list-style-type: none"> Students investigate patterns of association in bivariate data. 			

Academic Rigor—Mathematics Worksheet	Very Often	Often	Somewhat Often	Infrequent /Never
<i>Based on the evidence provided, is the course material sufficiently rigorous and intellectually challenging?</i>				
<i>In order to pass the course, are students expected to complete tasks that demonstrate mastery independently without assistance from the teacher or peers?</i>				
<p data-bbox="94 527 1312 592"><i>Based on the evidence provided, are students asked to complete tasks that ask them to use strategic thinking and reasoning (DOK Level 3) and/or extended thinking (DOK Level 4)?</i></p> <ul data-bbox="157 641 1312 917" style="list-style-type: none"> • Course work requires students to use reasoning and to develop a plan to approach a problem. • Course work requires decision making and justification. • Course work requires students to go beyond the text and explain, generalize, or connect ideas. • Course work requires students to develop a logical argument and cite evidence. • Course work involves an investigation or application to real world problems. • Course work requires students to analyze or synthesize information for multiple sources. • Course work requires time to research, problem solve, and process multiple conditions of the problem or task. 				

Mathematics Course Rubric

Category I: CONTENT

- *Is the material taught in this class the material that students are expected to know when beginning a high school level Mathematics course?*
- *Are students who pass this course prepared with the skills they will need to succeed in a high school level Mathematics course?*
- *In order to pass the course are students expected to complete work to a level such that they demonstrate mastery of the content and skills and can apply what they learn to new and novel situations without the support of the teacher?*

	<i>Considering the determinations you made using the Content Worksheet criteria, how would you rate the CONTENT of this course?</i>
High School-Ready	<ul style="list-style-type: none"> • Students who pass the class will be familiar with most, if not all, of the content knowledge they are expected to know in an introductory high school course. • The skills embedded in this course are clearly and undoubtedly sufficient to prepare students for an introductory high school course.
Likely High School-Ready	<ul style="list-style-type: none"> • Students are exposed to most of the content knowledge they are expected to know in an introductory high school course. • The skills embedded in this course are likely to be sufficient to prepare students for an introductory high school course.
Potentially High School-Ready	<ul style="list-style-type: none"> • Students are exposed to some of the content knowledge they are expected to know in an introductory high school course. • The skills embedded in this course may be sufficient to prepare students for an introductory high school course.
Unlikely to be High School-Ready	<ul style="list-style-type: none"> • The course does not cover enough of the content knowledge expected to prepare students for introductory level course. • The skills embedded in this course are unlikely to be sufficient to prepare students for an introductory high school course.

Category II: ACADEMIC RIGOR

- *Is the material taught in this class sufficiently rigorous to consider this course High School-Ready?*
- *Are students expected to complete tasks that are intellectually rigorous?*

	<i>Considering the determinations you made using the Academic Rigor Worksheet criteria, how would you rate the ACADEMIC RIGOR of this course?</i>
High School-Ready	<ul style="list-style-type: none"> • Academic tasks are very challenging and students are required to engage in an in-depth way on a regular basis. • Students are regularly asked to complete demanding work requiring higher-order thinking that will prepare them for an introductory high school course.
Likely High School-Ready	<ul style="list-style-type: none"> • Academic tasks are challenging and students are required to engage in an in-depth way on a regular basis. • Some of the work that students are asked to complete requires higher-order thinking that will prepare them for an introductory high school course.
Potentially High School-Ready	<ul style="list-style-type: none"> • Academic tasks are challenging but students interact with the material inconsistently OR course content is inconsistently challenging. • Very little of work that students are asked to complete requires higher-order thinking that will prepare them for an introductory high school course.
Unlikely to be High School-Ready	<ul style="list-style-type: none"> • Academic tasks are either not challenging enough OR students are not required to engage with material at anything but a cursory level. • Almost none of the work that students are asked to complete requires higher-order thinking that will prepare them for an introductory high school course.

Overall Determination

In order to “Pass” the Qualitative Evaluation, a course must be eligible for either a 1- or 3-year certification according to the Rubric Determination **AND** receive a “Yes” designation from the Reviewer Recommendation.

Rubric Determination

		ACADEMIC RIGOR			
		High School-Ready	Likely High School-Ready	Potentially High School-Ready	Unlikely to be High School-Ready
C O N T E N T	High School-Ready	3-Year Certification	3-Year Certification	Does not meet	Does not meet
	Likely High School-Ready	3-Year Certification	1-Year Certification	Does not meet	Does not meet
	Potentially High School-Ready	Does not meet	Does not meet	Does not meet	Does not meet
	Unlikely to be High School-Ready	Does not meet	Does not meet	Does not meet	Does not meet

Reviewer Recommendation

Is the work (both the content and the types of tasks) that students are expected to complete at least as challenging as the courses that already count toward the High School Readiness metrics, such as a course culminating in a Regents exam or state Language Proficiency Exam?

	<i>Based on your holistic review of the course and considering the entirety of the application, do you recommend that this course receive certification as a “High School-Ready” course? Indicate Yes or No and then provide a short rationale for your recommendation.</i>
Yes	
No	

Application Feedback

Strengths

Please describe 3 – 5 strengths that emerge from the application.

Ex. As evidenced by the curriculum map and the list of key texts, the course exposes students to a variety of points of view. Additionally, assignments such as the final project ask students to interact with and react to various points of view, as well as to conduct their own independent research and develop their own perspective on an issue of historical importance.

1.

2.

3.

Areas for Development

Please describe 3 – 5 areas of concern that emerge from the application.

Ex. The final project asks students to engage in an authentic, inquiry-based task. However, the formative assessments and assignments leading up to it may not provide enough opportunities for students to practice strategies that will allow for independent completion of the final project.

1.

2.

3.

