

CUNY Common Core

Course Submission Form

Instructions: All courses submitted for the Common Core must be liberal arts courses. Courses may be submitted for only one area of the Common Core. All courses must be 3 credits/3 hours unless the college is seeking a waiver for a 4-credit Math or Science course (after having secured approval for sufficient 3-credit/3-hour Math and Science courses). All standard governance procedures for course approval remain in place.

College	KINGSBOROUGH COMMUNITY COLLEGE
Course Number	MAT 00700
Course Title	Principles of Mathematics
Department(s)	Mathematics and Computer Science
Discipline	Mathematics
Subject Area	Principles of Mathematics
Credits	3
Contact Hours	4
Pre-requisites	none
Mode of Instruction	Select only one: In-person Hybrid Fully on-line
Course Attribute	Select from the following: Freshman Seminar Honors College Quantitative Reasoning Writing Intensive Other (specify): _____
Catalogue Description	A basic course in mathematical discovery. Students participate in the development and investigation of topics such as number sequences, calculating devices, extrapolation, mathematical mosaics and curves, probability, and topology.
Sample Syllabus	Syllabus must be included with submission,
Waivers for 4-credit Math and Science Courses	
All Common Core courses must be 3 credits and 3 hours.	
Waivers for 4-credit courses will only be accepted in the required areas of Mathematical and Quantitative Reasoning and Life and Physical Sciences. Such waivers will only be approved after a sufficient number of 3-credit/3-hour math and science courses are approved for these areas.	
If you would like to request a waiver please check here:	
If waiver requested: Please provide a brief explanation for why the course will be 4 credits.	

If waiver requested:

Please indicate whether this course will satisfy a major requirement, and if so, which major requirement(s) the course will fulfill.

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Indicate the status of this course being nominated:

current course revision of current course a new course being proposed

CUNY COMMON CORE Location

Please check below the area of the Common Core for which the course is being submitted. (Select only one.)

Required

English Composition
 X Mathematical and Quantitative Reasoning
 Life and Physical Sciences

Flexible

World Cultures and Global Issues Individual and Society
 US Experience in its Diversity Scientific World
 Creative Expression

Learning Outcomes

In the left column explain the assignments and course attributes that will address the learning outcomes in the right column.

I. Required Core (12 credits)

A. English Composition: Six credits

A course in this area must meet all the learning outcomes in the right column. A student will:

- Read and listen critically and analytically, including identifying an argument's major assumptions and assertions and evaluating its supporting evidence.
- Write clearly and coherently in varied, academic formats (such as formal essays, research papers, and reports) using standard English and appropriate technology to critique and improve one's own and others' texts.
- Demonstrate research skills using appropriate technology, including gathering, evaluating, and synthesizing primary and secondary sources.
- Support a thesis with well-reasoned arguments, and communicate persuasively across a variety of contexts, purposes, audiences, and media.
- Formulate original ideas and relate them to the ideas of others by employing the conventions of ethical attribution and citation.

B.. Mathematical and Quantitative Reasoning: Three credits

A course in this area must meet all the learning outcomes in the right column. A student will:

<p>One module devoted to analyzing a variety of data curves, utilizing the formula, table, and graph of each in conjunction. Example: Given a table and graph, express Fahrenheit temperatures as a function of Celcius temperatures. Estimate the Fahrenheit temperature that corresponds to a Celcius reading of 60 degrees.</p>	<ul style="list-style-type: none"> • Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.
<p>One module devoted to statistical thinking, including tables and graphs, numerical measures of center and variation, and solving problems for normally-distributed data. Example: Calculate the mean and standard deviation of a data set, and then determine if the data values exhibit a normal distribution.</p>	<ul style="list-style-type: none"> • Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical problems.
<p>There is specific attention given to translating from English to math in the sections of inductive reasoning and deductive proofs. Example: Prove a given “number trick” using graphical and algebraic formats.</p>	<ul style="list-style-type: none"> • Represent quantitative problems expressed in natural language in a suitable mathematical format.
<p>Exercises are regularly interspersed with questions on naming or explaining the principles involved. Example: Determine the type of sequence that a set of numbers belongs to, and explain your reasoning. Written explanations of reasoning are expected throughout the course.</p>	<ul style="list-style-type: none"> • Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.
<p>Specific questions on reasonableness are given as a follow-up to other work. Example: Given a numerical relationship between two variables, check estimation extrapolations for reasonableness.</p>	<ul style="list-style-type: none"> • Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.
<p>Some examples of applied problems: use of binary numbers in computers, scientific notation in astronomy and biology, the counting principle for setting up phone codes and license plates.</p>	<ul style="list-style-type: none"> • Apply mathematical methods to problems in other fields of study.