

CUNY Common Core Course Submission Form
Mathematical and Quantitative Reasoning

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.

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 [shown below]. 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 [shown below]. A student will:

- *Interpret and draw appropriate inferences from quantitative representations, such as formulas, graphs, or tables.*
- *Use algebraic, numerical, graphical, or statistical methods to draw accurate conclusions and solve mathematical problems.*
- *Represent quantitative problems expressed in natural language in a suitable mathematical format.*
- *Effectively communicate quantitative analysis or solutions to mathematical problems in written or oral form.*
- *Evaluate solutions to problems for reasonableness using a variety of means, including informed estimation.*
- *Apply mathematical methods to problems in other fields of study.*

C. Life and Physical Sciences: Three credits

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

- *Identify and apply the fundamental concepts and methods of a life or physical science.*
- *Apply the scientific method to explore natural phenomena, including hypothesis development, observation, experimentation, measurement, data analysis, and data presentation.*
- *Use the tools of a scientific discipline to carry out collaborative laboratory investigations.*
- *Gather, analyze, and interpret data and present it in an effective written laboratory or fieldwork report.*
- *Identify and apply research ethics and unbiased assessment in gathering and reporting scientific data.*

[www.jjay.cuny.edu/academics/CUNY_Common_Core_Course_Submission_Form\(1\).doc](http://www.jjay.cuny.edu/academics/CUNY_Common_Core_Course_Submission_Form(1).doc)

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Mathematical and Quantitative Reasoning

MAT 105. Modern Mathematics

A systematic treatment of the foundation of college algebra. Topics include complex numbers, systems of linear equations and inequalities, functions, the theory of equations, logarithms and exponential functions, and related applications. (Offered every semester.)

<http://johnjay.jjay.cuny.edu/modicourse/coursedescription.aspx?courseName=MAT&courseNumber=105>

MAT 103. Elements of Modern Mathematics I

Designed for students needing compensatory and remedial work with essentially the same content as Mathematics 105. Students required to take Mathematics 103 must take Mathematics 104 and may not enroll in or receive credit for Mathematics 105. (Offered every semester.)

<http://johnjay.jjay.cuny.edu/modicourse/coursedescription.aspx?courseName=MAT&courseNumber=103>

MAT 104. Elements of Modern Mathematics II

Designed for students needing compensatory and remedial work with essentially the same content as Mathematics 105. Students required to take Mathematics 103 must take Mathematics 104 and may not enroll in or receive credit for Mathematics 105. (Offered every semester.)

<http://johnjay.jjay.cuny.edu/modicourse/coursedescription.aspx?courseName=MAT&courseNumber=104>

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