Undergraduate Initial Certificate Program (Grades 7-12)
MATH EDUCATION (MATH712-BA)

Powdermaker Hall 150   718-997-5150

PLEASE CHECK WITH AN ADVISOR FOR UPDATES TO THE PROGRAM.

SEYS ADVISORS:	**Dr. Alice Artzt**	**718-997-5169**	Alice.Artzt@qc.cuny.edu
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MATH ADVISOR:	**Dr. Alan Sultan**	**718-997-5845**	Alan.Sultan@qc.cuny.edu

This program is intended for students who would like to become initially certified in Secondary Education (grades 7-12) with a concentration in Mathematics Education. Students must have taken at least two semesters of calculus and earned a minimum GPA of 2.75 in these courses to begin the program.

To qualify for student teaching you must have an average minimum GPA of 2.75 in mathematics, have earned a B in Methods (SEYS 361), and have a GPA of at least 3.0 in Education.

COURSE OUTLINE

Course Number	Title	Pre-requisites and Co-Requisites	Credits	Fieldwork Required
SEYS 201W (Spring or Fall)	**Historical, Social and Philosophical Foundations of Education**	Upper Sophomore, major and minor declared	**3**	**25 Hours Fieldwork**
SEYS 221 (Spring or Fall)	**Development and Learning in Middle Childhood & Adolescence**	Upper Sophomore, major and minor declared	**3**	**25 Hours Fieldwork**
SEYS 340 (Spring or Fall)	**Language, Literacy, and Culture In Education**	**Pre-requisite:** 201W	**3**	**25 Hours Fieldwork**
ECPSE 350 (Spring or Fall)	**Foundations in Special Education**	Upper Sophomore, major and minor declared	**~3**	**15 Hours Fieldwork**
SEYS 350* (Fall Course)	**Cognition, Technology and Instruction for Diverse Learners**	**Pre-requisite:** 221, 340 **Co-requisite:** 361, 371.2	**3**	**No extra fieldwork when taken with SEYS 371.2**
SEYS 371.2** (Fall Course)	**Initial Clinical Experience in Mathematics**	**Pre-Requisite:** ECPSE 350 **Co-requisite:**361, 350	**2**	**100 Hours of clinical practice (4 days per week) in high or middle school**
SEYS 361*** (Fall Course)	**Methods in Teaching Mathematics in Middle and High School**	**Pre-requisite:** Math 385W with min. grade of B **Co-requisite:** 350, 371.2	**3**	**25 Hours Fieldwork in a high or middle School**
SEYS 371.4 (Spring Course)	**Student Teaching Mathematics in Middle or High School**	**Pre-requisite:** 371.2 min. grade of B **Co-requisite:** 381W	**4**	**15 weeks, 5 days per week, 6 periods per day, in high or middle school**
SEYS 381W**** (Spring Course)	**Standards-Based Curriculum and Assessment in Teaching Mathematics**	**Co-requisite:** 371.4	**3**	**No Fieldwork**
TOTAL NUMBER OF CREDITS			**24**	

*When SEYS 350 is taken as a co-requisite with SEYS 371.2, candidates are not required to do extra hours of fieldwork. However, the Educational Psychology tasks are to be completed in the field, independent of ICE.

**Prior to SEYS 371.2 candidates must have accumulated 100 hours of fieldwork. Please consult advisor regarding ways to accomplish this beyond the fieldwork hours required in SEYS courses.

***Candidates must earn a minimum grade of B to progress to SEYS 371.4.

****To be recommended for certification, students must have earned a minimum grade of B in SEYS 371.4.

~Credits not applicable to minor's Total Number of Credits

Mathematics

Course Number	Title	Prereq.	Credit	Date Taken
M151 & M152 OR M141, 142, & 143	Beginning Calculus (courses are sequential)	M122	8 or 9	
M201	Multivariable Calculus	M143 OR M152	4	
M220	Discrete Mathematics	M151 OR M141	3	
M231 or M237 (Select One)	Linear Algebra	M151 OR M141	4	
M241 or M611 (Select One)	Probability and Mathematical Statistics	M151 OR M142	3	
M518	College Geometry	M231	3	
M505	Problem Solving	One year college math	3	
M333 or M613 (Select One)	Abstract Algebra	M231	3	
M385W (must take prior to SEYS 561 as upper junior)	Mathematical Foundations of the Secondary School Curriculum	M201 & M231	4	

Students must then take either *three* or *four* additional courses as follows:
Three additional courses chosen from Lists X and Y below, of which *two* must be from list X and one must be from list Y.
OR
Four additional courses chosen from Lists X and Y below, of which *one* must be from list X and *three* must be from list Y.

List X
Math 310, 317, 609,612,618,619,626,634
List Y
Math 202, 213W, 223, 232, 242, 245, 247, 248,320, 503, 524
And all 500 and 600-level courses not listed.

Computer Science and Physics (1 Course)

Course Number	Title	Credit	Date Taken
CS 111	Intro to C++	3	
	AND either one CS or one PHYS course from below:		
CS 212	Advanced Java	3	
Physics 121 or 145	General Physics or Principles of Physics I	3	