

The City College of New York - Division of Science

Sample Curriculum for Mathematics Majors

BA with a Secondary Education concentration

Year 1

Fall Semester (13 credits)

- MATH 20100 - Calculus I (4 cr.)
- Flexible Core World Cultures and Global Issues Course, e.g. WCIV 10100 or 10200 (3 cr.)
- NSS - New Student Seminar (0 cr.)
- English Composition I - ENGL 11000 or FIQWS (3 cr.)
- Free Elective (3 cr.)

Spring Semester (16 credits)

- MATH 21200 - Calculus II (4 cr.)
 - Flexible Core U.S. Experience in Its Diversity Course, e.g. USSO 10100 (3 cr.)
 - Flexible Core Creative Expression Course, e.g. ART or MUSIC 10000 (3 cr.)
 - English Composition II - [ENGL 21003](#) (3 cr.)
 - Free Elective (3 cr.)
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Year 2

Fall Semester (14 credits)

- MATH 21300 - Calculus III (4 cr.)
- Flexible Core Individual and Society Course, e.g. PHIL 14900 (3 cr.)
- Free Elective, e.g. SCI 20000 (3 cr.)
- Life and Physical Sciences Course* (4 cr.)

Spring Semester (15 credits)

- MATH 30800 - Bridge to Advanced Mathematics (3 cr.)
- MATH 34200 - History of Mathematics, or (with Math Department permission) PHIL 32200 - Philosophy of Science (3 cr.)
- MATH 34600 - Elements of Linear Algebra (3 cr.)
- Speech 11100 - Speech Foundations (3 cr.)

- SPED 32300 - Inclusive Education in STEM Classrooms (3 cr.)
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Year 3

Fall Semester (18 credits)

- MATH 34500 - Theory of Numbers (3 cr.)
- MATH 36500 - Elements of Combinatorics (4 cr.)
- EDSE 41200 - Reading and Writing Across the Curriculum (3 cr.)
- EDSE 44310 - Adolescent Learning in STEM Education (1 cr.)
- Free Elective, e.g. PHIL 30000 (3 cr.)
- Life and Physical Sciences Course* (4 cr.)

Spring Semester (17 credits)

- MATH 34700 or MATH 44900 (4 cr.)
 - MATH 36000 - Introduction to Modern Geometry (3 cr.)
 - MATH 37500 - Elements of Probability Theory (4 cr.)
 - Free Elective (3 cr.)
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Year 4

Fall Semester (14 credits)

- MATH 32300 - Advanced Calculus I (4 cr.)
- EDSE 44600 - Methods for Teaching Secondary Mathematics (4 cr.)
- MATHE 32400 - High School Mathematics from an Advanced Perspective (3 cr.)
- Free Elective (3 cr.)

Spring Semester (13-14 credits)

- EDSE 45104 - Curriculum Development in Secondary School (4 cr.)
 - EDSE 46300 - Teaching Practicum in the Secondary School (4 cr.)
 - EDSE 46301 - Seminar in Teaching Secondary School (2 cr.)
 - EDUC 41900 - Child Abuse & Health Seminar (0 cr.)
 - Math Elective** (3-4 cr.)
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Additional Requirements

1. **Certification Exams:** Students must pass the **CST (004) Mathematics Exam** and the **EAS Exam** for New York State certification.
2. ***Life and Physical Sciences Requirement for BA:** Students must complete two science courses from BIO 10100, BIO 10200, CHEM 10300, CHEM 10400, EAS 10600, EAS 22700, PHYS 20700
3. ****Math Elective Requirement:** Students must complete one course from among **MATH 32404, MATH 32800, MATH 37600, MATH 38100, MATH 38200, MATH 39100**
4. **Consultation with the School of Education:** Students should meet with an advisor in the **School of Education** to ensure they fulfill pedagogical and certification requirements.
5. **Graduation Requirements:**
 - Minimum 120 credits required for degree.
 - Minimum **2.00 GPA in all coursework** at CCNY.
 - Minimum **2.00 GPA in Mathematics courses**.

This plan is a guideline; students should consult their academic advisors for personalized scheduling and certification requirements.