



The Geology Major provides the required science content for New York State Certification in Earth Science when combined with a second major in adolescent education in the Department of Secondary Education. There are a total of 27 credits in pedagogical content courses from a combined area of study in science education, special education, foundations, and educational psychology.

Programs of Study for the BA and BS Degrees

Both BA and BS degrees in geology require 10 courses that examine Earth's internal and surface materials, conditions, and processes, and emphasize a hands-on approach in the laboratory and the field. An additional course in calculus, chemistry, physics, statistics, and computer science also is required. For the BS degree, two courses in calculus, chemistry, and physics are required, as well as a total of 64 credits in all mathematics and science courses.

Requirements for the B.A. in Geology:

The BA degree requires completion of: Geology 101, 102, 201, 202, 208, 213, 214, 216, 239, 361, and 370; Mathematics 141 or 151, Chemistry 113.4 and 113.1; Physics 145.4 and 145.1 (or 121.4 and 121.1); Computer Science 12 and a course in statistics.

Requirements for the B.S. in Geology:

For the BS in Geology, students must: satisfy the requirements for the BA; complete Mathematics 152 (or equivalent), Chemistry 114.4 and 114.1; Physics 146.4 and 146.1 (or 122.4 and 122.1); and have a total of at least 64 credits in courses applicable to the majors in biology, chemistry, computer science, geology, mathematics, and physics.

Queens College
Secondary Education & Youth Services (SEYS)

Undergraduate Science Education Initial Certificate

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Undergraduate students must have completed at least 15-20 credits in a traditional science major (biology, chemistry, geology, physics) with a minimum average of 2.75 in order to declare their second major in secondary education. Qualified students must have a major form signed by the appropriate science department advisor and a similar form signed by an advisor in SEYS (PH 150). The forms should be submitted by the upper sophomore/lower junior year. Candidates must earn a minimum letter grade of B in 362 and student teaching.

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 declared	3	25 Hours Fieldwork
SEYS 221 (Spring or Fall)	Development and Learning in Middle Childhood & Adolescence	Upper Sophomore, major declared	3	25 Hours Fieldwork
ECPSE 350 (Spring or Fall)	Foundations of Special Education	Upper Sophomore, major declared	*3	15 Hours of Fieldwork
SEYS 340 (Spring or Fall)	Language, Literacy, and Culture In Education	Pre-requisite: SEYS 201W	3	25 Hours Fieldwork
SEYS 362 (Spring ONLY)	Methods in Teaching Science in Middle and High School	Pre-requisite: SEYS 201W, 221 Pre- or Co-requisite: SEYS 340	3	25 Hours Fieldwork
SEYS 350 (Fall ONLY)	Cognition, Technology and Instruction for Diverse Learners	Pre-requisite: 221	3	25 Hours Fieldwork
SEYS 372.2 (Fall ONLY)	Initial Clinical Experience (ICE)	Pre or Co-req.: SEYS 350 Pre-req.: SEYS 362 Co-req. SEYS 382**	3	180 + Hours in Student Teaching I M-Th
SEYS 382 (Fall Course)	Standards-Based Curriculum and Assessment in Teaching Science	Pre-req.: SEYS 362 Co-requisite: 372.2	3	No Fieldwork
SEYS 372.4 (Spring Course)	Student Teaching Science in Middle or High School	Pre-requisite: SEYS 362, 372.2, 382	3	Student Teaching II M-F
TOTAL NUMBER OF CREDITS			27	

All students are required to complete 100 hours of fieldwork prior to Student Teaching I the Initial Clinical Experience (ICE).

*Credits not applicable to the program's Total Number of Credits

**Submission of Content- Specialty Test (CST) official score report prior to the first student teaching placement, with overall score and sub-scores (candidates who do not pass must develop a remediation plan signed by advisor prior to student teaching).

****Submission of the Educating All Students (EAS) official score report prior to the first student teaching placement, with overall score and sub-scores (candidates who do not pass must develop a remediation plan signed by advisor prior to student teaching).