

BA IN GEOLOGY + MAT IN ADOLESCENCE ED: EARTH SCIENCE

Program Overview

Education Coordinator	Latanya Brandon, (845) 257-3118, brandonl@newpaltz.edu
Content Coordinator	Frederick Vollmer, (845) 257-3760, vollmerf@newpaltz.edu
Program ID	102E
Credits	122 UG + 30 GR
Program Length	The MAT can be completed in one additional year of study if enrolled full-time, but students must complete the degree within 5 years
Modality	In-person
Full-time/Part-time	Full-time or Part-time
Transfer Credits	6
Capstone	Practicum
Certification/Licensure	NYSED Initial/Professional Adolescent Education: Earth Science

Program Description

We've developed this program in response to popular demand from students and parents who have called for a pathway to fulfilling jobs in education and science, and to school districts who report an increasing number of full-time job openings in STEM disciplines. Graduation from the Five-Year Master Plan empowers students with options to choose the career they find most fulfilling, whether that means becoming a science teacher, working as a chemist, or pursuing a Ph.D.

How does it work?

ENROLL in the Five-Year Master Plan and begin taking foundational science courses as a first-year student.

MAINTAIN a 3.0 GPA as you take embedded education courses and pursue your Bachelor of Arts (BA) degree in Geology.

QUALIFY for early admission to the graduate program during your junior year.

EARN your BA degree in four years, while taking education courses to prepare for your accelerated graduate program.

COMPLETE the MAT program, including all student teaching requirements in just one year.

Admission Requirements

To participate in the BA/MAT program in Geology, interested undergraduates should:

1. Submit a Declaration of Major/Change of Major form indicating the BA/MAT program in Geology (major 51ES) to the office of Records and Registration (Wooster Hall, rm. 115).

2. Meet with [Professor Latanya Brandon](#) to begin selecting courses. Maintain a GPA of 3.0 to fulfill admission requirements for the graduate program.

Early Admission to Graduate Program

During their **junior** year, students finalize their early admission to the Master of Arts in Teaching program:

- Apply using the link above.
- Create an account or log in and follow the steps.
- Select the fall term when you would like to begin your graduate coursework and major code (102E).
NOTE: This program only admits for the fall term.
- Select "BA Geology/MAT Adolescence Ed: Earth Science Program" as the intended curriculum.

Upload Checklist Items

To expedite a faculty review of an application, students may upload the following items:

- Admission Essay
 - Reflect on a time when your idea or belief was questioned or challenged. Or, conversely, reflect on a time when your idea or belief was validated. What happened? In what way(s) could this time be considered a learning experience?

As you reflect, please include at least one reference to the [School of Education's Conceptual Framework](#) and discuss how it speaks to your experience.

- Student copies of transcripts* from every college/university attended.

* Full admission REQUIRES the submission of official transcripts and test scores.

Check Your Application Status

- Check your application status via the [applicant portal](#).

BA in Geology

Course	Title	Credits
Year 1		
Fall		
	Education Seminar	1
ENG160	Composition I	3
CHE201	General Chemistry I	3
CHE211	General Chemistry I Lab	1
MAT251	Calculus I	4
GLG201	Physical Geology	3
GLG211	Physical Geology Laboratory	1
Credits		16
Spring		
ENG180	Composition II	3
CHE202	General Chemistry II	3
CHE212	General Chemistry II Lab	1
GLG202	Historical Geology	4
MAT252	Calculus II	4
SED354	Foundations of Secondary Education Seminar	1
Credits		16

Year 2		
Fall		
PHY201	General Physics 1	3
PHY211	Physics 1 Laboratory	1
GLG311	Mineralogy and Crystallography	4
	Elementary Foreign Language I	3
	Humanities course	3
Credits		14
Spring		
EDS340	Sociological and Philosophical Foundations of Education	3
EDS372	Developing Adolescence	3
GLG314	Petrology	4
PHY202	General Physics 2	3
PHY212	General Physics 2 Lab	1
	Elementary Foreign Language II	3
Credits		17
Year 3		
Fall		
	Arts course	3
GLG331	Stratigraphy-Sedimentation	4
GLG305	Paleontology or GLG407 or Hydrogeology	4
PHY205	Exploring the Solar System or PHY206 or Exploring the Universe	3
	Take the GRE	
Credits		14
Spring		
BIO201	General Biology I (or other 4 credit science elective)	3
BIO211	Gen Bio 1 Lab	1
PHY205	Exploring the Solar System or PHY206 or Exploring the Universe	3
GLG120	Weather and Environment	4
EDS383	Introduction to Literacy for Diverse Learners	3
	Other World Course	3
	Apply to the MAT program in Adolescence Ed: Earth Science	
Credits		17
Year 4		
Fall		
GLG405	Structure and Tectonics	4
GLG435	Field Geology	4
	Geology course by advisement	3-4
	Western Civilization course	3
Credits		14-15
Spring		
SED453	Curriculum and Assessment in the Secondary School	3
SED353	Field Work #1	1
SED356	Teaching and Learning in the Digital Environment	3
	Integrating ELLs in the School & Classroom	3

Graduate education or geology liberal arts elective by advisement	3
Credits	13
Total Credits	121-122

MAT in Adolescence Ed: Earth Science

Code	Title	Credits
Summer (3 Credits)		
	Select ONE of the following if offered: discipline-specific education course, an approved diversity course, or an approved course in discipline	3
Fall (13 Credits)		
	Select TWO of the following courses not taken during summer: discipline-specific education, an approved diversity course, or an approved course in discipline	6
SED543	Science in the Secondary School	3
SED552	Field Experience II	1
SPE565	Teaching in Inclusive Classrooms	3
Spring (14 Credits)		
SED604	Practicum in Secondary Ed 7-9	6
SED605	Practicum in Secondary Ed 10-12	6
SED606	Practicum Seminar	1
SED553	Field Experience III	1
Total Credits		30

Academic Standing Requirements for Bachelor's/Master's Students

A cumulative GPA of less than 3.0 in graduate-level courses taken in the undergraduate portion of a 4+1 program precludes the student's good standing. Students with GPA of 2.75 to 2.99 strongly advised to reconsider continuing into GR program. Students below 2.75 may not continue and will be de-matriculated from GR program.

Undergraduate Program Learning Outcomes

BA Geology

Knowledge Areas

- Demonstrate mastery of the fundamental knowledge areas in the Geological Sciences.
- Show the ability to read and interpret topographic, geologic, and other maps, and demonstrate map making skills.
- Acquire competency in the supporting fields of Physics, Chemistry, and Mathematics, particularly as related to the Geological Sciences.

Research Skills

- Understand and use the scientific method to conduct research, and to be able to critically evaluate scientific work.
- Demonstrate the ability to observe, describe, and interpret geo-logic samples, outcrops, and regions using field data collection techniques and scientific methodologies.

- Have the ability to acquire information resources from scientific journals, geologic databases, internet resources, and other primary sources.
- Apply quantitative methods for problem solving, data analysis, and model formulation.
- Develop the skills to work independently and collaboratively on scientific problems.

Technical Skills

- Use a variety of geological field equipment for data collection.
- Use common geological laboratory instruments and techniques.
- Perform quantitative data analysis and interpretation using computers.

Communication Skills

- Effectively communicate technical findings and conclusions through written reports using formats and styles required for scientific writing.
- Demonstrate effective communication skills by giving oral presentations in a professional style.
- Use maps, three-dimensional diagrams, and other imagery to communicate factual information and concepts.

Learning Skills

- Demonstrate a regional and global understanding of the earth, including tectonic, historical, environmental, and resource management aspects, and their relationship to the human experience.
- Show the ability to describe and interpret a geological outcrop, demonstrating facility in applying scientific knowledge, observational techniques, the ability to synthesize, and communication skills.
- Have group field excursions with faculty members and other students involving the scientific study and aesthetic appreciation of the geological aspects of our world.