

EARTH AND ENVIRONMENTAL SCIENCE—GEOSCIENCE—EARTH SCIENCE/SECONDARY EDUCATION (TEACHER CERTIFICATION), B.A.

This major offers a broad perspective on the different sub-disciplines that comprise the Earth Sciences (Physical Geology, Oceanography, Meteorology, Astronomy and Environmental Science). This track is ideal for K-12 teachers that are enrolled in the dual co-major with Early Childhood, Elementary or Secondary Education.

THE REQUIREMENTS FOR ADMISSION TO THIS CONCENTRATION ARE:

- A minimum cumulative undergraduate grade point average (CGPA) of 3.0.
- A minimum of B- or better on all education courses
- Passing scores on the Praxis CORE, **or** 560 verbal, 540 Math on the SAT, **or** 23 or higher on the ACT, **or** 155 verbal, 156 quantitative on the GRE.

Passing scores on the Praxis CORE Academic Skills for Educators Tests, as of 9/1/19:

- Math Test #5733 Passing Score 150
- Reading Test #5712 Passing Score 156
- Writing Test #5722 Passing Score 162

Students who meet the score levels below are not required to take the Praxis CORE:

SAT Scores

- If taken before 4/1/1995: Math 520, Reading 480
- If taken between 4/1/1995 to 2/28/2016: Math 540, Reading 560
- If taken on or after 3/1/2016: Math 570, 610 Evidence-Based Reading and Writing or 30 Reading Section

ACT Scores

- If taken before 8/28/1989: Math 23, English 20
- If taken on or after 8/28/1989: Math 23, English 23

GRE Scores

- If taken before 8/1/2011: Quantitative 720, Verbal 530
- If taken on or after 8/1/2011: Quantitative 156, Verbal 155

For more information on Praxis exams: <https://www.ets.org/praxis/nj/requirements> (<https://www.ets.org/praxis/nj/requirements/>)

THE REQUIREMENTS FOR COMPLETION OF THIS DEGREE TRACK ARE:

- Completion of NJCU General Education requirements or equivalent
- Successful completion of major in intended content area
- Passing scores on appropriate Praxis II Exam
- A minimum cumulative GPA of 3.0

- Successful completion of clinical experience and clinical practice (student teaching)

This includes successful submission of the performance assessment, edTPA, as required by the New Jersey Department of Education.

Note: For the most updated information on this teaching certification program, students are directed to contact the College of Education as changes may have occurred since publication.

Code	Title	Credits
Required		
EESC 238	Wonders of Weather: The Atmosphere	3
EESC 223	The Blue Planet: The Oceans	3
EESC 135	Our Planet Earth	3
EESC 201	Environmental Science for All: Introduction to Environmental Systems and Processes	3
EESC 227	Hands on Earth: Earth Lab	3
EESC 250	Plunder: The Race for Natural Resources	3
EESC 334	Stratigraphy	4
CHEM 100	Preparation for General Chemistry	3
MATH 175	Enhanced Precalculus	4
PHYS 101	Basic Concepts of Physics	3
PHYS 113	Introduction to Astronomy	3
Required General Education Courses		
BIOL 225	Human Sexual Biology	3
or BIOL 224	The Human Body	
or BIOL 106	Practical Nutrition	
MATH 215	Problem Solving in Mathematics ¹	3
LTED 160	Languages of Power and Social Justice ²	3
Select a minimum of 15 credits from Earth and Environmental Science courses numbered 200 or higher. At least 2 or more courses have to be at the 300+ level.		15
EESC 237	Environmental Issues and Policy: Global and Urban Perspectives	3
EESC 226	Earth 360: Integrated Geography	3
EESC 231	Water Chronicles	3
EESC 235	Global Climate Change	3
EESC 250	Plunder: The Race for Natural Resources	3
EESC 252	GIS I: Contemporary Applications of GIS	3
EESC 336	Field Methods in Geoscience	4
EESC 340	Hydrology I	3
EESC 348	Environmental Geology	3
EESC 350	GIS Applications of Geoscience/Geography	3
EESC 410	Urban Soil Survey	4
EESC 434	Earth Surface Processes	4
EESC 446	Introduction to Geochemistry	3
EESC 447	Introduction to Geophysics	4
EESC 455	GIS III: Modeling with GIS	3
Required Education Courses, to be taken by phase and in sequence, for traditional certification: Phase 1 must be completed prior to admission to the Secondary Education program. Students may take Phase 1 prior to passing the Praxis CORE.		
Phase I (May be taken separately and in any order).		
EDU 280	Challenges in Urban Education	3

LTED 230	Focus: Reading Language & Literacy	3
Phase II Prerequisites: satisfactory completion of Phase 1, passing score on the Praxis CORE (unless exempt).		
EDU 330	Focus: Development, Behavior and Learning	3
EDU 371	Grades 7-12 Methods/Materials	3
Phase III (Taken concurrently and offered fall semesters only).		
LTED 370	Secondary:Reading & Language Workshop	2
EDU 3372	Methods and Materials of Teaching Science in Middle and Secondary Schools	3
EDU 331	Clinical Practice I	2
Phase IV Courses must be taken concurrently. Students must pass the appropriate Content Knowledge Praxis exam(s) before beginning Phase IV. Check with your advisor regarding which exam(s) you should take.		
EDU 470	Concurrent Student Teaching Seminar	2
EDU 480	Clinical Practice II	8
EDU 485	Classroom Management and Assessment Internship Seminar	2

¹ Required of students who have yet to meet Paxis Core Math requirement.

² Strongly recommended for students who have yet to meet Praxis Core Writing and Reading requirement.

Freshman

Semester 1		Credits
ENGL 101 or ESL 101	English Composition I or English Composition I for English as a Second Language Students	4
INTD 101	Orientation to College ^{*First time freshman only}	1
MATH 175	Enhanced Precalculus	4
BIOL 225 or BIOL 224 or BIOL 106	Human Sexual Biology or The Human Body or Practical Nutrition	3
General Education Tier I Course		3
Credits		15

Semester 2

ENGL 102 or ESL 102	English Composition II or	4
EESC 135	Our Planet Earth	3
EESC 201	Environmental Science for All: Introduction to Environmental Systems and Processes	3
MATH 215	Problem Solving in Mathematics	3
General Education Tier I Course		3
Credits		16

Sophomore

Semester 1

PHYS 101	Basic Concepts of Physics	3
CHEM 100	Preparation for General Chemistry	3
EESC 227	Hands on Earth: Earth Lab	3
EDU 280	Challenges in Urban Education	3
LTED 230	Focus: Reading Language & Literacy	3
Credits		15

Semester 2

EESC 238	Wonders of Weather: The Atmosphere	3
EESC 223	The Blue Planet: The Oceans	3
EESC 250	Plunder: The Race for Natural Resources	3
EESC 334	Stratigraphy	4
EESC Major Elective		3-4
Credits		16-17

Junior

Semester 1

PHYS 113	Introduction to Astronomy	3
EDU 330	Focus: Development, Behavior and Learning	3
EDU 371	Grades 7-12 Methods/Materials	3
EESC Major Elective		3-4
EESC Major Elective		3-4
Credits		15-17

Semester 2

EESC Major Elective		3-4
EESC Major Elective		3-4
General Education Tier II Course		3
General Education Tier II Course		3
General Education Tier II Course		3
Credits		12-14

Senior

Semester 1

LTED 370	Secondary:Reading & Language Workshop	2
EDU 3372	Methods and Materials of Teaching Science in Middle and Secondary Schools	3
EDU 331	Clinical Practice I	2
EESC Major Elective		3-4
General Education Tier II Course		3
General Education Tier III Capstone		3
Credits		16-17

Semester 2

EDU 470	Concurrent Student Teaching Seminar	2
EDU 480	Clinical Practice II	8
EDU 485	Classroom Management and Assessment Internship Seminar	2
Credits		12
Total Credits		117-123