

**LEHMAN COLLEGE
OF THE
CITY UNIVERSITY OF NEW YORK**

DEPARTMENT OF EARTH ENVIRONMENTAL AND GEOSPATIAL SCIENCES

CURRICULUM CHANGE

Name of Program and Degree Award: BA in Earth Science

Hegis Number: 191400

Program Code: 34028

Effective Term: January 2016

1. **Type of Change:** Change in Degree Requirements

2. **From:**

EARTH SCIENCE, BA (30 CREDITS)

This program is recommended for teacher education students. The required credits are distributed as follows:

~~26 Credits in required courses~~

GEO 101 Dynamic Earth (3 credits)

GEO 102 Dynamic Earth Lab (1 credit)

GEO 167 Earth Evolution (3 credits)

GEO 168 Earth Evolution Lab (2 hours, 1 credits)

GEO 228 Weather and Climate (3 hours, 3 credits)

GEO 229 Weather and Climate Lab (2 hours, 1 credits)

GEO 245 Earth Materials (5 hours, 4 credits)

~~GEO 345 Environmental Hydrology (5 hours, 4 credits)~~

GEO 4500 Topics in Earth Science (2 hours, 2 credits)

AST 117 Astronomy of Stellar Systems (5 hours, 4 credits)

~~4 Credits to be chosen from the following:~~

GEO 236 Environmental Geology (5 hours, 4 credits)

GEO 340 Natural Hazards and Disasters (3 hours, 3 credits) and GEO 341
Natural Hazards and Disasters (2 hours, 1 credit)

GEO 350 Regional Field Geology and Mapping Techniques (5 hours, 4
credits)

GEO 448 Plate Tectonics (5 hours, 4 credits)

GEO 490 Honors Geology (5 hours, 4 credits)

(Other courses may be substituted with department permission.)

3. **To:**

EARTH SCIENCE, BA (30 CREDITS)

This program is recommended for teacher education students. The required credits are distributed as follows:

22 Credits in required courses

GEO 101 Dynamic Earth (3 credits)
GEO 102 Dynamic Earth Lab (1 credit)
GEO 167 Earth Evolution (3 credits)
GEO 168 Earth Evolution Lab (2 hours, 1 credits)
GEO 228 Weather and Climate (3 hours, 3 credits)
GEO 229 Weather and Climate Lab (2 hours, 1 credits)
GEO 245 Earth Materials (5 hours, 4 credits)
GEO 4500 Topics in Earth Science (2 hours, 2 credits)
AST 117 Astronomy of Stellar Systems (5 hours, 4 credits)

8 Credits to be chosen from the following:

GEO 236 Environmental Geology (5 hours, 4 credits)
GEO 340 Natural Hazards and Disasters (3 hours, 3 credits) and GEO 341
Natural Hazards and Disasters (2 hours, 1 credit)
GEO 345 Environmental Hydrology (5 hours, 4 credits)
GEO 350 Regional Field Geology and Mapping Techniques (5 hours, 4
credits)
GEO 448 Plate Tectonics (5 hours, 4 credits)
GEO 490 Honors Geology (5 hours, 4 credits)
(Other courses may be substituted with department permission.)

4. Rationale (Explain how this change will impact learning outcomes of the department and Major/Program):

This change in degree requirements shifts GEO 345 Environmental Hydrology (5 hours, 4 credits) from a required course to the list of “courses to be chosen from”. The objective is to provide flexibility that will allow students to complete the degree in a reasonable amount of time rather than having to wait for an infrequently offered required course. As a result the number of “Required Courses” credits is changed from 26 to 22 credits and the number of “courses to be chosen from” credits is changed from 4 to 8 credits.

5. Date of departmental approval: September 9, 2015

**LEHMAN COLLEGE
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DEPARTMENT OF EARTH ENVIRONMENTAL AND GEOSPATIAL SCIENCES

CURRICULUM CHANGE

Name of Program and Degree Award: Certificate in Earth Science

Hegis Number: 191400

Program Code: 34028

Effective Term: January 2016

1. **Type of Change:** Change in Degree Requirements

2. **From:**

CERTIFICATE IN EARTH SCIENCE, 30 CREDITS

The Certificate in Earth Science is structured to provide a strong foundation in Earth science content. The program is intended for certified teachers of other science areas who plan to obtain a second certification in Earth Science as well as holders BA or BS degrees who seek a foundation in Earth science before applying to a Masters of Education program.

~~26 Credits in Required Courses~~

GEO 167 Earth Evolution (3 credits)

GEO 168 Earth Evolution Lab (2 hours, 1 credits)

GEO 228 Weather and Climate (3 hours, 3 credits)

GEO 229 Weather and Climate Lab (2 hours, 1 credits)

GEO 245 Earth Materials (5 hours, 4 credits)

GEO 301 Earth Science for Educators (5 hours, 4 credits)

~~GEO 345 Environmental Hydrology (5 hours, 4 credits)~~

GEO 4500 Topics in Earth Science (2 hours, 2 credits)

AST 117 Astronomy of Stellar Systems (5 hours, 4 credits)

~~4 Credits to be chosen from the following:~~

GEO 236 Environmental Geology (5 hours, 4 credits)

GEO 340 Natural Hazards and Disasters (3 hours, 3 credits) and GEO 341

Natural Hazards and Disasters (2 hours, 1 credit)

GEO 350 Regional Field Geology and Mapping Techniques (5 hours, 4 credits)

GEO 448 Plate Tectonics (5 hours, 4 credits)

GEO 490 Honors Geology (5 hours, 4 credits)

(Other courses may be substituted with department permission.)

3. **To:**

CERTIFICATE IN EARTH SCIENCE, 30 CREDITS

The Certificate in Earth Science is structured to provide a strong foundation in Earth science content. The program is intended for certified teachers of other science areas who plan to obtain a second certification in Earth Science as well as holders BA or BS degrees who seek a foundation in Earth science before applying to a Masters of Education program.

22 Credits in Required Courses

GEO 167 Earth Evolution (3 credits)
GEO 168 Earth Evolution Lab (2 hours, 1 credits)
GEO 228 Weather and Climate (3 hours, 3 credits)
GEO 229 Weather and Climate Lab (2 hours, 1 credits)
GEO 245 Earth Materials (5 hours, 4 credits)
GEO 301 Earth Science for Educators (5 hours, 4 credits)
GEO 4500 Topics in Earth Science (2 hours, 2 credits)
AST 117 Astronomy of Stellar Systems (5 hours, 4 credits)

8 Credits to be chosen from the following:

GEO 236 Environmental Geology (5 hours, 4 credits)
GEO 340 Natural Hazards and Disasters (3 hours, 3 credits) and GEO 341 Natural Hazards and Disasters (2 hours, 1 credit)
GEO 345 Environmental Hydrology (5 hours, 4 credits)
GEO 350 Regional Field Geology and Mapping Techniques (5 hours, 4 credits)
GEO 448 Plate Tectonics (5 hours, 4 credits)
GEO 490 Honors Geology (5 hours, 4 credits)
(Other courses may be substituted with department permission.)

4. Rationale (Explain how this change will impact learning outcomes of the department and Major/Program):

This change in degree requirements shifts GEO 345 Environmental Hydrology (5 hours, 4 credits) from a required course to the list of “courses to be chosen from”. The objective is to provide flexibility that will allow students to complete the degree in a reasonable amount of time rather than having to wait for an infrequently offered required course. As a result the number of “Required Courses” credits is changed from 26 to 22 credits and the number of “courses to be chosen from” credits is changed from 4 to 8 credits.

5. Date of departmental approval: September 9, 2015

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DEPARTMENT OF EARTH ENVIRONMENTAL & GEOSPATIAL SCIENCES

CURRICULUM CHANGE

1. **Type of Change:** Change in the course description.

2. **From:**

Department(s)	Earth Environmental and Geospatial Sciences
Career	<input checked="" type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate
Academic Level	<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial
Subject Area	Earth Science (Geology)
Course Prefix & Number	GEO 101
Course Title	Dynamic Earth
Description	An Earth system science approach to the geosphere, hydrosphere, biosphere, atmosphere and the chemical and physical processes that connect them, including the rock, water, and tectonic cycles. Optional field observations. NOTE: GEO 102 is required for majors
Pre/ Co Requisites	
Credits	3
Hours	3
Liberal Arts	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<div style="margin-left: 40px;"> <input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Required <div style="margin-left: 20px;"> <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input checked="" type="checkbox"/> Science </div> <input type="checkbox"/> Flexible <div style="margin-left: 20px;"> <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression </div> </div>

	<input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World
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3. To:

Department(s)	Earth Environmental and Geospatial Sciences
Career	<input checked="" type="checkbox"/> Undergraduate <input type="checkbox"/> Graduate
Academic Level	<input checked="" type="checkbox"/> Regular <input type="checkbox"/> Compensatory <input type="checkbox"/> Developmental <input type="checkbox"/> Remedial
Subject Area	Earth Science (Geology)
Course Prefix & Number	GEO 101
Course Title	Dynamic Earth
Description	<u>Exploration of the Earth systems: the rock beneath our feet, the water on its surface, the atmosphere, life and their multiple connections; geohazards; human impact.</u> NOTE: GEO 102 is required for majors
Pre/ Co Requisites	None
Credits	3
Hours	3
Liberal Arts	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Course Attribute (e.g. Writing Intensive, WAC, etc)	
General Education Component	<input type="checkbox"/> Not Applicable <input checked="" type="checkbox"/> Required <input type="checkbox"/> English Composition <input type="checkbox"/> Mathematics <input checked="" type="checkbox"/> Science <input type="checkbox"/> Flexible <input type="checkbox"/> World Cultures <input type="checkbox"/> US Experience in its Diversity <input type="checkbox"/> Creative Expression <input type="checkbox"/> Individual and Society <input type="checkbox"/> Scientific World

4. Rationale (Explain how this change will impact the learning outcomes of the department and Major/Program):

It was noted that incoming freshman had difficulty understanding what this course was about due to the language used in the description. This change aims to make the course description more accessible with the goal of attracting more students to the course and the BA Earth Science.

5. Date of departmental approval: September 9, 2015