

KINGSBOROUGH COMMUNITY COLLEGE  
The City University of New York  
CURRICULUM DATA TRANSMITTAL SHEET

DEPARTMENT: **PHYSICAL SCIENCES**

DATE: **Spring 2018**

Title of Course or Degree Change: **A.S. EARTH AND PLANETARY SCIENCES**

Change(s) Initiated: (Please Check)

- |   |  |
|---|--|
| <input type="checkbox"/> Closing of Degree        | <input checked="" type="checkbox"/> Change in Degree or Certificate Requirements |
| <input type="checkbox"/> Closing of Certificate   | <input type="checkbox"/> Change in Degree Requirements (adding concentration)    |
| <input type="checkbox"/> New Certificate Proposal | <input type="checkbox"/> Change in Pre/Co-Requisite                              |
| <input type="checkbox"/> New Degree Proposal      | <input type="checkbox"/> Change in Course Designation                            |
| <input type="checkbox"/> New Course               | <input type="checkbox"/> Change in Course Description                            |
| <input type="checkbox"/> New 82 Course            | <input type="checkbox"/> Change in Course Title, Numbers Credit and/or Hour      |
| <input type="checkbox"/> Deletion of Course       | <input type="checkbox"/> Change in Academic Policy                               |
|   | <input type="checkbox"/> Pathways Submission:                                    |
|   | <input type="checkbox"/> Life and Physical Science                               |
|   | <input type="checkbox"/> Math and Quantitative Reasoning                         |
|   | <input type="checkbox"/> A. World Cultures and Global Issues                     |
|   | <input type="checkbox"/> B. U.S. Experience in its Diversity                     |
|   | <input type="checkbox"/> C. Creative Expression                                  |
|   | <input type="checkbox"/> D. Individual and Society                               |
|   | <input type="checkbox"/> E. Scientific World                                     |

Other (please describe):

PLEASE ATTACH PERTINENT MATERIAL TO ILLUSTRATE AND EXPLAIN ALL CHANGES

I. DEPARTMENTAL ACTION

Action by Department &/or Departmental Curriculum Committee, if required:

Date approved:

Signature, Committee Chairperson:

Signature, Department Chair:

Date:

Appended are:

1. Proposed Degree Requirements A.S. Earth and Planetary Sciences
2. Proposed 4 semester Degree Map A.S. Earth and Planetary Sciences
3. List of Proposed Changes A.S. Earth and Planetary Sciences
4. Current catalog description A.S. Earth and Planetary Sciences  
(Marked-up to show add/drop changes)
5. Proposed catalog description A.S. Chemistry

Reason for Changes:

Comport with CUNY Degree and Academic Standards policies memo of 20 July 2016 requiring degree to be 60 credits including all pre-requisites and completed 4 semesters.

**Proposed Degree Map A.S. Earth and Planetary Sciences**

**CUNY's General Education requirements:** [excluding math and science requirements]

One year of English Composition: ENG 12 & ENG 24 (6 crs.)

Group A: One semester World (3 crs.)

Group B: One semester United States (3 crs.)

Group C: One semester Creative (3 crs.)

Group D: One semester Individual (3 crs.)

***18 credits***

**Department Degree Requirements**

**Physical Science Requirements:**

CHM 1100 – General Chemistry I (4 crs.)

EPS 3100 – Meteorology (4 crs.)

EPS 3200 – Oceanography (4 crs.)

EPS 3300 – Physical Geology(4 crs.)

EPS 3500 – Astronomy (4 crs.)

EPS 3600 – Planetology (4 crs.)

EPS 3800 – Introduction to Earth Science (4 crs.)

PHY 1100 – General Physics I (4 crs.)

***32 credits***

**Mathematics Requirements:**

MAT 9900 Pre-Calculus (3 crs)

MAT 1500 Calculus I (3 crs)

MAT 1600 Calculus II (3 crs)

***9 credits***

**Elective Credit**

***1 credits***

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***Total 60 credits***

**A.S. Earth and Planetary Sciences Degree Map**

CHM, ENG, MAT development (if required) 0 crs.

<ul style="list-style-type: none"> <li>• <b><u>Semester 1 (16 Credits)</u></b></li> <li>• EPS 38– Introduction to Earth Science 4 crs.</li> <li>• MAT 99 Pre-Calculus 3 crs.</li> <li>• ENG12 -English Composition I 3 crs.</li> <li>• Group A or B or C or D 3 crs.</li> <li>• Group A or B or C or D 3 crs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b><u>Semester 2 (14 Credits)</u></b></li> <li>• EPS 31,32,33,35 or 36 4 crs.</li> <li>• EPS 31,32,33,35 or 36 4 crs.</li> <li>• MAT 15 Calculus I 3 crs.</li> <li>• ENG24- English Composition II 3 crs.</li> </ul>
<ul style="list-style-type: none"> <li>• <b><u>Semester 3 (15 credits)</u></b></li> <li>• EPS 31,32,33,35 or 36 4 crs.</li> <li>• EPS 31,32,33,35 or 36 4 crs.</li> <li>• CHM11-Chemistry I 4 crs.</li> <li>• MAT 16 Calculus I 3 crs.</li> </ul>	<ul style="list-style-type: none"> <li>• <b><u>Semester 4 (15 credits)</u></b></li> <li>• EPS 31,32,33,35 or 36 4 crs.</li> <li>• PHY11 - Physics I 4 crs.</li> <li>• Group A or B or C or D 3 crs.</li> <li>• Group A or B or C or D 3 crs.</li> <li>• Elective Credit .....1 crs.</li> </ul>

Proposed Changes A.S. Earth and Planetary Sciences

FROM:

**Required Core (4 Courses, 14 Credits):**

Mathematical & Quantitative Reasoning Course\* ~~MAT 1500 – Calculus I (4 crs.)~~

TO:

**Required Core (4 Courses, 13 Credits):**

Mathematical & Quantitative Reasoning Course\* **MAT 99 Pre-Calculus(3crs)**

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FROM:

Flexible Core (6 Courses, 20 Credits):

E. Scientific World Designated Courses\*

~~MAT 1600 – Calculus II (4 crs.)~~

EPS 3100 – Meteorology (4 crs.)

TO:

Flexible Core (6 Courses, 20 Credits):

E. Scientific World Designated Courses\*

**EPS 3100 – Meteorology (4 crs.)**

**EPS 3800 – Introduction to Earth Science (4 crs.)**

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FROM:

**Major Requirements(6 Courses, 24 Credits):**

~~EPS 3200 – Oceanography (4 crs.)~~

~~EPS 3300 – Physical Geology (4 crs.)~~

~~EPS 3500 – Astronomy (4 crs.)~~

~~EPS 3600 – Planetology (4 crs.)~~

~~EPS 3800 – Introduction to Earth Science (4 crs.)~~

~~PHY 1100 – General Physics I (4 crs.)~~

~~Electives: 2 credits sufficient to meet required total of 60 credits~~

TO:

**Additional Department Degree Requirements:**

**Physical Science Requirements (5 Courses, 20 Credits):**

**EPS 3200 – Oceanography (4 crs.)**

**EPS 3300 – Physical Geology(4 crs.)**

**EPS 3500 – Astronomy (4 crs.)**

**EPS 3600 – Planetology (4 crs.)**

**PHY 1100 – General Physics I (4 crs.)**

**Mathematics Requirements (2 Courses, 6 Credits)::**

**Calculus 1 MAT 15 Calculus I (3 crs)**

**Calculus 2 MAT 16 Calculus II (3 crs)**

**Electives: 1 credits sufficient to meet required total of 60 credits**

## CURRENT

### A.S. EARTH AND PLANETARY SCIENCES

ACADEMIC DEPARTMENT: Physical Sciences

HEGIS: 5499.00

PROGRAM CODE: 34242

CHAIRPERSON: Dr. John Mikalopas

OFFICE LOCATION: S-243

TELEPHONE: (718) 368-5746

The curriculum presented here applies to students who started the major in Fall 2017 or Spring 2018. If you enrolled as a matriculant prior to that, please see the *College Catalog* for the year you started the major as a matriculant for the curriculum requirements that apply to you.

***Consultation with the Program Advisor is required.***

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#### Learning Outcomes:

Upon successful completion of the Earth and Planetary Sciences degree program requirements, graduates will:

1. demonstrate an understanding of the earth's subsystems
2. be able to describe the interaction and evolution of these subsystems on different temporal and spatial scales
3. demonstrate an understanding of the nature of human interactions with the earth subsystems
4. demonstrate a recognition of the relevance of the earth system to the individual and to society
5. recognize, describe, and analyze the types of natural hazards and natural resources
6. demonstrate an understanding of the nature of scientific knowledge and its historical development

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#### College Requirements:

Successful completion of CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math with passing examination scores, unless otherwise exempt, or developmental courses may be required.

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#### Civic Engagement Experiences:

Two (2) Civic Engagement experiences satisfied by Civic Engagement Certified or Civic Engagement Component courses or approved outside activity.

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#### Writing Intensive Requirement:

One (1) Writing Intensive course in any discipline is required. Participation in a Learning Community that includes ENG 1200 or ENG 2400 also satisfies this requirement.

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*Refer to course descriptions for prerequisite, corequisite and/or pre-corequisite requirements*

~~**DROP: Required Core (4 Courses, 14 Credits):**~~

**ADD: Required Core (4 Courses, 13 Credits):**

**When Required Core Courses are specified for a category, they are required for the major**

ENG 1200      Composition I (3 crs.)

ENG 2400      Composition II (3 crs.)

Mathematical & Quantitative Reasoning Course\* –

~~**DROP: MAT 1500 – Calculus I (4 crs.)**~~

**ADD: MAT 99 Pre-Calculus(3crs)**

Life & Physical Sciences Course\* - CHM 1100 – General Chemistry I (4 crs.)

\*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

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**Flexible Core (6 Courses, 20 Credits):**

**When Flexible Core Courses are specified for a category, they are required for the major**

One course from each Group A to D (Group E is satisfied by the courses show.)

- A. World Cultures and Global Issues Designated Course
- B. U.S. Experience in its Diversity Designated Course
- C. Creative Expression Designated Course
- D. Individual and Society Designated Course
- E. Scientific World Designated Courses\*

~~DROP: MAT 1600 – Calculus II (4 crs.)~~

**ADD: EPS 3800 – Introduction to Earth Science (4 crs.)**

EPS 3100 – Meteorology (4 crs.)

\*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

*No more than two courses can be selected from the same discipline*

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**DROP:**

~~Major Requirements (6 Courses, 24 Credits):~~

~~EPS 3200 – Oceanography (4 crs.)~~

~~EPS 3300 – Physical Geology (4 crs.)~~

~~EPS 3500 – Astronomy (4 crs.)~~

~~EPS 3600 – Planetology (4 crs.)~~

~~EPS 3800 – Introduction to Earth Science (4 crs.)~~

~~PHY 1100 – General Physics I (4 crs.)~~

**ADD:**

**Additional Department Degree Requirements:**

**Physical Science Requirements (5 Courses, 20 Credits):**

**EPS 3200 – Oceanography (4 crs.)**

**EPS 3300 – Physical Geology (4 crs.)**

**EPS 3500 – Astronomy (4 crs.)**

**EPS 3600 – Planetology (4 crs.)**

**PHY 1100 – General Physics I (4 crs.)**

**Mathematics Requirements (2 Courses, 6 Credits):**

**Calculus 1 MAT 15 Calculus I (3 crs)**

**Calculus 2 MAT 16 Calculus II (3 crs)**

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**Electives:**

~~DROP: 2 credits sufficient to meet required total of 60 credits~~

**ADD: 1 credits sufficient to meet required total of 60 credits**

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## PROPOSED

### A.S. EARTH AND PLANETARY SCIENCES

ACADEMIC DEPARTMENT: Physical Sciences

HEGIS: 5499.00

PROGRAM CODE: 34242

CHAIRPERSON: Dr. John Mikalopas

OFFICE LOCATION: S-243

TELEPHONE: (718) 368-5746

The curriculum presented here applies to students who started the major in Fall 2017 or Spring 2018. If you enrolled as a matriculant prior to that, please see the *College Catalog* for the year you started the major as a matriculant for the curriculum requirements that apply to you.

***Consultation with the Program Advisor is required.***

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#### **Learning Outcomes:**

Upon successful completion of the Earth and Planetary Sciences degree program requirements, graduates will:

7. demonstrate an understanding of the earth's subsystems
  8. be able to describe the interaction and evolution of these subsystems on different temporal and spatial scales
  9. demonstrate an understanding of the nature of human interactions with the earth subsystems
  10. demonstrate a recognition of the relevance of the earth system to the individual and to society
  11. recognize, describe, and analyze the types of natural hazards and natural resources
  12. demonstrate an understanding of the nature of scientific knowledge and its historical development
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#### **College Requirements:**

Successful completion of CUNY Assessment Tests in Reading, Writing, and ACCUPLACER CUNY Assessment Test in Math with passing examination scores, unless otherwise exempt, or developmental courses may be required.

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***Refer to course descriptions for prerequisite, corequisite and/or pre-corequisite requirements***

#### **Required Core (4 Courses, 13 Credits):**

**When Required Core Courses are specified for a category, they are required for the major**

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ENG 2400      Composition II (3 crs.)

Mathematical & Quantitative Reasoning Course\* – MAT 99 Pre-Calculus (3 crs.)

Life & Physical Sciences Course\* - CHM 1100 – General Chemistry I (4 crs.)

\*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

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**Flexible Core (6 Courses, 20 Credits):**

**When Flexible Core Courses are specified for a category, they are required for the major**

One course from each Group A to D (Group E is satisfied by the courses show.)

- F. World Cultures and Global Issues Designated Course
- G. U.S. Experience in its Diversity Designated Course
- H. Creative Expression Designated Course
- I. Individual and Society Designated Course
- J. Scientific World Designated Courses\*
  - EPS 3100 – Meteorology (4 crs.)
  - EPS 3800 – Introduction to Earth Science (4 crs.)

\*This program has a waiver to require particular courses in the Common Core, otherwise more than the minimum credits for the degree may be necessary.

***No more than two courses can be selected from the same discipline***

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**Additional Department Degree Requirements:****Physical Science Requirements (5 Courses, 20 Credits):**

- EPS 3200 – Oceanography (4 crs.)
- EPS 3300 – Physical Geology(4 crs.)
- EPS 3500 – Astronomy (4 crs.)
- EPS 3600 – Planetology (4 crs.)
- PHY 1100 – General Physics I (4 crs.)

**Mathematics Requirements (2 Courses, 6 Credits):**

- MAT 1500 Calculus I (3 crs)
  - MAT 1600 Calculus II (3 crs)
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**Electives:**

ADD: 1 credits sufficient to meet required total of 60 credits

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**TOTAL CREDITS: 60**