

**EXECUTIVE COMMITTEE  
COLLEGE OF NATURAL AND AGRICULTURAL SCIENCES**

**REPORT TO RIVERSIDE DIVISION  
MAY 23, 2017**

**To be adopted:**

Proposed changes to the undergraduate major requirements in Geology and Geophysics

**PRESENT:**

**Majors**

The Department of Earth Sciences offers B.S. degrees in Geology and Geophysics. These degree programs are designed for students with a strong interest in various aspects of the Earth Sciences, and for students interested in secondary teaching with a science emphasis. The B.S. programs place substantial emphasis on fieldwork with field courses, field trips in all appropriate courses, and excursions between quarters.

**Academic Advising**

Undergraduate advising in the Department of Earth Sciences is designed to allow close professional contact with faculty and staff. Counseling on graduation, departmental requirements and enrollment is handled by the major's professional academic advisors housed in the CNAS Undergraduate Academic Advising Center and the faculty undergraduate advisor for each major.

~~Each student selects a faculty mentor who counsels the student on career goals and research opportunities. The department recommends that students meet with their faculty mentor at least once each quarter to clarify career objectives and revise the program of study so it is commensurate with the developing interests and objectives of the student.~~

**PROPOSED:**

**Majors**

The Department of Earth Sciences offers B.S. degrees in Geology and Geophysics. These degree programs are designed for students with a strong interest in various aspects of the Earth Sciences, and for students interested in secondary teaching with a science emphasis. The B.S. programs place substantial emphasis on fieldwork with field courses, field trips in all appropriate courses, and excursions between quarters.

**Academic Advising**

No Change

Faculty undergraduate advisors counsel students on career goals and research opportunities. The department recommends that students meet with their faculty advisor at least once each quarter to clarify career objectives and revise the program of study so it is commensurate with the developing interests and objectives of the student.

## Teaching Credential

Teachers in the public schools in California must have a credential approved by the State Commission on Teacher Credentialing. The credential requires an undergraduate major, baccalaureate degree, and completion of a graduate credential program such as that offered by the Graduate School of Education at UCR.

Before admission and student teaching in a graduate credential program, the candidate must pass the California Basic Education Skills Test (CBEST) and demonstrate subject-matter proficiency by passing an examination. All candidates for a multiple subject credential to teach in the elementary grades must pass the Multiple Subjects, California Subject Exam for Teachers (CSET). Students are urged to start early, preferably as freshmen, selecting courses most helpful for this career. Details and counseling on the Prepare to Teach Program, a program for the multiple subject credential, are available in the Office of Interdisciplinary Programs, 2417 Humanities and Social Sciences, (951) 827-2743. Details and counseling on other programs are available in the Department of Earth Sciences or the Graduate School of Education.

UCR does not yet have a state-approved subject matter undergraduate program for earth science majors who wish to teach at the secondary level. The Teaching Credential in Science, geoscience authorization, is required for teachers who want to teach earth science/geoscience in middle school and high school. Students who plan to get this credential must take the CSET exams in Geosciences and should make certain their academic program includes preparatory course work. The examination includes geoscience in depth and general science with introductory, college-level biology, chemistry, physics, and geoscience (geology, meteorology, oceanography, astronomy). CSET test guides are available at [cset.nesinc.com](http://cset.nesinc.com).

Further information about courses, requirements, and examinations can be obtained in orientation meetings, the CalTEACH-SMI Office (1104 Pierce Hall) and the Graduate School of Education (1124 Sproul Hall).

## Teaching Credential

No Change

Earth Science students interested in a secondary school science teaching career, who intend to obtain a Teaching Credential in Science, geoscience authorization, should pursue ~~both the B.S. in General Geology~~ as well as the teaching credential from the Graduate School of Education. Students who want to have the option to become either a professional geoscientist or to teach earth science in secondary school should pursue the B.S. in ~~General Geology~~ as well as the teaching credential from the Graduate School of ~~education~~.

Students in CNAS who intend to pursue a Teaching Credential in Science, with authorization in another science, should consider pursuing a Minor in Earth Sciences.

### **Geology Major**

~~The department offers four options for the Geology major: General Geology, Geobiology, Geophysics, and Global Climate Change.~~ Students who choose the Geology major study the structure, composition, processes, and history of the earth. In particular, the Geology major stresses features of the Earth's surface and interactions between its atmosphere, hydrosphere, biosphere, rocky crust, and interior.

~~**General Geology Option** Students entering the General Geology option study the nature, distribution, age, and origin of minerals, rocks, and their contained fossils, placed within a global framework of the Earth as an evolving geologic system. The option entails a broad range of geologic training including geology, geophysics, geochemistry, and paleontology. An emphasis is also placed on fieldwork (mapping, sampling) and thoughtful analysis of geologic data (including statistical and graphical analysis with computers). Though broadly based, the option provides the student some flexibility to pursue specific geologic areas of interest at the upper division level.~~

~~Graduates of the General Geology option are qualified to pursue almost any professional career in the Earth Sciences and are well suited~~

Earth Science students interested in a secondary school science teaching career, who intend to obtain a Teaching Credential in Science, geoscience authorization, should pursue the B.S. in Geology as well as the teaching credential from the Graduate School of Education. Students who want to have the option to become either a professional geoscientist or to teach earth science in secondary school should pursue the B.S. in Geology as well as the teaching credential from the Graduate School of Education.

No Change

### **Geology Major**

Students who choose the Geology major study the structure, composition, processes, and history of the Earth. In particular, the Geology major stresses features of the Earth's surface and interactions between its atmosphere, hydrosphere, biosphere, rocky crust, and interior.

to tackle graduate research at the M.S. or Ph.D. level.

**Global Climate Change Option** The Global Climate Change option offers earth science training with an emphasis on modern and ancient evidence for global climate change and the effects of such processes on the planet. Links between human activities, organismal evolution, weathering, volcanism, plate tectonics, extraterrestrial events and the history of the atmosphere and oceans are examined. Ancient earth climate trends are studied as proxies for predicting future climate change. Students in this option receive training in climatology, oceanography, paleoecology, stratigraphy, earth resources and the global carbon cycle.

**Geobiology Option** The Geobiology option offers broad-based geological training combined with a special emphasis on paleontology and organism-time interactions. Students take the geology core but at the undergraduate upper-division level focus on courses related to the fossil record, evolution and biodiversity, sedimentology, stratigraphy, and biogeography. The graduate leaves with a marketable geology degree coupled with special insight into historical aspects of life's place and role on this planet.

**Geophysics Option** The Geophysics option allows a student to combine general geological training with geophysical techniques to image the Earth's interior. Students take the geology core but complete additional courses in physics, mathematics, geophysics, and geohydrology. Emphasis is placed on applications of geophysics to hydrological, environmental, and natural resource problems. Graduates are especially suited to enter professional employment in environmental geology and resource exploration or graduate programs in Earth Sciences. Students seeking to enter graduate programs in Geophysics should pursue the Geophysics major.

## Geophysics Major

Students who choose the Geophysics major apply the principles and concepts of physics, mathematics, geology, and engineering to the study of the physical characteristics of the earth and other planets. They make measurements of gravity and magnetic fields, seismic waves, temperatures, and natural electric current. Geophysicists study these topics from the standpoint of the physics of solid bodies, gases, and fluids. Some geophysicists are field oriented, some laboratory oriented, some theoretical, and some combine these areas.

## Change of Major and Continuation Criteria

Students wishing to change into or continue in the Geology major must be in good academic standing and show potential to graduate without exceeding 216 units.

Freshmen (2nd and 3rd quarter) must demonstrate progress in basic sciences and aptitude for geology by satisfying the following three criteria by Spring Quarter or Summer Session:

- MATH 009B eligible (e.g. completion of ~~MATH 9A~~ or ~~MATH 8B~~ with grades of C- or better)
- CHEM 001B eligible (e.g. completion of CHEM 1A with a grade of C- or better)
- One of GEO 001, GEO 002, or GEO 003 completed with a grade of C- or better

Sophomores (up to 89.9 cumulative units) must demonstrate sustained progress in basic sciences and aptitude for geology by satisfying the following three criteria by Spring Quarter or Summer Session:

- CHEM 001C completed with passing grades
- MATH 009C or MATH 046 eligible (e.g. MATH 9B with grade of C- or better)
- Two of GEO 001, GEO 002, or GEO 003 completed with no grade below C- after repeats

## Geophysics Major

No Change

## Change of Major and Continuation Criteria

No Change

- MATH 009B eligible (e.g. completion of MATH 007A or MATH 009A with grades of C- or better)

- No Change
- No Change

No Change

- No Change
- MATH 009C or MATH 046 eligible (e.g. MATH 007B or MATH 9B with grade of C- or better)
- No Change

Juniors (90 – 134.9 units) must demonstrate near completion of basic sciences and aptitude for upper-division geology by satisfying the following three criteria by Spring Quarter or Summer Session:

- CHEM 001C and MATH 009C or MATH 046 completed with passing grades
- PHYS 040B or PHYS 002B and PHYS 002LB eligible (i.e. completion of one quarter of college physics with C- or better)
- GEO 002, GEO 003 and GEO 115 or GEO 122 (and all prerequisites) completed with no grade below C- after repeats

No Change

• No Change

• No Change

• No Change

Seniors (135+ units): must have completed all but 1 course of the geology core requirements by Spring Quarter or Summer Session, as follows:

- CHEM 001C, MATH 009C or MATH 046 and PHYS 040C or PHYS 002C and PHYS 02LC completed with passing grades.
- BIOL 002 or BIOL 005A and BIOL 05LA, and STAT 100A or STAT 155 completed with passing grades.
- GEO 001, GEO 003, GEO 115, and GEO 122 or GEO 101 (and all prerequisites) completed with no grade below C- after repeats.

No Change

• No Change

• BIOL 002 or BIOL 005A and BIOL 05LA or BIOL 020, and STAT 100A or STAT 155 completed with passing grades.

• No Change

Seniors (135+ units): must have completed all but 1 course of the geology core requirements by Spring Quarter or Summer Session, as follows:

- CHEM 001C, MATH 009C or MATH 046 and PHYS 040C or PHYS 002C and PHYS 02LC completed with passing grades.
- BIOL 002 or BIOL 005A and BIOL 05LA, and STAT 100A or STAT 155 completed with passing grades.
- GEO 001, GEO 003, GEO 115, and GEO 122 or GEO 101 (and all prerequisites) completed with no grade below C- after repeats.

Seniors (135+ units): must have completed all but 1 course of the geology core requirements by Spring Quarter or Summer Session, as follows:

• No Change

• BIOL 002 or BIOL 005A and BIOL 05LA or BIOL 020, and STAT 100A or STAT 155 completed with passing grades.

• No Change

### Transfer Selection Criteria

Applicants to majors in the College of Natural and Agricultural Sciences are selected on the basis of academic preparation, as assessed by their GPA and the strength of preparation for the intended major. A GPA of at least 2.70 is required. (This is a baseline GPA for consideration and not a guarantee of admission.)

In addition, applicants will need to complete college courses comparable to at least two of the following UCR year-long sequences in order to meet selection criteria for this major. Courses must be completed with “C” grades or better:

MATH 009A, MATH 009B, and MATH 009C or MATH 046 (mandatory)

And at least one sequence from:

1. ~~BIOL 005A/BIOL 05LA~~ and BIOL 005B (and BIOL 005C, if articulated)
2. CHEM 001A, CHEM 01LA, CHEM 001B, CHEM 01LB, CHEM 001C, and CHEM 01LC

3. PHYS 040A, PHYS 040B, and PHYS 040C or PHYS 002A, PHYS 002B and PHYS 002C

4. MATH 010A, MATH 010B, and MATH 046

Courses must be completed with a letter grade, with no grade lower than a “C.” Students should visit [assist.org](http://assist.org) for updated and comprehensive major preparation requirements.

### University Requirements

See Undergraduate Studies section.

### College Requirements

See College of Natural and Agricultural Sciences, Colleges and Programs section.

Some of the following requirements for the major may also fulfill some of the college’s breadth requirements. Consult with a department advisor for course planning.

### Transfer Selection Criteria

No Change

No Change

MATH 007A or MATH 009A, MATH 007B or MATH 009B, and MATH 009C or MATH 046 (mandatory)

And at least one sequence from:

1. BIOL 005A, BIOL 05LA or BIOL 020 and BIOL 005B (and BIOL 005C, if articulated)
2. No Change

3. No Change

4. No Change

Courses must be completed with a letter grade, with no grade lower than a “C.” Students should visit [assist.org](http://assist.org) for updated and comprehensive major preparation requirements.

### University Requirements

No Change

### College Requirements

No Change

## Major Requirements

### Geology Major

All courses in Geosciences that are prerequisites for other courses in the major must be passed with a grade of "C-" or better before proceeding in the sequence. For example, GEO 001 is a prerequisite for GEO 122.

~~The department offers four options to majors in Geology: General Geology, Geobiology, Geophysics, and Global Climate Change.~~ All students majoring in Geology are normally required to take the core curriculum.

### ~~General Geology, Geobiology, Geophysics, and Global Climate Change Options~~

#### ~~Core Requirements (77-79 units)~~

##### ~~1. Lower-division requirements (58-59 units)~~

- a) GEO 001, GEO 002, GEO 003/BIOL 010
- b) BIOL 002 or ~~both BIOL 005A and BIOL 05LA~~
- c) Either CHEM 001A and CHEM 01LA or CHEM 01HA and CHEM 1HLA, either CHEM 001B and CHEM 01LB or CHEM 01HB and CHEM 01HLB, ~~either CHEM 001C and CHEM 01LC or CHEM 01HC and CHEM 1HLC~~
- d) MATH 009A, MATH 009B, ~~MATH 009C~~
- e) PHYS 040A, PHYS 040B, ~~PHYS 040C~~ or PHYS 002A, PHYS 002B, ~~PHYS 002C~~ and PHYS 002LA, PHYS 002LB, ~~PHYS 002LC~~

## Major Requirements

### Geology Major

No Change

All students majoring in Geology are normally required to take the core curriculum.

##### 1. Lower-division requirements (43-44 units)

- a) GEO 001, GEO 002 or GEO 009 or GEO 011, GEO 003/BIOL 010
- b) BIOL 002 or BIOL 005A, BIOL 05LA (or BIOL 020)
- c) Either CHEM 001A and CHEM 01LA or CHEM 01HA and CHEM 1HLA, either CHEM 001B and CHEM 01LB or CHEM 01HB and CHEM 01HLB
- d) MATH 007A or MATH 008B or MATH 009A, MATH 009B, MATH 046
- e) PHYS 040A, PHYS 040B or PHYS 002A and PHYS 02LA, PHYS 002B and PHYS 02LB

Students interested in elective classes in Geophysics are recommended to take PHYS 040C (if they have previously taken PHYS 040A and PHYS 040B), or PHYS 002C and 02LC (if they have previously taken PHYS 002A and PHYS 02LA and PHYS 002B and 02LB). Students interested in elective classes in Geochemistry are recommended to take CHEM 001C and CHEM 01LC.

2. Upper-division requirements (19-20 units)

a) GEO 101, GEO 115, GEO 122

b) STAT 100A or STAT 155

2. Upper-division requirements (47-49 units)

a) GEO 100, GEO 101, GEO 102A, GEO 102B, GEO 111, GEO 115, GEO 116, GEO 118, GEO 122

b) Two of GEO 123, GEO 124, GEO 132, GEO 136, GEO 137, GEO 140, GEO 144, GEO 145, GEO 147, GEO 151, GEO 152, GEO 157, GEO 160, GEO 161, GEO 162, GEO 169, STAT 100A or STAT 155

Students interested in pursuing professional licensure through the California Geologist In Training (GIT) examination should consider taking GEO 132 and GEO 162 as their elective classes.

**~~Global Climate Change Option (59 units)~~**

~~1. Lower-division requirements (20 units)~~

~~a) BIOL 005B, BIOL 005C~~

~~b) GEO 009, GEO 010 and GEO 011~~

~~2. Upper-division requirements (39 units)~~

~~a) GEO 118, GEO 136 or GEO 137, GEO 152 or GEO 153, GEO 157, GEO 160, GEO 169~~

~~b) Fourteen (14) units of related upper-division course approved by the undergraduate advisor.~~

**~~General Geology Option (53 units)~~**

~~1. GEO 100, GEO 116, GEO 118~~

~~2. GEO 102A (8 units in one quarter), and GEO 102B (1 unit summer field camp).~~

~~3. One course from GEO 157, GEO 160, GEO 161, GEO 162, GEO 169~~

~~4. One course from GEO 124, GEO 132, GEO 136, GEO 137~~

~~5. One course from GEO 140, GEO 144, GEO 145, GEO 147.~~

~~6. GEO 151 or GEO 152/BIOL 152~~

~~7. Eight (8) additional units of related upper-division courses approved by the undergraduate advisor~~

### **Geobiology Option (53-units)**

1. BIOL 005B, BIOL 005C
2. GEO 100, GEO 116, GEO 118
3. GEO 102A (8 units in one quarter) and GEO 102B (1 unit in summer field camp)
4. Three courses from GEO 151, GEO 152/BIOL 152, GEO 160, GEO 169
5. Four (4) additional units of related upper-division courses approved by the undergraduate advisor

### **Geophysics Option (55-units)**

1. MATH 046
2. CS 10 and MATH 031
3. GEO 116, GEO 118, GEO 132, GEO 140, GEO 144, and GEO 145 or GEO 147
4. Two additional 4-unit upper-division courses in Geosciences
5. Two upper-division physical science courses approved by the undergraduate advisor.

### **Geophysics Major**

The following are major requirements for the B.S. in Geophysics. All students majoring in Geophysics are normally required to take this core curriculum.

1. Lower-division requirements (~~67-68~~ units)
  - a) ~~Either CHEM 001A and CHEM 011A or CHEM 01HA and CHEM 1HLA, either CHEM 001B and CHEM 01LB or CHEM 01HB and CHEM 01HLB, either CHEM 001C and CHEM 01LC or CHEM 01HC and CHEM 1HLC~~
  - b) ~~GEO 001~~
  - c) ~~MATH 008B or MATH 009A, MATH 009B, MATH 009C, MATH 010A, MATH 010B, MATH 046~~
  - d) ~~PHYS 040A, PHYS 040B, PHYS 040C, PHYS 040D~~
  - e) ~~CS 010~~

### **Geophysics Major**

No Change

1. Lower-division requirements (52-66 units)
  - a) GEO 001 and one of GEO 004 or GEO 008
  - b) MATH 007A or MATH 008B or MATH 009A, MATH 007B or MATH 009B, MATH 009C, MATH 010A, MATH 031, MATH 046
  - c) PHYS 040A, PHYS 040B, PHYS 040C (strongly recommended), or PHYS 002A, PHYS 02LA, PHYS 002B, PHYS 02LB, PHYS 002C, PHYS 02LC
  - d) CS 010 or CS 030

CHEM 001A, CHEM 001LA, CHEM 001B, CHEM 001LB, MATH 010B are recommended as prerequisites for upper division electives in geology and geophysics, and for students looking to earn a teaching credential for high school science.

2. Upper-division requirements (~~61-66~~)

a) GEO 115, GEO 116, GEO 140, GEO 145

b) ~~Two of GEO 100, GEO 122, GEO 123, GEO 132, GEO 137, GEO 144, GEO 147, GEO 157~~

c) Five of PHYS 130A, PHYS 130B, PHYS 134, PHYS 135A, PHYS 135B, PHYS 136, PHYS 139L, ~~PHYS 142L~~, PHYS 177, ~~MATH 113 or~~ MATH 131, MATH 132, MATH 135A, MATH 135B, MATH 146A, MATH 146B, MATH 147

d) ~~Sixteen (16) units of upper division physical science courses, which may include up to 9 units of Senior Thesis (GEO 195A, GEO 195B, GEO 195C) or up to 4 units of independent internship (GEO 198I).~~

2. Upper-division requirements (46-51 units)

a) GEO 111, GEO 115, GEO 116, GEO 140, GEO 145

b) One of GEO 144 or GEO 147

c) Five of GEO 100, GEO 101, GEO 118, GEO 122, GEO 132, GEO 144 OR GEO 147, GEO 157, PHYS 130A, PHYS 130B, PHYS 132 OR PHYS 134, PHYS 135A, PHYS 135B, PHYS 136, PHYS 139L, PHYS 177, MATH 120, MATH 131, MATH 132, MATH 135A, MATH 135B, MATH 146A, MATH 146B, MATH 146C, MATH 147, MATH 149A OR STAT 160A, MATH 149B or STAT 160B, or STAT 160C, MATH 168, STAT 100A or STAT 155, STAT 100B

Students wishing to continue on to graduate school may wish to earn a Minor in Mathematics, Physics, Statistics, or Computer Science, requiring an additional 24 upper division units of study, and/or completion of a Senior Thesis, which includes up to 9 units of independent research.

### **Justification:**

Changes to the major preamble: The introduction of the B.S. in Earth Sciences requires rephrasing of the introduction because field work is a less pervasive part of the curriculum in this degree. The faculty mentoring system, though well intentioned, has not proven to be effective and has resulted on an unequal distribution of students among mentors, largely reflecting familiarity with faculty from lower division classes. A dedicated point person among the faculty for each of the three degrees (Earth Sciences, Geology, and Geophysics) may provide a more effective model, and we wish to explore this. The new B.S. in Earth Sciences degree will offer equally effective preparation to the B.S. in Geology for teaching within California secondary schools, although the B.S. in Geology will remain a stronger preparation for working as a professional, licensed geologist within the State.

Changes to the Geophysics Major: The Bachelor of Science in Geophysics teaches students to apply the principles and concepts of physics, mathematics, and geology to the study of the physical characteristics of the Earth and other planets. Depending on specialty, geophysicists may concentrate in seismology, exploration geophysics, electromagnetism, mineralogy/petrology, crustal deformation, or other related fields. The proposed changes to the curriculum will provide students with the core principles of geophysics (mathematics, physics, and geology) while allowing them some flexibility to tailor their degree to the geophysical subfield of interest to them.

Following the UD-45 mandate from the Committee of Two/Office of the President, we undertook a review of the major, seeking ways in which to reduce the overall unit count for the major, particularly in the upper division. We have achieved this without, we believe, harming the integrity of the major by adding more required geophysics-focused GEO classes to the core curriculum in both upper and lower divisions, and removing the requirement for 16 additional physical science units.

Lower division changes in detail:

- **Removal of lower division chemistry requirement.** Chemistry classes are not prerequisites for any of the core upper division classes in the Geophysics major. In the interest of streamlining the unit requirement for the Geophysics major, and to bring it more into line with the lower division unit requirements for the Geology major (which has fewer mathematics prerequisites), we propose to remove these classes as a requirement. We will retain CHEM 001A and CHEM 001B and their associated labs as *recommended* classes, given their status as prerequisites for some geology classes that are electives in the Geophysics major.
- **Addition of GEO 004/008 as a lower division requirement.** These classes provide additional context for the applications of geophysics to societal issues, and can act as a pathway into the major.
- **Replacement of MATH 010B requirement with MATH 031.** Linear algebra (MATH 031) is foundational to geophysical inverse theory, and its movement into the mathematics lower division postdated our previous revision to the Geophysics curriculum; we believe it would be more useful to most of our majors than MATH 010B. We will, however, list MATH 010B as a recommended class, as it is a prerequisite for several classes in the mathematics and physics upper division, as well as for the upper division elective GEO 144.
- **Allowing the PHYS 002/002L series as alternatives to the PHYS 040 series.** The two physics series cover equivalent material, and both can be used as prerequisites for upper division physics classes. This change, which is also proposed for the Geology major, will allow students greater flexibility.
- **Removal of PHYS 040D.** This class is no longer offered at UCR.
- **Allowing CS 030 as an alternative to CS 010.** This alternative class is considered equivalent to CS 010 and will allow students greater flexibility.

Upper division changes:

- **Addition of GEO 111 as a required class.** GEO 111 (Numerical Skills in Geoscience) is a new class involving instruction in scientific computing techniques in the geosciences. We believe that such skills are essential for modern geophysics, and have added the class to the core curriculum as a result.
- **Requiring one of GEO 144 or GEO 147.** These are both geophysics-focused classes, and to bolster the core curriculum, we will require students to take at least one of them.
- **Addition of more classes to the elective list.** We have added classes in geology, mathematical optimization and modeling, differential equations, thermodynamics and statistics to the elective list, giving greater flexibility and also allowing students to better pursue their interests. We have also removed classes where the prerequisites have become difficult for students in our major to attain (e.g. PHYS 142L) or that are no longer offered (e.g. MATH 113).
- **Removal of the 16 additional units requirement.** To reduce the overall upper division unit requirement to be equivalent to one year of upper division work (46–51 units), we have removed this requirement.

**Approvals:**

Approved by the faculty of the Department of Earth Sciences:

September 16, 2016

Approved by the Executive Committee of the College of Natural and  
Agricultural Sciences:

January 13, 2017

Approved by the Committee on Educational Policy:

May 10, 2017