

To: CLASCC

From: Diane Burns, Chair, Geology and Geography Department

Date: August 30, 2019

Subject: Science Teacher Certification (Earth Sciences Specialization) Program Revision Proposal

Proposal and Rationale for Revision to the B.S. in Science Teacher Licensure with Earth Sciences Specialization Major:

In an effort to make the most efficient use of resources, faculty, and students' time, make this major more attractive by requiring less semester hours to complete, and utilize the best course options, several revisions to the program are proposed.

Two Science core classes that are currently required – GEO 1430 Historical Geology and GEO 4490 Invertebrate Paleontology – are being combined to cover all of the material necessary for an understanding of deep time and historical geology events as well as an introductory understanding of fossil material (GEO 2200 History of the Earth). Paleontology (GEO 4490) is being modified to become an elective within the Geology major and will no longer be offered every fall. For teaching Earth Science within a high school course, GEO 2200 will sufficiently cover fossil identification and applications of paleontology to the history of Earth. GEO 1430 Historical Geology and GEO 4490 Invertebrate Paleontology will be eliminated from this program; GEO 2200 History of the Earth will be added to the required classes of the program.

GEO 3200 Human Impacts is currently in the Science Core. It is a fine class, but is offered infrequently due to staffing issues; however, similar topics are covered in GEO 4850 Environmental Geology and this course is offered on a yearly basis, since it is in the Geology Major core. Thus, it makes sense to replace GEO 3200 with GEO 4850 for the Earth Science Teacher Licensure program.

Effective Year/Term:

Spring, 2020

Current Version:

Earth Sciences Specialization

Total Semester Hours required for the Degree: 134 semester hours

The BS in Science with Teacher Licensure (Earth Sciences Specialization) degree program prepares students for a career as a secondary science teacher with emphasis in the earth sciences.

The BS in Science Teacher Licensure with Earth Sciences Specialization Major:

Semester hours required for the Science with Teacher Licensure: Earth Sciences Specialization: 104 including professional education core

1. 70 Semester Hours of Major Courses

- [BIO 1500 - General Biology I](#). Credits: 4
- [BIO 1550G - General Biology II](#). Credits: 4
- [CHM 1310G - General Chemistry I](#). Credits: 3
- [CHM 1315G - General Chemistry Laboratory I](#). Credits: 1
- [CHM 1410 - General Chemistry II](#). Credits: 3
- [CHM 1415 - General Chemistry Laboratory II](#). Credits: 1
- [CHM 2730 - Quantitative Analysis](#). Credits: 3
- [CHM 3100 - Practicum in Chemistry](#). Credits: 1
- [GEO 1300G - Introduction to Earth Sciences](#). Credits: 4
- [GEO 1400G - Weather and Climate](#). Credits: 4
- [GEO 2450G - Oceanography](#). Credits: 3
- [GEO 3200 - Human Impacts on the Environment](#). Credits: 3
- [GEO 3410 - Climatology](#). Credits: 3
- or GEO 3510
- [GEO 1430 - Historical Geology](#). Credits: 4
- [GEO 2440 - Mineralogy](#). Credits: 4
- [GEO 3405 - Petrology](#). Credits: 4
- [GEO 3420 - Geomorphology: Surficial Processes and Landforms](#). Credits: 3
- [GEO 3510 - Principles of Sedimentation](#). Credits: 3
- or GEO 3410
- [GEO 4490 - Invertebrate Paleontology](#). Credits: 3

- [PHS 3400 - Methods of Teaching Physical Sciences](#). Credits: 3
- [PHY 1055G - Principles of Astronomy](#). Credits: 3
- [PHY 1056G - Principles of Astronomy Laboratory](#). Credits: 1
- [PHY 1151G - Principles of Physics I](#). Credits: 3
- [PHY 1152G - Principles of Physics I Laboratory](#). Credits: 1
- [PHY 1161 - Principles of Physics II](#). Credits: 3
- [PHY 1162 - Principles of Physics II Laboratory](#). Credits: 1

2. 34 Hours in the Professional Education Core

- [EDF 2555G - Education in a Diverse Society: The Multilingual/Multicultural Classroom](#). Credits: 3
- (May also be used to satisfy General Education (Social and Behavioral Sciences) and Diversity requirement.)
- [EDF 4550 - Critical Focus on Education](#). Credits: 3
- (EDF 4450 may be substituted for EDF 4550 if taken prior to Fall 2013)
- [EDP 2330 - Educational Psychology: Foundations for Teachers](#). Credits: 3
- (EDP 3331 may be substituted for EDP 2330 if taken prior to Fall 2016.)
- [SED 2000 - Inquiry Into Teaching](#). Credits: 2
- [SED 3330 - Instructional Tasks in the Secondary School](#). Credits: 4
- [SED 4330 - Literacy, Assessment, and Differentiation in Secondary Schools](#). Credits: 3
- [SPE 3500 - The Education of Individuals with Exceptional Learning Needs: Access to the General Curriculum](#). Credits: 3
- [STG 4000 - Multicultural/Disabilities Practicum](#). Credits: 1
- [STG 4001 - Student Teaching](#). Credits: 12 to 16
- (Register for 12 semester hours)

Footnote:

(Major GPA based on all biological sciences, chemistry, earth sciences, and physics courses taken at EIU.)

Proposed Changes (in RED):

Earth Sciences Specialization

Total Semester Hours required for the Degree: ~~134~~ 131 semester hours

The BS in Science with Teacher Licensure (Earth Sciences Specialization) degree program prepares students for a career as a secondary science teacher with emphasis in the earth sciences.

The BS in Science Teacher Licensure with Earth Sciences Specialization Major:

Semester hours required for the Science with Teacher Licensure: Earth Sciences Specialization: ~~104~~ 101 including professional education core

1. ~~70~~ 67 Semester Hours of Major Courses

- [BIO 1500 - General Biology I](#). Credits: 4
- [BIO 1550G - General Biology II](#). Credits: 4
- [CHM 1310G - General Chemistry I](#). Credits: 3
- [CHM 1315G - General Chemistry Laboratory I](#). Credits: 1
- [CHM 1410 - General Chemistry II](#). Credits: 3
- [CHM 1415 - General Chemistry Laboratory II](#). Credits: 1
- [CHM 2730 - Quantitative Analysis](#). Credits: 3
- [CHM 3100 - Practicum in Chemistry](#). Credits: 1
- [GEO 1300G - Introduction to Earth Sciences](#). Credits: 4
- [GEO 1400G - Weather and Climate](#). Credits: 4
- [GEO 2200 - History of the Earth](#). Credits: 4
- [GEO 2450G - Oceanography](#). Credits: 3
- ~~[GEO 3200 - Human Impacts on the Environment](#). Credits: 3~~
- [GEO 3410 - Climatology](#). Credits: 3
- or GEO 3510
- ~~[GEO 1430 - Historical Geology](#). Credits: 4~~
- [GEO 2440 - Mineralogy](#). Credits: 4
- [GEO 3405 - Petrology](#). Credits: 4
- [GEO 3420 - Geomorphology: Surficial Processes and Landforms](#). Credits: 3
- [GEO 3510 - Principles of Sedimentation](#). Credits: 3
- or GEO 3410

- ~~GEO 4490 – Invertebrate Paleontology. Credits: 3~~
- GEO 4850 – Environmental Geology. Credits: 3
- [PHS 3400 - Methods of Teaching Physical Sciences.](#) Credits: 3
- [PHY 1055G - Principles of Astronomy.](#) Credits: 3
- [PHY 1056G - Principles of Astronomy Laboratory.](#) Credits: 1
- [PHY 1151G - Principles of Physics I.](#) Credits: 3
- [PHY 1152G - Principles of Physics I Laboratory.](#) Credits: 1
- [PHY 1161 - Principles of Physics II.](#) Credits: 3
- [PHY 1162 - Principles of Physics II Laboratory.](#) Credits: 1

2. 34 Hours in the Professional Education Core

- [EDF 2555G - Education in a Diverse Society: The Multilingual/Multicultural Classroom.](#) Credits: 3
- (May also be used to satisfy General Education (Social and Behavioral Sciences) and Diversity requirement.)
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- [STG 4001 - Student Teaching.](#) Credits: 12 to 16
- (Register for 12 semester hours)

Footnote:

(Major GPA based on all biological sciences, chemistry, earth sciences, and physics courses taken at EIU.)

Date approved by the department or school: 8/30/2019

Date approved by the college curriculum committee: 9/11/2019

Date approved by the Honors Council (if this is an honors course):

Date approved by CAA: CGS:

