



University Courses & Curricula Committee 2020-2021

November 4th, 2020
Zoom Host
12:45pm-2:45pm

Call to Order 12:45pm

- Welcome from Chair Wendy Krause
- Remarks and Updates from OUCCAS/DASA
- Approval of UCCC October 21st, 2020 Minutes
- Course and Curricular Business

New Business

Consent Agenda		
Action	Type	Notes
BIO 488 / BIO 588 Neurobiology	Minor	Revisions: Delivery, Prerequisites
CE 525 Advanced Structural Analysis	Minor	Revisions: Title, Offering, Grading, Prerequisite, Description, Level
EMS 470 / EMS 570 Methods and Materials for Teaching Mathematics	Minor	Revisions: Prerequisite
EMS 472 / EMS 572 Teaching Mathematics Topics in Senior High School	Minor	Revisions: Offering, Prerequisite
EMS 474 Teaching Mathematics Topics in the Middle Grades	Minor	Revisions: Prerequisite
REL 491 Advanced Readings in Theological and Religious Literature	Drop	Course Drop
TE 466 / TE 566 : Polymeric Biomaterials Engineering	Minor	Revisions: Course Prefix, Title, Grading, Prerequisite, Description

College of Agriculture and Life Sciences			
Presenter	Reviewers	Action	Type
Knowles	Domingue, Hergeth, Rucker	ARS 410 Art and History of World Puppetry	New Course
Knowles	Muse, Roise, Harrington	HI 377 The Silk Road in the Medieval World	New Course

College of Humanities and Social Sciences			
Presenter	Reviewers	Action	Type
Merrill	Schaffer, Reynolds, Duggins	AEC 245 Global Conservation Ecology	New Course

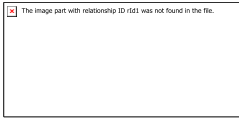
College of Education			
Presenter	Reviewers	Action	Type
Hessling	Knowles, Kuzenski, Muse	Science Education (BS): Earth Science Concentration (13SCIEDBS-13SCIEDES)	Revisions: Addition of earth science elective and earth science elective lab courses

SLO= Student Learning Outcomes

Discussion: Chair Elect nominations and voting

Notes:

- To view actions, please click on the hyperlink. You may need to use your Unity ID to log in.
- If you experience issues logging in, please go to <https://next-catalog.ncsu.edu/courseadmin/> and type the course prefix and number into the search bar.



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University Courses and Curricula Committee

October 21st, 2020
Hosted Via Zoom
Call to Order: 12:46 PM

Members Present:

Chair Wendy Krause, Rudi Seracino (past chair), Catherine Driscoll, Helmut Hergeth, James Knowles, Joseph Roise, Kanton Reynolds, Kenneth Zagacki, Kristen Schaffer, Melissa Merrill, Peggy Domingue, Peter Hessling, Renee Harrington, Rob Rucker, Andy Hale (Proxy for SP), Spencer Muse

Absent Members: Grad Student Jorden Rabasco, Student Senate Thomas Walsh,

Guests: Heather Lyerly

Ex-Officio Members Present: Li Marcus, Lexi Hergeth, Kyle Pyscher, Stephany Dunstan, John Harrington

WELCOME AND INTRODUCTIONS

- **Remarks from Chair** – Welcomed the members and proxies
- **Remarks from OUCCAS/DASA-** Thanked the members and reminded the committee that Lexi is available for training.
- **Approval of the Minutes from October 7th, 2020** – Approved
 - Discussion: Motion to approve by Helmut Hergeth.

NEW BUSINESS

- **Consent Agenda** - Approved
Discussion: The consent agenda was moved to approve by member Helmut Hergeth.
- **11EXTEDM Extension Education Minor** – Approved
Discussion: The revisions to this minor were presented by Melissa Merrill.
- **FTD 498 FTD Senior Studio** – Approved with Suggestions
Discussion: The course was presented by Helmut Hergeth. Member made the suggestion to utilize the available characters in the abbreviated title to
A link in the syllabus, under class evaluation, the second link is broken. The link will open two weeks before the start of the semester.
Member also brought attention to the attendance being 0-12 on a sliding scale. This jumped out to the member since they're college has a range of 0-2.
All are suggestions.
- **T 101 Strategies for Success in the Wilson College of Textiles** – Approved Pending
Discussion: The new course was presented by Helmut Hergeth. Member brought attention to the disability resources office statement. Member moved to amend the motion to approved pending to update to the DRO statement.
*Member asked if 'letter grade only' is up to the instructor, or if there are guidelines for this, this is up to the instructor and can be overrode by the instructor for individual students.
Member brought attention to the reading assignments in the student learning outcomes and asked how reading assignments are assessed. Other members brought attention to the tophat questions for the readings.

Discussion: Members discussed the Chair Elect Nominations that have been reopened. Helmut Hergeth has volunteered in the past.

The chair also mentioned the subcommittee is still under discussion about pulling boilerplate information from the syllabi and bringing it before the students in another way.

Meeting adjourned: 1:08 PM.

Respectfully submitted by Lexi Hergeth

MEMORANDUM

To: University Course and Curriculum Committee

From: Matt Reynolds, Undergraduate Program Coordinator,
Science Education

Date: October 5, 2020

RE: Science Education: Earth Science Concentration Curricular Updates

To Whom It May Concern:

The program has decided to update the curricula for the Science Education (BS): Earth Science Concentration degree. The updates include revisions to earth science content coursework through the addition of earth science elective and earth science elective lab courses. These changes are due to faculty discussion around what earth science content courses should or should not be required based on the science content our teacher candidates will go onto teach in secondary science classrooms. We have also decided to replace COM 110 with the option of COM 112 or COM 289.

Here is an outline of the changes:

1. We removed MEA 410: Intro to Mineralogy & Petrology (4hrs) and MEA 451: Structural Geology (4hrs) as required earth science content courses. Instead, students will now be able to select two Earth Science Elective courses (6hrs) and two Earth Science Lab Elective courses (2hrs) from a list. This change was made to allow our teacher candidates to have more flexibility and be better able to align their content area course work with the content they intend to teach in the future. Our faculty also believed the increase in lab-based course work would be valuable to their pedagogical development. Further, this change will eliminate issues that arise due to course prerequisites and MEA 410 and MEA 451 only being offered during the fall semester each year.
2. We replaced the communications requirement within the program, COM 110: Public Speaking, with COM 112: Interpersonal Communication or COM 289: Science Communication and Public Engagement. Both of these courses count towards the GEP Social Sciences requirement (3hrs), which creates to opportunity for students to have three credits of free electives (currently, this major has no free electives).
3. We updated the 8-semester plan to reflect the previously mentioned changes in the curricula.

We believe these revisions provide students with more flexibility in their coursework and still provides a rigorous and complete course of study. A record of these revisions is provided as tracked version of the curriculum display along with the list of requirements for the degree.

Sincerely,



Matt Reynolds

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: Spring 2021

Degree/Plan Title: Science Education

Concentration/Subplan Title: Earth Science

Plan SIS Code: 13SCIEDBS

Subplan SIS Code: 13SCIEDES

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ED 100 or ED150/151 ⁵	2	MEA 202 Geology II Historical ^{B,9}	3 ^{CP}
MEA 101 Phy Geology ^{B,9}	3 ^{CP}	HES*** Health & Exercise Studies Course ^E	1
MEA 110 Phy Geology Lab ^{B,9}	1 ^{CP}	CH 201 Quant Chemistry ^{B,9}	3
CH 101 Chem-A Molecular Science ^{B,9}	3	CH 202 Quant Chemistry Lab ⁹	1
CH 102 Molecular Chem Lab ^{B,9}	1	MA 231 or MA 241 Calculus II ^A	3-4
MA 131 or MA 141 Calculus I ^A	3-4	COM 112 ^D or COM 289 ^D	3
ENG 101 Acad. Writing & Research ^H	4		
	Total:17-18		Total:14-15

SOPHOMORE YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MEA 200 Intro to Oceanography ⁹	3	BIO 183 Intro Bio: Cell/Molecular Bio ⁹	4
BIO 181 Intro Bio:Ecol/Evol/Div ⁹	4	PY 212 College Physics II ⁹	4
PY 211 College Physics I ⁹	4	ED 204 Intro to 21 st Century Teaching ⁵	2 ^{CP}
Earth Science Lab Elective ⁴	1	EMS 205 Intro to Teaching Science ⁵	2 ^{CP}
Hist/Phil of Science Elective ^{1, G}	3	EDP 304 Educational Psychology ^{5, D}	3
HES*** Health & Exercise Studies Course ^E	1		
	Total: 16		Total: 15

JUNIOR YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
GEP Addtl. Breadth Req. ^F	3	ECI 416 Teaching Exceptional Students	3
MEA 130 Intro to Weather & Climate ⁹	3	ED 311 Class Assessment Princ & Pract ⁵	2
PY 123 Stellar Astron. ⁹ or PY 124 Solar Sys. Astron. ⁹	3	ED 312 Class Assess. Princ. & Pract. Lab ⁵	1
Earth Science Lab Elective ⁴	1	EMS 375 Methods of Teach Sci I ^{3, 5}	3
EMS 373 Instr. Materials in Science ⁵	3	GEP Humanities Req. ^C	3
ELP 344 School & Society ⁵	3	Earth Science Elective ⁷	3
	Total: 16		Total: 15

SENIOR YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EMS 475 Methods of Teach Sci II ^{2, 5}	3	EMS 476 Student Teaching in Science ^{5, 6}	10
Earth Science Elective ⁷	3	EMS 495 Sr. Seminar in Math & Science Ed. ^{5, 6}	2
GEP Humanities Req. ^C	3		
ES 200 Climate Change & Sustainability ^{8, 9}	3		
Free Elective	3		
	Total:15		Total:12

Minimum Credit Hours Required for Graduation*: 120

Major/Program Footnotes:

1. Choose one from HI 321, HI 322, HI 341, HI 480, PHI 340, or STS 301 (Fulfills 3 hours of GEP Interdisciplinary Perspectives).

2. Offered only in the Fall semester.
3. Offered only in the Spring semester.
4. Choose from MEA 135, MEA 210, MEA 211, and PY125
5. A grade of C (2.0) or better is required for all ECI, ELP, and ED courses, EDP 304, EMS 373, EMS 476, EMS 495. B- or better is required for EMS 205, EMS 375, and EMS 475.
6. Offered only in the spring semester. Prior admission to the Professional Semester is required.
7. Choose from MEA 300, MEA 320, MEA 350, MEA 369, MEA 410, MEA 415, MEA 440, MEA 449, MEA 450, MEA 451, MEA 465, MEA 470, MEA 481, MEA 493, ES 300, BIO325
8. Fulfills 3 hours of GEP Interdisciplinary Perspectives and GK
9. A grade of C (2.0) or better is required for core content courses, up to two courses with a grade below a C is permitted.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- A. **Mathematical Sciences** (6 credit hours – one course with MA or ST prefix)
Choose from the University approved GEP Mathematical Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **MA 131 or MA 141, MA 231 or MA 241**
- B. **Natural Sciences** (7 credit hours – include one laboratory course or course with a lab)
Choose from the University approved GEP Natural Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **CH 101/102 and CH 201/202; PY 211/212 and PY 123 or PY124; BIO 181/183; MEA 101/110, MEA 130, MEA 200, and MEA 202; Earth Science Elective and Earth Science Lab Elective**
- C. **Humanities** (6 credit hours selected from two different disciplines/course prefixes)
Choose from the University approved GEP Humanities course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement:
- D. **Social Sciences** (6 credit hours selected from two different disciplines/course prefixes)
Choose from the University approved GEP Social Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **EDP 304, COM 112 or COM289**
- E. **Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
- F. **Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
☒ Humanities/Social Sciences/Visual and Performing Arts or _____ Mathematical Sciences/Natural Sciences/Engineering
- G. **Interdisciplinary Perspectives** (5-6 credit hours)
Choose from the University approved GEP Interdisciplinary Perspectives course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **History & Philosophy of Science Elective, ES 200**
- H. **Introduction to Writing** (4 credit hours satisfied by completing ENG 101 with a C- or better)

The following **Co-Requisites** must be satisfied to complete the General Education Program requirements:

- I. **U.S. Diversity** (USD)
Choose from the University approved GEP U.S. Diversity course list or choose a course identified on the approved GEP course lists as meeting the U.S. Diversity (USD) co-requisite.
- J. **Global Knowledge** (GK)
Choose from the University approved GEP Global Knowledge course list or choose a course identified on the approved GEP course lists as meeting the Global Knowledge (GK) co-requisite. The following course(s) completed as part of the Major requirements may fulfill this requirement: **ES 200**
- K. **Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

FORMAT A
(SEMESTER-BY-SEMESTER CURRICULUM DISPLAY)

Indicate display status: Current: Proposed: X Proposed Effective Semester: ~~Fall 2019~~ Spring 2021

Degree/Plan Title: Science Education

Concentration/Subplan Title: Earth Science

Plan SIS Code: 13SCIEDBS

Subplan SIS Code: 13SCIEDES

New Degree Audit required? (Y or N) Y

Critical Path Courses - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.

FRESHMAN YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
ED 100 or ED150/151 ⁵	2	MEA 202 Geology II Historical ^{B,9}	3 ^{CP}
MEA 101 Phy Geology ^{B,9}	3 ^{CP}	HES*** Health & Exercise Studies Course ^E	1
MEA 110 Phy Geology Lab ^{B,9}	1 ^{CP}	CH 201 Quant Chemistry ^{B,9}	3
CH 101 Chem-A Molecular Science ^{B,9}	3	CH 202 Quant Chemistry Lab ⁹	1
CH 102 Molecular Chem Lab ^{B,9}	1	MA 231 or MA 241 Calculus II ^A	3-4
MA 131 or MA 141 Calculus I ^A	3-4	Social Science Req.^{4,B} COM 112 ^D or COM 289 ^D	3
ENG 101 Acad. Writing & Research ^H	4		
	Total: 17-18		Total: 14-15

SOPHOMORE YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
MEA 410 Intro to Mineralogy & Petrology⁹	4	MEA 200 Intro to Oceanography⁹	3
MEA 200 Intro to Oceanography ⁹	3	BIO 183 Intro Bio: Cell/Molecular Bio ⁹	4
PY 211 College Physics I ⁹	4	PY 212 College Physics II ⁹	4
COM 110 Public Speaking	3	ED 204 Intro to 21 st Century Teaching ⁵	2 ^{CP}
BIO 181 Intro Bio:Ecol/Evol/Div ⁹	4	EMS 205 Intro to Teaching Science ⁵	2 ^{CP}
GEP Addtl. Breadth Req.^F	3	EDP 304 Educational Psychology ^{5,D}	3
Earth Science Lab Elective ⁴	1	GEP Humanities Req.⁶	3
Hist/Phil of Science Elective ^{1, G}	3		
HES*** Health & Exercise Studies Course ^E	1		
	Total: 18-16		Total: 17-15

JUNIOR YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
GEP Addtl. Breadth Req.^F	3	ECI 416 Teaching Exceptional Students	3
MEA 130 Intro to Weather & Climate ⁹ OR MEA 311 The Global Atmosphere ⁹	3	BIO 183 Intro Bio: Cell/Molecular Bio⁹	4
MEA 451 Structural Geology⁹	3	ED 311 Class Assessment Princ & Pract ⁵	2
BIO 181 Intro Bio:Ecol/Evol/Div⁹	3	ED 312 Class Assess. Princ. & Pract. Lab ⁵	1
PY 123 Stellar Astron. ⁹ or PY 124 Solar Sys. Astron. ⁹	3	EMS 375 Methods of Teach Sci I ^{3,5}	3
Earth Science Lab Elective ⁴	1	GEP Humanities Req. ^C	3
EMS 373 Instr. Materials in Science ⁵	3	Earth Science Elective ⁷	3
ELP 344 School & Society ⁵	3		
	Total: 17-16		Total: 13-15

SENIOR YEAR

FALL SEMESTER	CREDITS	SPRING SEMESTER	CREDITS
EMS 475 Methods of Teach Sci II ^{2,5}	3	EMS 476 Student Teaching in Science ^{5,6}	10
PY 123 Stellar Astron.⁹ or PY 124 Solar Sys. Astron.⁹	3	EMS 495 Sr. Seminar in Math & Science Ed. ^{5,6}	2
Earth Science Elective⁷	3		
GEP Humanities Req. ^C	3		
ES 200 Climate Change & Sustainability ^{8,6,9}	3		

Free Elective	3	
	Total: 12 15	Total: 12
Minimum Credit Hours Required for Graduation*: 120		

Major/Program Footnotes:

1. Choose one from HI 321, HI 322, HI 341, HI 480, PHI 340, or STS 301 (Fulfills 3 hours of GEP Interdisciplinary Perspectives).
2. Offered only in the Fall semester.
3. Offered only in the Spring semester.
4. Choose a course from the GEP Social Science list EXCEPT PSY course. Social Science elective may NOT be a Psychology course.
4. Choose from MEA 135, MEA 210, MEA 211, and PY125
5. A grade of C (2.0) or better is required for all ECI, ELP, and ED courses, EDP 304, EMS 373, EMS 476, EMS 495. B- or better is required for EMS 205, EMS 375, and EMS 475.
6. Offered only in the spring semester. Prior admission to the Professional Semester is required.
7. Choose from MEA 300, MEA 415, MEA 440, MEA 450, MEA 465, MEA 470, MEA 481, MEA 493
7. Choose from MEA 300, MEA 320, MEA 350, MEA 369, MEA 410, MEA 415, MEA 440, MEA 449, MEA 450, MEA 451, MEA 465, MEA 470, MEA 481, MEA 493, ES 300, BIO325
8. Fulfills 3 hours of GEP Interdisciplinary Perspectives and GK
9. A grade of C (2.0) or better is required for core content courses, up to two courses with a grade below a C is permitted.

***General Education Program (GEP) requirements and GEP Footnotes:**

To complete the requirements for graduation and the General Education Program, the following category credit hours and co-requisites must be satisfied.

University approved GEP course lists for each of the following categories can be found at <http://www.ncsu.edu/uap/academic-standards/gep/courselists/index.html>.

- A. Mathematical Sciences** (6 credit hours – one course with MA or ST prefix)
Choose from the University approved GEP Mathematical Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **MA 131 or MA 141, MA 231 or MA 241**
- B. Natural Sciences** (7 credit hours – include one laboratory course or course with a lab)
Choose from the University approved GEP Natural Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **CH 101/102, CH 201/202, MEA 101/110, and MEA 202**
- C. Humanities** (6 credit hours selected from two different disciplines/course prefixes)
Choose from the University approved GEP Humanities course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement:
- D. Social Sciences** (6 credit hours selected from two different disciplines/course prefixes)
Choose from the University approved GEP Social Sciences course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **EDP 304, COM 112 or COM 289**
- E. Physical Education/Healthy Living** (2 credit hours – at least one 100-level Fitness and Wellness Course)
Choose from the University approved GEP Physical Education/Healthy Living course list.
- F. Additional Breadth** - (3 credit hours to be selected from the following checked University approved GEP course lists)
☒ Humanities/Social Sciences/Visual and Performing Arts
- G. Interdisciplinary Perspectives** (5-6 credit hours)
Choose from the University approved GEP Interdisciplinary Perspectives course list or the following course(s) if completed as part of the Major requirements may fulfill part or all of this requirement: **History & Philosophy of Science Elective, ES 200**
- H. Introduction to Writing** (4 credit hours satisfied by completing ENG 101 with a C- or better)

The following **Co-Requisites** must be satisfied to complete the General Education Program requirements:

- I. U.S. Diversity (USD)**
Choose from the University approved GEP U.S. Diversity course list or choose a course identified on the approved GEP course lists as meeting the U.S. Diversity (USD) co-requisite.
- J. Global Knowledge (GK)**
Choose from the University approved GEP Global Knowledge course list or choose a course identified on the approved GEP course lists as meeting the Global Knowledge (GK) co-requisite. The following course(s) completed as part of the Major requirements may fulfill this requirement: **ES 200**
- K. Foreign Language proficiency** - Proficiency at the FL_102 level is required for graduation.

CURRICULUM REQUIREMENTS

Format B

<u>Degree/Plan Title</u> : BS Science Education	<u>Plan SIS Code</u> : 13SCIED
<u>Concentration/Subplan Title</u> : Earth Science	<u>Subplan SIS Code</u> : 13SCIEDES
<u>Indicate requirements status</u> : Current: Proposed: X	<u>Proposed Effective Semester</u> : 1.2021
<u>New Degree Audit required?</u> (Y or N) Y	
<u>Critical Path Courses</u> - Identify using the code (CP) which courses are considered critical path courses which represent specific major requirements that are predictive of student success in a given program/plan. Place the (CP) next to the credit hours for the course.	

MAJOR FIELD OF STUDY REQUIREMENTS:		
<i>Required Courses/Groups/ Electives:</i>	<i>Credit Hours</i>	<i>GEP category, if applicable</i>
Indicate if course or course groupings have a C-wall or MGPA requirement and which are considered Critical Path courses – indicate with (CP) next to applic. course.		List GEP category and hours satisfied by a Major requirement
Sciences (C [2.0] or better required for all science courses, up to two courses with a grade below C is permitted) Required Science Courses: BIO 181 Intro Bio: Ecol/Evol/Div 4 BIO 183 Intro Bio: Cell/Molecular Bio 4 CH 101 Chem-A Molecular Science 3 CH 102 Molecular Chem Lab 1 CH 201 Quant Chemistry 3 CH 202 Quant Chemistry Lab 1 PY 211 College Physics I 4 PY 212 College Physics II 4 MEA 101 Phy Geology 3 (CP) MEA 110 Phy Geology Lab 1 (CP) ES 200 Climate Change & Sustainability ⁸ 3 PY 123 Stellar Astron. or PY 124 Solar Sys. Astron. 3 MEA 130 Intro to Weather & Climate 3 MEA 200 Intro to Oceanography 3 MEA 202 Geology II Historical 3 (CP)		GEP Natural Science (3hrs) GEP Natural Science (1hr) GEP Natural Science (3hrs) GEP Natural Science (3hrs) GEP Natural Science (1hrs) GEP Interdisciplinary Perspectives (3hrs)
Earth Science Electives: Choose two of the following: MEA 300, MEA 320, MEA 350, MEA 369, MEA 410, MEA 415, MEA 440, MEA 449, MEA 450, MEA 451, MEA 465, MEA 470, MEA 481, MEA 493, ES 300, BIO325	6	
Earth Science Lab Electives: Choose two from MEA 135, MEA 210, MEA 211, or PY125	2	
History & Philosophy of Science Elective Choose one from HI 321, HI 322, HI 341, HI 480, PHI 340, or STS 301	3	GEP Interdisciplinary Perspectives (3hrs)
Communication COM 112 or COM 289	3	GEP Social Sciences (3hrs)
Mathematics MA 131 or MA 141 Calculus I 3 MA 231 or MA 241 Calculus II 3		GEP Mathematics (3hrs) GEP Mathematics (3hrs)

Professional Education ED 204 (C or better) (C- not acceptable) ED 311 (C or better) (C- not acceptable) ED 312 (C or better) (C- not acceptable) EDP 304 (C or better) (C- not acceptable) ELP 344 (C or better) (C- not acceptable) ECI 416 (C or better) (C- not acceptable) EMS 205 (B- or better) EMS 373 (C or better) (C- not acceptable) EMS 375 (B- or better) EMS 475 (B- or better) EMS 476 (C or better) (C- not acceptable) EMS 495 (C or better) (C- not acceptable)	2 (CP) 2 1 3 3 3 2 (CP) 3 3 3 10 2	GEP Social Sciences (3hrs)
Free Electives:	3	
Total credit hours under Major Field of Study: <i>Minimum 27 hours required in program area.</i>	103 hours	
COLLEGE REQUIREMENTS:		
Orientation Course(s): ED 100 or ED 150/151 (C or higher) (C- not acceptable)	2	
Other:		
Total credit hours under College Requirements:	2 Hours	


<u>NCSU GENERAL EDUCATION PROGRAM REQUIREMENTS</u> <i>Courses in the Major and/or Minor may also fulfill a General Education requirement; however, a GEP category may not be subset to require a specific course from the category list. Required courses must be listed in the Major/College requirements.</i> <i>Specific courses should not be listed in any of the fields below other than ENG 101.</i>		<u>At least one of the following must be listed:</u> 1 Choose course(s) from the University Approved GEP course list for this category. 2 Minimum requirements are satisfied by Major/College course requirements. 3 Major/College course requirement satisfies <u>X</u> credit hrs of this requirement. Remaining hours required must be chosen from the University Approved GEP course list for the category. 4 Co-requisite is satisfied by a Major/College course requirement. 5 Choose course(s) from the University Approved GEP course lists for the Humanities/ Social Sciences/ Visual & Performing Arts. 6 Choose course(s) from the University Approved GEP course lists for Natural Sciences/Mathematical Sciences.
General Education Program Requirements: <i>Minimum 39-40 hrs</i>	<i>Credit hours</i>	<i>How will the GEP requirement be met?</i> <i>(Choose applicable statement from 1-6 listed above)</i>
Mathematical Sciences (6 credits) (At least 1 course with MA or ST prefix) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. MA 131 or MA 141, MA 231 or MA 241		(Choose statement 1, 2 or 3) 2
Natural Sciences (7 credits) (At least 1 lab course or course with a lab) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. CH 101/102, CH 201/202, MEA 101/110, and MEA 202		(Choose statement 1, 2 or 3) 2
English 101 (C- or better required) (4 credits)	4	ENG 101
Humanities (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites.	6	(Choose statement 1, 2 or 3) 1
Social Sciences (6 credits) (Courses from two different disciplines) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. EDP 304, COM 112 or COM 289		(Choose statement 1, 2 or 3) 2

Additional Breadth (3 credits) (Choose approach that is <i>different</i> from the approach of the Major) Major/College requirements cannot satisfy this requirement and an AB course cannot be double-counted except in satisfying the Global Knowledge or U.S. Diversity co-requisites.	3	(Choose statement 5 or 6) 5
Interdisciplinary Perspectives (5 credits) Course(s) in the Major may double-count to satisfy this requirement and also satisfy either the Global Knowledge or U.S. Diversity co-requisites. History & Philosophy of Science Elective, ES 200		(Choose statement 1, 2 or 3) 2
Health and Exercise Studies (2 credits) (Including one <i>Fitness and Wellness</i> course)	2	Choose course(s) from the University Approved GEP course list for this category.
Total credit hours needed to complete GEP that are <u>not</u> satisfied as part of the Major/College requirements.	15 hours	
GEP Co-Requisites:		Courses taken in the Major, GEP, or Minor may double-count to fulfill the co-requisites. Courses that satisfy the U.S. Diversity or Global Knowledge co-requisite are marked on course lists with a "USD" or "GK" indicator.
U.S. Diversity co-requisite (USD)	n/a	(Choose statement 1 or 4) 1
Global Knowledge co-requisite (GK)	n/a	(Choose statement 1 or 4) 1
Foreign Language Proficiency	n/a	Proficiency at the FL_102 level required.
The following requirements must be satisfied within the College/Program:		Place an X in the credit hour box to indicate below that the requirement is "Satisfied by College/Program Requirements"
Communication in the Major (Advanced Communication)	X	Satisfied by College/Program Requirements
Technology Fluency	X	Satisfied by College/Program Requirements
Total credit hours required to complete Degree: Total must be within 120-128 credit hours.	120 Total hours	As applicable, indicate here the overall GPA requirement for degree completion including course completion.

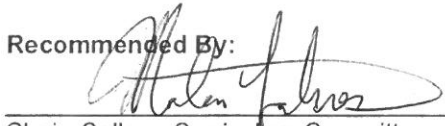
North Carolina State University
Department of Science, Technology, Engineering, and Mathematics Education
in the College of Education

This request to update the Science Education (BS): Earth Science Concentration degree has been reviewed and approved by the appropriate campus committees and authorities.


Endorsed By:

 _____ 10/12/2020
Head, Department/Program Date

Recommended By:

 _____ 10/19/20
Chair, College Curriculum Committee Date

Endorsed By:

 _____ 10/19/20
College Dean Date

Recommended By:

Vice Provost, DELTA (if DE degree/certificate) Date

Recommended By:

Chair, University Courses & Curricula Committee Date

Approved By:

Dean, Division of Academic and Student Affairs (DASA) Date

Recommended By:

Dean's Council Date

Approved By:

Provost Date

Approved By:

Chancellor Date

COURSE ACTION FOR 13SCIEDBS-13SCIEDES

RECOMMENDED BY:

HEAD, DEPARTMENT/PROGRAM

DATE

ENDORSED BY:

CHAIR, COLLEGE COURSES & CURRICULA COMMITTEE

DATE

COLLEGE DEAN

DATE

APPROVED BY:

CHAIR, UNIVERSITY COURSES & CURRICULA COMMITTEE

DATE

CHAIR, COUNCIL ON UNDERGRADUATE EDUCATION

DATE

DEAN, DIVISION OF ACADEMIC AND STUDENT AFFAIRS (DASA)

DATE

APPROVED EFFECTIVE DATE _____