Notice

Complete and correct proposals/packages were placed on this agenda in the order in which they were received and availability of time.

The Committee devotes the necessary time to thoroughly review each package; therefore, presentation times are approximate and may vary. Your patience is appreciated.

Section I - Meeting Agenda

<table>
<thead>
<tr>
<th>Agenda Items*</th>
<th>Call to Order/Announcements (Jean-Luc Scemama)</th>
<th>2:00</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Approval of the February 14, 2019 minutes</td>
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</tbody>
</table>

|               | College of Education Department of Literacy Studies, English Education, and History Education (Elizabeth Swaggerty - excused) | 2:05 |
|               | 1. Notice of Revision of Existing Graduate Courses in Undergraduate Catalog: READ 5316, 5317 (no UCC review - for information only) |      |
III. Harriot College of Arts and Sciences
Department of Economics
(Gregory Howard)
1. Memorandum of Request
2. Proposal of a New Accelerated Program: Accelerated BS in Economics/MS in Quantitative Economics and Econometrics (Level 2)

IV. College of Education
Department of Mathematics, Science, and Instructional Technology Education
(Bonnie Glass)
1. Memorandum of Request
2. Revision of Existing Courses: SCIE 3602, 3604, 3606, 4324, 4325 (Level 1)
3. Revision of an Existing Degree: Science Education, BS (Level 3)

V. College of Education
(Vivian Covington)
Note: this package required a memorandum of request form only (no additional forms)
1. Memorandum of Request
2. Discontinuation of Existing Concentrations: Anthropology, Biology, Chemistry, Economics, French, General Science (24 hour option), Geography, Geology, German, Hispanic Studies, History, Mathematics (24 hour option), Philosophy, Physics, Political Science, Sociology, Teaching English as a Second Language (Level 1)
3. Moving concentrations to a new academic home: Birth-Kindergarten, English, General Science (18 hour option), Interdisciplinary Human Studies, Mathematics (18 hour option), Psychology, Reading, Social Studies (Level 1)

VI. College of Education
Department of Elementary and Middle Grades Education
(Carol Greene)
Package 1:
1. Memorandum of Request
2. Banking of an Existing Course: ELEM 4500 (Level 1)
3. Revision of Existing Courses: ELEM 4324, 4325 (Level 1)
4. Revision of an Existing Degree: Elementary Education (K-6), BS (Level 3)
Package 2:
1. Memorandum of Request
Section II - Meeting Minutes

<table>
<thead>
<tr>
<th>Date</th>
<th>Minutes</th>
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</thead>
<tbody>
<tr>
<td>2-28-2019</td>
<td>✔️ Minutes</td>
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**Attendance**
- Bellacerio, Cynthia*
- Bowman, Josie*
- Dembo, Jonathan*
- Ferguson, Kenneth*
- Jordan, Debra*
- Kean, Linda*
- Kidd, Susan*
- Scemama, Jean-Luc*

**Attendance**
- Spalding, Nancy*
- Vail-Smith, Karen*
- Weiss, Stacy*
- SGA Rep*
- Baker, Rachel
- Coltraine, Diane
- Summey, Karen
- Traynor, Karen

Guests/Comments
<table>
<thead>
<tr>
<th>I. Call to Order/Announcements</th>
<th>Call to Order/Announcements (Jean-Luc Scemama)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• Approval of the February 14, 2019 minutes.</td>
</tr>
<tr>
<td></td>
<td>Motion made to approve the minutes by D. Jordan and seconded by N. Spalding. Motion passed.</td>
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<thead>
<tr>
<th>II. College of Education</th>
<th>College of Education</th>
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<tbody>
<tr>
<td>Department of Literacy Studies, English Education, and History Education</td>
<td>Department of Literacy Studies, English Education, and History Education (Elizabeth Swaggerty - excused)</td>
</tr>
<tr>
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<td>Notice of Revision of Existing Graduate Courses in Undergraduate Catalog: READ 5316, 5317 (no UCC review - for information only)</td>
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<tr>
<th>III. Harriot College of Arts and Sciences</th>
<th>Harriot College of Arts and Sciences (Gregory Howard)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department of Economics</td>
<td>Department of Economics</td>
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<tr>
<td></td>
<td>Memorandum of Request</td>
</tr>
<tr>
<td></td>
<td>Shared justification for the accelerated program and identified an increase of interest by students along with increased quality.</td>
</tr>
<tr>
<td></td>
<td>Proposal of a New Accelerated Program: Accelerated BS in Economics/MS in Quantitative Economics and Econometrics (Level 2)</td>
</tr>
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<td></td>
<td>Motion made to approve the package by K. Vail-Smith, and seconded by N. Spalding. Motion passed.</td>
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<tr>
<th>IV. College of Education</th>
<th>College of Education</th>
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</thead>
<tbody>
<tr>
<td>Department of Mathematics, Science, and Instructional Technology Education</td>
<td>Department of Mathematics, Science, and Instructional Technology Education (Ron Prescott)</td>
</tr>
<tr>
<td></td>
<td>Memorandum of Request</td>
</tr>
<tr>
<td></td>
<td>Overview of proposed changes related to decreasing the overall number of hours. Clearly written.</td>
</tr>
</tbody>
</table>
2. Revision of Existing Courses: SCIE 3602, 3604, 3606, 4324, 4325 (Level 1)

SCIE 3602, would suggest changing designation from lecture and lab to just lecture. Dr. Prescott will follow up with the faculty in the department and made appropriate edits related to designation. The course does not need pre-requisites since course is primarily taken by students in the major.

SCIE 3604, some edits suggested for the objectives by the committee members who reviewed the proposal which were made prior to the meeting.

SCIE 3606, 4324, 4325. No suggested edits. (Level 1)

3. Revision of an Existing Degree: Science Education, BS (Level 3)

Motion made to approve as amended by D. Jordan and second by C. Bellacero. Motion passed.

V. College of Education
(Vivian Covington)

Note: this package required a memorandum of request form only (no additional forms)

1. Memorandum of Request

The changes requested are a result of a review of the curriculum and eliminating concentrations that have not been taught over past 5 years.

1. Discontinuation of Existing Concentrations: Anthropology, Biology, Chemistry, Economics, French, General Science (24 hour option), Geography, Geology, German, Hispanic Studies, History, Mathematics (24 hour option), Philosophy, Physics, Political Science, Sociology, Teaching English as a Second Language (Level 1)

2. Moving concentrations to a new academic home: Birth-Kindergarten, English, General Science (18 hour option), Interdisciplinary Human Studies, Mathematics (18 hour option), Psychology, Reading, Social Studies (Level 1)

Motion made to approve by S. Kidd and seconded by S. Weiss. Motion passed.

Section III

VI. College of Education
Department of Elementary and Middle Grades Education
(Carol Greene)

Presented the justification and how the department decreased the semester
hours to 120.

Package 1:

1. Memorandum of Request
2. Banking of an Existing Course: ELEM 4500 (Level 1)
3. Revision of Existing Courses: ELEM 4324, 4325 (Level 1)

Suggested edits made to course objectives which were changed during the meeting.

1. Revision of an Existing Degree: Elementary Education (K-6), BS (Level 3)

Motion made to approve as amended Package 1 by D. Jordan and second by N. Spalding. Motion passed.

Package 2:

1. Memorandum of Request
2. Revision of an Existing Degree: Middle Grades Education, BS (Level 1)

Suggested edit to remove a stray (*) which was done.

Motion made to approve as amended Package 2 by S. Weiss and second by N. Spalding. Motion passed.

VII.

College of Engineering and Technology
Department of Engineering
(William Howard)

1. Memorandum of Request
2. Revision of Existing Courses: ENGR 3034, MENG 4153, 4263 (Level 1)
3. Revision of an Existing Degree: Engineering, BS (Level 3)

The department is requesting exception to the mandate to decrease the program to 120 hours. The department is proposing to decrease the program to 125 semester hours. Changes in courses included pre-requisite changes. The catalog changes were discussed and approved by D. Coltraine.

Motion made to approve the proposal by N. Spalding and second by S. Kidd. Motion passed.
<table>
<thead>
<tr>
<th>Course Prefix</th>
<th>Course Number</th>
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<tbody>
<tr>
<td>READ</td>
<td>5316</td>
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<table>
<thead>
<tr>
<th>Course Title</th>
<th>Applied Word Study: Phonics, Spelling, and Vocabulary Instruction</th>
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<tbody>
<tr>
<td>Credits</td>
<td>3</td>
</tr>
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<table>
<thead>
<tr>
<th>Service Learning</th>
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<tbody>
<tr>
<td>Writing Intensive</td>
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<th>When Offered</th>
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<table>
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<tr>
<th>General Education (GE) Curriculum</th>
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<tr>
<td>Diversity (DD/GD)</td>
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<th>Same as</th>
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<tr>
<th>Lecture/Lab/Studio/Contact Hours</th>
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<th>Note</th>
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<tr>
<th>Prerequisite</th>
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<td>Recommended prerequisite</td>
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<thead>
<tr>
<th>Corequisite</th>
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<tbody>
<tr>
<td>Recommended corequisite</td>
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<th>Prereq/Coreq</th>
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<table>
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<tr>
<th>Recommended</th>
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</table>
### Course Description*  
Skill in phonics as one kind of Examination of help word knowledge and its role in identifying written words K-12 literacy instruction. Essentials Knowledge of phonics, spelling, word development, and linguistically sound vocabulary instruction using a generative approach in methodology.

### School/College  
College of Education

### Course Prefix AND Number (Ex. ABCD 1234)*  
READ 5316

### Department*  
College of Education  
Department of Literacy Stud, Eng and Hist Education

### Course Discipline*  
Reading

### Section IV - Additional Course Information

<table>
<thead>
<tr>
<th>Method(s) of Delivery CURRENT</th>
<th>Activity Log</th>
<th>Method(s) of Delivery FUTURE</th>
<th>Activity Log</th>
</tr>
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<tbody>
<tr>
<td>Elizabeth Swaggerty</td>
<td>+ 08 Internet or world wide web (does not have dedicated physical space and meeting times except for testing and/or examination periods)</td>
<td>Elizabeth Swaggerty</td>
<td>+ 08 Internet or world wide web (does not have dedicated physical space and meeting times except for testing and/or examination periods)</td>
</tr>
<tr>
<td></td>
<td>+ 01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)</td>
<td></td>
<td>+ 01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)</td>
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<tr>
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<td>- 01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)</td>
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<td>- 01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)</td>
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<tr>
<td></td>
<td>+ 07 Face-to-face remote site (regular face-to-face meeting times and dedicated physical space at a location other than ECU)</td>
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<tr>
<td>Select Primary Instructional Format</td>
<td>Activity Log</td>
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<tr>
<td>Elizabeth Swaggerty</td>
<td>04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.</td>
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Contact Hours | Select one: 
--- | ---
3 | Activity Log
Elizabeth Swaggerty
Weekly

(Optional) Additional Instructional Format

Contact Hours | Select one:
Section II - Course Information

<table>
<thead>
<tr>
<th>Course Prefix*</th>
<th>Course Number*</th>
<th>5317</th>
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</table>

**Course Title**
Reading Adolescent Literacy in the Junior and Senior High School Content Areas

**Credits**
3

**Service Learning**

**Writing Intensive**

**When Offered**

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab/Studio/Contact Hours:**
Lecture and lab.

**Note**
May receive credit for only one of READ 3990, 5317.

**Prerequisite**

**Recommended prerequisite**

**Corequisite**

**Recommended corequisite**

**Prereq/Coreq**
**Recommended prereq/coreq**

**Course Description**

Knowledge and skills enable prospective junior high and secondary teachers to assess reading levels, improve adolescent learning strategies related to the different dimensions of students and use methods and materials in keeping with individual interests and needs. Literacy (e.g., reading capability enhanced through teaching-learning process in each, reading, writing, speaking, listening, viewing) across content area courses. May receive credit for only one of READ 3990, 5317.

<table>
<thead>
<tr>
<th>School/College</th>
<th>College of Education</th>
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<tbody>
<tr>
<td>Course Prefix AND Number (Ex. ABCD 1234)*</td>
<td>READ 5317</td>
</tr>
<tr>
<td>Department*</td>
<td>College of Education</td>
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<td>Department of Literacy Stud, Eng and Hist Education</td>
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<td></td>
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**Select Primary Instructional Format**

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</tr>
</tbody>
</table>
04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.

Contact Hours 3

Select one:
- Activity Log
  - Elizabeth Swaggerty
  - Weekly

(Optional)
Additional Instructional Format

Contact Hours

Select one:
Economics - UG - Howard - Accelerated Bachelor of Science in Economics/Master of Science in Quantitative Economics and Econometrics

O - New Accelerated Program Form

Section I - General Information

<table>
<thead>
<tr>
<th>Contact Last Name*</th>
<th>Howard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telephone*</td>
<td>2527374318</td>
</tr>
<tr>
<td>Email*</td>
<td><a href="mailto:howardgr@ecu.edu">howardgr@ecu.edu</a></td>
</tr>
</tbody>
</table>

Section II - Program Justification

Justification* To attract, motivate and retain our best undergraduate students, the Department of Economics is proposing an accelerated bachelor's/master's program. An accelerated program will benefit our students, the department, and the university in several ways.

First, an accelerated bachelors/master's program will benefit our students. Giving students the ability to count up to 12 hours of graduate courses toward both their bachelors and master's degrees will enable our highest-caliber students to encounter graduate-level curriculum earlier than they would otherwise be able. Further, the program would allow students to complete their graduate studies at an accelerated pace, a move which yields the dual benefit of getting them into high-paying jobs more quickly and reducing the student debt they accumulate over the course of their education.

In addition to benefiting students, an accelerated program provides benefits to the department and university. Accelerated degrees are becoming more common, and our own such program will make the Economics department more competitive when it comes to attracting high-quality students. This is true at the graduate level, meaning the program will make it easier to keep our strongest undergraduate students from being poached by graduate programs at other universities, but it is also true at the undergraduate level. Advertising this accelerated program (and other similar programs for other departments) will make ECU more attractive for bright high school students who have yet to make their college decision.

This action impacts
teacher education.* □ Yes □ No

DE Authorization (check ECU API, if needed)*
□ Both the UG and GR degrees are authorized for DE delivery
□ One of the two degrees is authorized for DE delivery
□ Neither the UG nor the GR degree is authorized for DE delivery

**Section III - Program Information**

**Click Program**
□ Program
□ Shared Core

**New degree title (begins with Accelerated)**
Accelerated Bachelor of Science in Economics/Master of Science in Quantitative Economics and Econometrics

**Existing UG degree title**
Economics, BS

**Unit where existing UG degree is housed**
Department of Economics

**Existing GR degree title**
Quantitative Economics and Econometrics, MS

**Unit where existing GR degree is housed**
Department of Economics

**Section IV - Catalog Information**

□ I request assistance with the catalog information section of this proposal form.*
□ Yes (strongly recommended) □ No

**Program Coordinator:** Philip Rothman (A-424 Brewster Building; 252-328-6151; rothmanp@ecu.edu)

The accelerated bachelor of science in economics/master of science in quantitative economics and econometrics is initiated while undergraduates are completing the BS in economics degree and is intended for outstanding undergraduates. For this program, graduate student course work will begin in the students' fourth year of undergraduate study and be completed with one academic year of study beyond the bachelor's degree. Students are formally admitted to the master's program after all requirements for the undergraduate degree are completed. It is anticipated that a full year of study beyond completion of undergraduate economics requirements will be required to
complete this program.

Undergraduate economics students may apply to the program after completion of a minimum of 80 eligible undergraduate credit hours and can begin taking graduate courses after completion of a minimum of 90 eligible undergraduate credit hours (120 credit hours are required for the bachelor's degree in economics). Up to 12 credit hours of graduate courses may be counted towards completion of both the undergraduate degree and master’s degree.

Students accepted into the accelerated program must earn a grade of B or above in all graduate coursework to continue in the accelerated program. Students who earn a C in any graduate course will still be able to count that course toward the BS degree, but will not be eligible to take additional graduate courses in the accelerated BS/MS. Students will be able to reapply to the MS program.

Students accepted into the accelerated BS in economics/MS in quantitative economics and econometrics can take up to 12 s.h. from the following courses:

- ECON 5360 (for ECON 3520)
- ECON 6111 (for ECON 4101)
- ECON 6112 (for ECON 4102)
- ECON 6113 (for ECON 4103)
- ECON 6301 (for ECON 4521)
- ECON 6302 (for ECON 4521)
- ECON 6390 (for ECON 4523)
- ECON 6401 (for ECON 4700)

Proposed curriculum*

Admission Process

Students applying to the accelerated bachelor of science in economics/master of science in quantitative economics and econometrics program will go through the regular graduate application process with the following exceptions: • On the online graduate application form students will indicate that they are applying to an "Accelerated program". • A supplemental form will be completed with a faculty advisor listing the graduate courses to be counted towards both degrees, the intended date of completion of the undergraduate degree requirements, and the intended semester of assistantship eligibility. • Personal statement should address the applicant’s specific interest in economics and econometrics graduate education and the accelerated program.
### Section V - Additional Resources and Support

**Identify additional resources requested with this proposal**
- [ ] Add'l Personnel
- [ ] Add'l Facilities
- [ ] Library Services
- [ ] Add'l Computer
- [x] None Required

**ITCS**
- [ ] Mainframe
- [ ] Statistical Services
- [ ] Netwk Connection
- [ ] Computer Lab

### Section VI - Impact Report

<table>
<thead>
<tr>
<th>List Program Impacts (if none, enter N/A)</th>
<th>N/A</th>
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<table>
<thead>
<tr>
<th>List Course Impacts (if none, enter N/A)</th>
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# Section II - Course Information

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<tr>
<td>SCIE</td>
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<table>
<thead>
<tr>
<th>Course Title*</th>
<th>Investigations in Physical Science</th>
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<table>
<thead>
<tr>
<th>Credits*</th>
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<tr>
<th>Service Learning</th>
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| General Education (GE) Curriculum | |

| Diversity (DD/GD) | |

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<th>Formerly</th>
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</table>

| Same as | |

| Lecture/Lab/Studio/Contact Hours: | One 3-hour lecture, Two 1.5-hour lecture/lab, 5-hour lectures/labs per week. |

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<tr>
<th>Note</th>
<th></th>
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</table>

| Prerequisite | |

| Recommended prerequisite | |

| Corequisite | |

| Recommended corequisite | |

| Prereq/Coreq | |

| Recommended | |

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Course Description* Selected topics and investigations in the physical sciences. Science concepts treated in depth and in relationship to state and national science education standards. Emphasis on role of investigative approach.

School/College College of Education

Course Prefix AND Number (Ex. ABCD 1234)* SCIE 3602

Department* Department of Math, Science, and Instructional Tech Education

Course Discipline* Science Education

Section IV - Additional Course Information

Method(s) of Delivery CURRENT

Bonnie Glass

+ 01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)

Method(s) of Delivery FUTURE

Bonnie Glass

+ 01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)

Select Primary Instructional Format

Bonnie Glass

+ 04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.

- 13 Lecture and Lab requires the combined attributes of a lecture course and a lab course. Display hours as X Lecture/X Lab.

Bonnie Glass

+ 13 Lecture and Lab requires the combined attributes of a lecture course and a lab course. Display hours as X Lecture/X Lab.

Contact Hours 3

Select one: Activity Log
<table>
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<tr>
<th>Bonnie Glass</th>
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<tr>
<td>+ Weekly</td>
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<td>Weekly</td>
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<tr>
<th>(Optional) Additional Instructional Format</th>
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<table>
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<tr>
<th>Contact Hours</th>
<th>Select one:</th>
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### Section II - Course Information

<table>
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<td><strong>Course Title</strong>*</td>
<td>Investigations in Life and Environmental Science</td>
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<td><strong>Credits</strong>*</td>
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<tr>
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<tr>
<td>Writing Intensive</td>
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<tr>
<td>When Offered</td>
<td>F,S,SS</td>
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<tr>
<td>General Education (GE) Curriculum</td>
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<tr>
<td>Diversity (DD/GD)</td>
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<tr>
<td><strong>Formerly</strong></td>
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<tr>
<td><strong>Same as</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecture/Lab/Studio/Contact Hours:</td>
<td>Two 2-hour lectures/labs One 3-hour lecture/lab Two 1.5-hour lectures/labs lectures per week.</td>
<td></td>
</tr>
<tr>
<td><strong>Note</strong></td>
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<tr>
<td>Prerequisite</td>
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<tr>
<td>Recommended prerequisite</td>
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<tr>
<td>Corequisite</td>
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<tr>
<td>Recommended corequisite</td>
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<tr>
<td><strong>Prereq/Coreq</strong></td>
<td></td>
<td></td>
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<tr>
<td>Recommended</td>
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</tr>
</tbody>
</table>
Course Description: Development of skills Selected topics and investigations in the life science. Science concepts treated in utilizing living organisms depth and school yard environment in relationship to provide learning experiences for children state and national science education standards. Emphasis on role of investigative approach.

School/College: College of Education

Course Prefix AND Number (Ex. ABCD 1234)*: SCIE 3604

Department*: Department of Math, Science, and Instructional Tech Education

Course Discipline*: Science Education

Section IV - Additional Course Information

Method(s) of Delivery CURRENT: Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)

Method(s) of Delivery FUTURE: Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)

Select Primary Instructional Format: Lecture and Lab requires the combined attributes of a lecture course and a lab course. Display hours as X Lecture/X Lab.

Activity Log: Bonnie Glass

- 04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.

- 04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.

- 13 Lecture and Lab requires the combined attributes of a lecture course and a lab course. Display hours as X Lecture/X Lab.

- 04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline led by an
04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.

<table>
<thead>
<tr>
<th>Contact Hours</th>
<th>Select one:</th>
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<tbody>
<tr>
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</table>

(Optional)
Additional Instructional Format

<table>
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<th>Contact Hours</th>
<th>Select one:</th>
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</table>
# Math, Sci, & Instruc Tech Educ - UG - Glass - SCIE 3606

**B - LONG Course Revision Form**

## Section II - Course Information

<table>
<thead>
<tr>
<th>Course Prefix*</th>
<th>Course Number* 3606</th>
</tr>
</thead>
</table>

**Course Title*** Investigations in Earth and Space Science

**Credits** 4 3

**Service Learning**

**Writing Intensive**

**When Offered**

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab /Studio/Contact Hours:** Two 1.5-hour lectures/labs per week.

**Note**

**Prerequisite**

**Recommended prerequisite**

**Corequisite**

**Recommended corequisite**

**Prereq/Coreq**

**Recommended**
Course Description* Selected topics and investigations in Earth and space sciences. Science concepts treated in depth and in relationship to state and national science education standards. Emphasis on role of investigative approach.

School/College College of Education

Course Prefix AND Number (Ex. ABCD 1234)* SCIE 3606

Department* Department of Math, Science, and Instructional Tech Education

Course Discipline* Science Education

Section IV - Additional Course Information

<table>
<thead>
<tr>
<th>Method(s) of Delivery CURRENT</th>
<th>Activity Log</th>
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<tbody>
<tr>
<td>Bonnie Glass</td>
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<table>
<thead>
<tr>
<th>Method(s) of Delivery FUTURE</th>
<th>Activity Log</th>
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<tbody>
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<table>
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<th>Activity Log</th>
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<tr>
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<td>04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.</td>
</tr>
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<td></td>
<td>- 04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.</td>
</tr>
<tr>
<td></td>
<td>- 13 Lecture and Lab requires the combined attributes of a lecture course and a lab course. Display hours as X Lecture/X Lab.</td>
</tr>
</tbody>
</table>

Bonnie Glass

- 13 Lecture and Lab requires the combined attributes of a lecture course and a lab course. Display hours as X Lecture/X Lab.
- 04 Lecture requires the extended expression of thought supported by generally-accepted principles or theorems of a field or discipline led by an expert or qualified representative of the field or discipline.
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<tr>
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<tbody>
<tr>
<td>Activity Log</td>
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<tr>
<td>Bonnie Glass</td>
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<tr>
<td>Weekly</td>
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</table>

(Optional) Additional Instructional Format

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# Math, Sci, & Instruc Tech Educ - UG - Glass - SCIE 4324

**B - LONG Course Revision Form**

## Section II - Course Information

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<tr>
<td>Course Number*</td>
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<table>
<thead>
<tr>
<th>Course Title*</th>
<th>Internship in Science Education</th>
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<table>
<thead>
<tr>
<th>Credits*</th>
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<th>Service Learning</th>
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<th>Writing Intensive</th>
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<th>General Education (GE) Curriculum</th>
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<tr>
<th>Lecture/Lab /Studio/Contact Hours:</th>
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</thead>
</table>

**Note**  Full-time, semester-long internship.

<table>
<thead>
<tr>
<th>Prerequisite</th>
<th>Admission to upper division; SCIE 4323;</th>
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<table>
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<tr>
<th>Recommended prerequisite</th>
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</table>

<table>
<thead>
<tr>
<th>Corequisite</th>
<th>SCIE 4325.</th>
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<table>
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<table>
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<th>Prereq/Coreq</th>
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</thead>
</table>

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<thead>
<tr>
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</table>
**Course Description**

Internship under direction of master teacher. Teaching science in a high school classroom in collaboration with university supervisor in assigned supervised by a licensed high school teacher of science.

**School/College**

College of Education

**Course Prefix AND Number (Ex. ABCD 1234)**

SCIE 4324

**Department**

Department of Math, Science, and Instructional Tech Education

**Course Discipline**

Science Education

### Section IV - Additional Course Information

<table>
<thead>
<tr>
<th>Method(s) of Delivery CURRENT</th>
<th>Activity Log</th>
<th>Method(s) of Delivery FUTURE</th>
<th>Activity Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonnie Glass</td>
<td><strong>07 Face-to-face remote site (regular face-to-face meeting times and dedicated physical space at a location other than ECU)</strong></td>
<td>Bonnie Glass</td>
<td><strong>07 Face-to-face remote site (regular face-to-face meeting times and dedicated physical space at a location other than ECU)</strong></td>
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<table>
<thead>
<tr>
<th>Select Primary Instructional Format</th>
<th>Activity Log</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bonnie Glass</td>
<td><strong>06 Student Teaching requires students to instruct or teach at an entity external to the institution, generally as part of the culminating curriculum of a teacher education or certification program.</strong></td>
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<table>
<thead>
<tr>
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<td>Bonnie Glass</td>
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<td>(Optional) Additional Instructional Format</td>
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<td>-------------------------------------------</td>
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<tr>
<td>Contact Hours</td>
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<td>Select one:</td>
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## Section II - Course Information

<table>
<thead>
<tr>
<th>Course Prefix*</th>
<th>Course Number* 4325</th>
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<tbody>
<tr>
<td><strong>Course Title</strong> Internship Seminar: Issues in Science Education</td>
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<tr>
<td><strong>Credits</strong> 2</td>
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<tr>
<td>Service Learning</td>
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<tr>
<td>Writing Intensive</td>
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<tr>
<td><strong>When Offered</strong> S</td>
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<tr>
<td>General Education (GE) Curriculum</td>
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<td>Lecture/Lab /Studio/Contact Hours:</td>
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<tr>
<td><strong>Note</strong></td>
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<tr>
<td><strong>Prerequisite</strong> Admission to upper division;</td>
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<tr>
<td><strong>Recommended prerequisite</strong></td>
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<tr>
<td><strong>Corequisite</strong> SCIE 4324.</td>
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<tr>
<td><strong>Recommended corequisite</strong></td>
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<tr>
<td><strong>Prereq/Coreq</strong></td>
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</tbody>
</table>
Recommended prereq/coreq

**Course Description**
Critical reflection on issues related to the internship and teaching high school science.

**School/College**
College of Education

**Course Prefix AND Number (Ex. ABCD 1234)**
SCIE 4325

**Department**
Department of Math, Science, and Instructional Tech Education

**Course Discipline**
Science Education

### Section IV - Additional Course Information

<table>
<thead>
<tr>
<th>Method(s) of Delivery CURRENT</th>
<th>Method(s) of Delivery FUTURE</th>
</tr>
</thead>
<tbody>
<tr>
<td>01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)</td>
<td>01 Face-to-face (regular face-to-face meeting times and dedicated physical space at ECU)</td>
</tr>
</tbody>
</table>

**Select Primary Instructional Format**
05 Seminar requires students to participate in structured conversation or debate focused on assigned readings, current or historical events, or shared experiences led by an expert or qualified representative of the field or discipline.

**Contact Hours** 2

**Select one:** Weekly

<table>
<thead>
<tr>
<th>(Optional) Additional Instructional Format</th>
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<tbody>
<tr>
<td>Contact Hours</td>
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</tbody>
</table>
Math, Sci, & Instruc Tech Educ - UG - Glass - Science Education, BS

D - Program Revision Form

Section II - Program Justification

Primary CIP Code* 13.1316

Section III - Catalog Information

Program Coordinator: Bonnie Glass Flanagan (352-C Speight (352-D Flanagan Building; 252-328-9368; glassb@ecu.edu)

The science education degree prepares and develops professionals in science education by offering classroom instruction and research opportunities in programs for students whose career goals are teaching science in the elementary, middle, and secondary schools, and in higher education. Undergraduate areas of preparation include the methods and processes of teaching the biological, physical, and earth sciences.

Minimum degree requirement is \textbf{123 120 s. h.} of credit as follows:
1. General education and special requirements for certification including those listed below - 40 s.h.

(For information about courses that carry general education credit see General Education Program.)

BIOL 1100 Principles of Biology I
CHEM 1150 General Chemistry I
GEOL 1500 Dynamic Earth
GEOL 1501 Dynamic Earth Laboratory
MATH 1065 College Algebra
PSYC 1000 Introductory Psychology

[After] Choose a Council-approved diversity course - PSYC 2777, or SOCI 1010 or EDUC 3002.

[After] Choose a literature course (GE:HU)

Note: BIOL 1100; GEOL 1500, GEOL 1501 count toward the 7 s.h. general education natural sciences requirement. CHEM 1150 counts toward the 3 s.h. general education elective requirement.

2. Teaching area concentration - 52-54-50-53 49-53 s.h.

(Choose one from the following.)
**a. a. Biology** (52-53) *(50-51) (52-53 s. h.)*

- BIOL 1101 Principles of Biology
- BIOL 1200 Principles of Biology II
- BIOL 1201 Principles of Biology Laboratory II
- BIOL 2110 Fundamentals of Microbiology
- BIOL 2111 Fundamentals of Microbiology Laboratory
- BIOL 2250 Ecology
- BIOL 2251 Ecology Laboratory
- BIOL 2300 Principles of Genetics
- BIOL 3030 Principles of Physiology
- [Before]
- BIOL 3260 Cell and Developmental Biology
- [After] or
- or
- BIOL 3310 Cellular Physiology
- [After]
- BIOL 3311 Cellular Physiology Laboratory
- BIOL 3620 Biological Evolution
- CHEM 1151 General Chemistry Laboratory I
- CHEM 1160 General Chemistry II
- CHEM 1161 General Chemistry Laboratory II
- MATH 2121 Calculus for the Life Sciences I
- MATH 2122 Calculus for the Life Sciences II
- PHYS 1250 General Physics I
- PHYS 1251 General Physics Laboratory I
- PHYS 1261-1-2 General Physics Laboratory II
- PHYS 1260 General Physics II
- SCIE 3602 Investigations in Physical Science
- SCIE 3604 Investigations in Life and Environmental Science
- SCIE 3606 Investigations in Earth and Space Science
**b. b. Chemistry-54-50 (49 s. h.)**

BIOL 1101 Principles of Biology
Laboratory I
BIOL 1200 Principles of Biology II
BIOL 1201 Principles of Biology
Laboratory II
CHEM 1151 General Chemistry Laboratory I
CHEM 1160 General Chemistry II
CHEM 1161 General Chemistry Laboratory II
CHEM 2250 Quantitative and Instrumental Analysis
CHEM 2251 Quantitative and Instrumental Analysis Laboratory
CHEM 2750 Organic Chemistry I
CHEM 2753 Organic Chemistry Laboratory I
CHEM 2760 Organic Chemistry II
CHEM 2763 Organic Chemistry Laboratory II
CHEM 3450 Elementary Inorganic Chemistry
CHEM 3451 Elementary Inorganic Chemistry Laboratory
CHEM 3850 Introduction to Physical Chemistry
CHEM 3851 Introduction to Physical Chemistry Laboratory
CHEM 2770 Biological Chemistry
MATH 2121 Calculus for the Life Sciences I
MATH 2122 Calculus for the Life Sciences II
PHYS 1250 General Physics I
PHYS 1251 General Physics Laboratory I
PHYS 1260 General Physics II
PHYS 1261 General Physics Laboratory II
SCIE 3602 Investigations in Physical Science
SCIE 3604 Investigations in Life and Environmental Science
SCIE 3606 Investigations in Earth and Space Science
c. c. Earth science—(52–53 (52 s. h.))

BIOL 1101 Principles of Biology
BIOL 1200 Principles of Biology II
BIOL 1201 Principles of Biology
Laboratory II
CHEM 1151 General Chemistry Laboratory I
CHEM 1160 General Chemistry II
CHEM 1161 General Chemistry Laboratory II

[After]
GEOL 1550 Oceanography
[Right] or
or
[After]
GEOL 1700 Environmental Geology
GEOL 1600 Earth and Life Through Time
GEOL 3050 Mineralogy and Petrology I
GEOL 3051 Mineralogy and Petrology I
Laboratory
GEOL 3200 Introduction to Field Methods
GEOL 3250 Introduction to Geomorphology

[After] GEOL Elective over 3000 (3)
GEOL 3251 Introduction to Geomorphology Laboratory
GEOL Elective over 3000 (3)
MATH 2121 Calculus for the Life Sciences I
MATH 2122 Calculus for the Life Sciences II
PHYS 1250 General Physics I
PHYS 1251 General Physics Laboratory I
PHYS 1260 General Physics II
PHYS 1261 General Physics Laboratory II
SCIE 3602 Investigations in Physical Science

SCIE 3604 Investigations in Life and Environmental Science
SCIE 3606 Investigations in Earth and Space Science
d. d. Physics—53 (50 s. h.)

BIOL 1101 Principles of Biology
Laboratory I
BIOL 1200 Principles of Biology II
BIOL 1201 Principles of Biology
Laboratory II
CHEM 1151 General Chemistry Laboratory I
CHEM 1160 General Chemistry II
CHEM 1161 General Chemistry Laboratory II
MATH 2171 Calculus I
MATH 2172 Calculus II
PHYS 1251 General Physics Laboratory I
PHYS 1261 General Physics Laboratory II
PHYS 2350 University Physics I
PHYS 2360 University Physics II
PHYS 3416 Modern Physics I
PHYS 3417 Modern Physics II
PHYS 3716 Undergraduate Research in Physics
PHYS 4120 Thermodynamics
PHYS 4310 Modern Optics
SCIE 3602 Investigations in Physical Science
SCIE 3604 Investigations in Life and Environmental Science
SCIE 3606 Investigations in Earth and Space Science

3. Specialty area — 6 s.h.

SCIE 3323 Introduction to Teaching in the High School Science Classroom
SCIE 4323 The Teaching of Science in High School
4. Professional studies—**25–26 22–23 s. h.**

**EDUC 3200 Foundations of American Education**

[After]

EDUC 4400 Foundations of School Learning, Motivation, and Assessment

[Right] or

or

[After]

PSYC 4305 Educational Psychology

[Right] or

READ 3990 Teaching Reading in the Content Areas in the Secondary School

[After]

or

READ 5317 Reading in the Junior and Senior High School

SCIE 2123 Early Experiences for the Prospective Teacher

SCIE 4030 Technology in Science Teaching

SCIE 4324 Internship in Science Education

SCIE 4325 Internship Seminar: Issues in Science Education

SPED 4010 Effective Instruction in Inclusive Classrooms

5. **Electives to complete requirements for graduation.**
As Assistant Dean of Undergraduate Affairs and Educator Preparation, I respectfully request to:

A. Discontinue the following concentrations: Anthropology, Biology, Chemistry, Economics, French, General Science (24 hours), Geography, Geology, German, Hispanic Studies, History, Mathematics (24 hours), Philosophy, Physics, Political Science, Sociology, Teaching English as a Second Language and

B. Move the following concentrations from the College level to the Department of Elementary Education and Middle Grades Education: Birth-Kindergarten, English, General Science (18 hours), Interdisciplinary Human Studies, Mathematics (18 hours), Psychology, Reading, Social Studies.

Data to support the discontinuation of the above named concentrations is attached. The justification for the move of the concentrations to the department is because they are the only department for whom this section of the catalog pertains. The four 24-hour concentrations were previously moved to the middle grades education portion of the catalog, as middle grades candidates must choose two of these four 24-hour concentrations only due to licensure area requirements. Any future required changes will be administratively easier if this resides within the department.

Any candidates who have started with a concentration, which is subject to deletion in this request, will be held harmless and allowed to complete the concentration.
## Section I - Request

**Choose One:**
- Undergraduate
- Graduate

**Department:**
- Department of Elementary and Middle Grades Education

<table>
<thead>
<tr>
<th>List courses to be banked (prefix, number, and title).</th>
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</thead>
<tbody>
<tr>
<td>ELEM 4500 Internship 1</td>
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</table>

| List courses to be deleted (prefix, number and title). |

Enter the current prefix of the course list you wish to change and the new prefix (Example: From EXSS to KINE).

## Section II - Impact of Proposed Changes

| List Program Impacts (each impacted program will require the home dept. to initiate a program revision form). |

| List Course Impacts (impacted courses may require the home dept. of the impacted course to initiate course revision forms). |
## Section II - Course Information

<table>
<thead>
<tr>
<th>Course Prefix*</th>
<th>Course Number*</th>
<th>4324</th>
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<tbody>
<tr>
<td>Course Title*</td>
<td>Internship in the Elementary School</td>
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<tr>
<td>Credits*</td>
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<tr>
<td>Service Learning</td>
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<tr>
<td>Writing Intensive</td>
<td></td>
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<tr>
<td>When Offered</td>
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<tr>
<td>General Education (GE) Curriculum</td>
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<tr>
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<td>Lecture/Lab /Studio/Contact Hours:</td>
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<tr>
<td>Note</td>
<td></td>
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</tr>
<tr>
<td>Prerequisite</td>
<td>Upper division standing; EDTC 4001; <strong>EDUC 4400</strong> or <strong>PSYC 4305</strong>; ELEM 3000, ELEM 3100, ELEM 3200, ELEM 3300, ELEM 3500, ELEM 3600, ELEM 4300, ELEM 4400, <strong>ELEM 4500</strong>; MATE 3050, MATE 3051, MATE 3060; READ 3301, READ 3302; SCIE 3216;</td>
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<tr>
<td><strong>Recommended prerequisite</strong></td>
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**Corequisite**
ELEM 4325.

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</table>

**Prereq/Coreq**

<table>
<thead>
<tr>
<th><strong>Recommended prereq/coreq</strong></th>
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</table>

**Course Description**
Full-time, semester-long internship in assigned elementary (K-6) classroom under direction of a master teacher and a university supervisor. Emphasis on teacher as decision maker in planning, implementing, and evaluating instruction.

<table>
<thead>
<tr>
<th><strong>School/College</strong></th>
<th>College of Education</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th><strong>Course Prefix AND Number (Ex. ABCD 1234)</strong></th>
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ELEM 4324

<table>
<thead>
<tr>
<th><strong>Department</strong></th>
<th>Department of Elementary and Middle Grades Education</th>
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</thead>
</table>

<table>
<thead>
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### Section II - Course Information

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<tbody>
<tr>
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**Course Title*** Internship Seminar: Issues in Elementary Education

**Credits*** 2.3

**Service Learning**

**Writing Intensive**

**When Offered** F,S

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab/Studio/Contact Hours:**

**Note**

**Prerequisite** Upper division standing; EDTC 4001; **EDUC 4400 or PSYC 4305**; ELEM 3000, ELEM 3100, ELEM 3200, ELEM 3300, ELEM 3500, ELEM 3600, ELEM 4300, ELEM 4400, **ELEM 4500**; MATE 3050, MATE 3051, MATE 3060; READ 3301, READ 3302; SCIE 3216;
Recommended prerequisite

Corequisite ELEM 4324.

Recommended corequisite

Prereq/Coreq

Recommended prereq/coreq

Course Description* Reflective study of problems or issues in elementary education and concerns arising from internship experience. Examines the skills, dispositions, and content knowledge required of elementary teachers in contemporary schools.

School/College College of Education

Course Prefix AND Number (Ex. ABCD 1234)* ELEM 4325

Department* Department of Elementary and Middle Grades Education

Course Discipline* Elementary Education

Section IV - Additional Course Information

Method(s) of Delivery CURRENT

Activity Log Carol Greene

08 Internet or world wide web (does not have dedicated physical space and meeting times except for testing and/or examination periods)

Method(s) of Delivery FUTURE

Activity Log Carol Greene

08 Internet or world wide web (does not have dedicated physical space and meeting times except for testing and/or examination periods)

Select Primary Activity Log
05 Seminar requires students to participate in structured conversation or debate focused on assigned readings, current or historical events, or shared experiences led by an expert or qualified representative of the field or discipline.

Contact Hours 3

Select one:

Activity Log
Carol Greene
+ Weekly

(Optional)
Additional Instructional Format

Contact Hours

Select one:
## Section II - Program Justification

<table>
<thead>
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## Section III - Catalog Information

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<tr>
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<td>Elementary Education (K-6), BS</td>
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<td>Degree Type*</td>
<td>Bachelor of Science</td>
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<tr>
<td>Program Type*</td>
<td>Bachelors</td>
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<tr>
<td>Program Description*</td>
<td>Program Coordinator: Mark L’Esperance (230 Speight Building; 252-328-1136; <a href="mailto:lesperancem@ecu.edu">lesperancem@ecu.edu</a>)</td>
</tr>
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</table>

Minimum degree requirement is 125-129 s. h. of credit as follows:

<table>
<thead>
<tr>
<th>Proposed Curriculum*</th>
</tr>
</thead>
</table>


1. General education requirements **including the following**-40 s. h.

(For information about courses that carry general education credit see General Education Program.)

ART 3850 Art in the Elementary School
MATH 2127 Basic Concepts of Mathematics
MUSC 3018 Introduction to Basic Music Skills for Elementary School Teachers

[After] Choose 3 s. h. humanities
(literature)*Choose 9 s. h. social science in 2 different areasChoose 7 s. h. natural science, include 1 science lab
(literature)* (literature)

**Note:**

*Children's literature cannot be used to fulfill this requirement.
2. Professional studies-30-27 28 s. h.

EDTC 4001 Technology in Education
[After]
EDUC 3002 Introduction to Diversity
[Right] or
PSYC 2777 Ethnocultural Psychology
[Right] or
SOCI 1010 Race, Gender, Class
[Before]
EDUC 3200 Foundations of American Education
[Before]
EDUC 4400 Foundations of School Learning, Motivation, and Assessment
[Right] or
PSYC 4305 Educational Psychology
[After]
ELEM 2123 Early Experience for the Prospective Teacher
ELEM 4324 Internship in the Elementary School
ELEM 4325 Internship Seminar: Issues in Elementary Education
READ 3301 Reading Instruction in the Primary Grades
SPED 4020 Teaching Students with Exceptionalities in Elementary Classrooms

3. Academic concentration concentrations-18-12 12-18 s. h.*

(See Academic Concentration.) Each of the following academic concentrations require 18 s. h. Six However, four of the academic concentrations, however, require general education designated courses or offer electives that may in some cases count toward the degree's general education requirement of the degree. For these four concentrations, a maximum of six semester hours (6 s. h.) may count toward the general education requirement for the degree. Students are encouraged to discuss this degree option with their advisor prior to developing the four year plan. Choose one of the following academic concentrations:
**Note:**
*A maximum of 6 s.h. may be counted toward general education requirements.*

### New-Core a. Birth through Kindergarten-18 (18 s.h.)

- HDFS 2000 Child Development I: Prenatal Through Early Childhood
- HDFS 3150 Introduction to Early Childhood Intervention
- HDFS 3306 Guiding Children’s Behavior
- HDFS 3321 Infant and Toddler Curriculum
- HDFS 4121 Social Studies, Math, and Science Curriculum in Early Childhood
- HDFS 4122 Language and Literacy Curriculum in Early Childhood

### New-Core b. English-18 s.h.

- ENGL 2000 Interpreting Literature
- ENGL 2200 Major American Writers
  [After] or
- ENGL 3020 History of American Literature to 1900
- ENGL 3950 Literature for Children
  [After] or
- LIBS 4950 Literature for Children
- ENED 4319 Teaching English and Language Arts in the Middle Grades
- ENED 4970 Literature for the Younger Adolescent
- LING 2710 English Grammar
New Core c. General Science—18 s. h.

SCIE 3216 Teaching Science in the Elementary School
SCIE 3270 Physical Science for Grades K-6
SCIE 3280 Life and Environmental Science Grades K-6
SCIE 3290 Earth Systems Science Grades K-6
SCIE 3336 Science and Methods in Informal Settings and Field Experience

[After] Choose 3 s. h. of general education science credits.

New Core d. History—18 s. h.

HIST 1030 World Civilizations to 1500
HIST 1031 World Civilizations Since 1500
HIST 1050 American History to 1877
HIST 1051 American History Since 1877

[After] Choose 6 s.h. HIST electives of which 3 s.h. must be above 2999
New Core e. Interdisciplinary Human Studies - 18 s. h.

[Before] Choose 9 s.h. from the following:
- HLTH 3010 Health Problems
- HLTH 4410 Planning, Implementing, and Assessing Sexuality Education
- HLTH 4605 Community Strategies for Health Education
- KINE 2900 Teaching Skillful Movement
- KINE 3300 Applied Sports Psychology
- KINE 3301 Physical Education and Sport in Modern Society
- KINE 3900 Elementary School Instruction in Physical Education
- PSYC 1000 Introductory Psychology
- PSYC 4350 Psychology of Sexual Behavior
- SOCI 1025 Courtship and Marriage
- SOCI 3325 Sociology of Human Sexuality

[After] Choose 9 s.h. from the following:
- BIOL 2130 Survey of Human Physiology and Anatomy
- EHST 2110 Introduction to Environmental Health Sciences
- HLTH 2125 Safety Education and First Aid
- HLTH 2126 Safety Education and First Aid Laboratory
- HLTH 3020 Health Disparities
- HLTH 3244 Health Methods for Elementary Grades
- HLTH 3355 Alcohol, Tobacco, and Other Drugs Education and Prevention
- KINE 2202 Motor Learning and Performance
- KINE 3805 Physiology of Exercise
- KINE 3850 Introduction to Biomechanics
- KINE 3906 Physical Education for Special Populations
- KINE 4804 Measurement and Evaluation in Exercise and Sport Science
- KINE 4805 Exercise Evaluation and Prescription Laboratory
- KINE 4806 Exercise Evaluation and Prescription
- NUTR 1000 Contemporary Nutrition

[After] or
- NUTR 2105 Nutrition Science
New Core f. Mathematics-18 s. h.

MATE 1267 Functional Relationships
MATE 2067 Data and Probability Explorations
MATE 3067 Algebra and Number Foundations
MATE 3167 Geometry and Measurement
MATE 3267 Concepts in Discrete Mathematics
MATH 1065 College Algebra

New Core g. Psychology-18 s. h.

MATH 2228 Elementary Statistical Methods I
[Right] or
PSYC 2101 Psychological Statistics
PSYC 1000 Introductory Psychology
PSYC 3206 Developmental Psychology
PSYC 3225 Psychology of Learning
[Right] or
PSYC 3226 Cognitive Psychology
[After] Choose 6 s.h. PSYC electives above 2999

New Core h. Reading (Optional Add-on Licensure)-18 s. h.

READ 3000 Literacy Learning in a Diverse World
READ 3301 Reading Instruction in the Primary Grades
READ 3302 Reading Instruction in the Intermediate Grades
READ 4000 Connecting Theory and Practice in K-12 Literacy Instruction
READ 5316 Applied Phonics
READ 5317 Reading in the Junior and Senior High School
### New Core i. Social Studies-18 s. h.

- HIST 1030 World Civilizations to 1500
- [Right] or
- HIST 1031 World Civilizations Since 1500
- HIST 1050 American History to 1877
- HIST 1051 American History Since 1877
- HIST 3100 North Carolina History
- [Right] or
- MIDG 3200 North Carolina History
- Standards Curriculum and Planning in the Middle Grades Classroom
- POLS 1010 National Government
- [After] Choose 3 s.h. GEOG electives

### 4. Specialty area-41 s-38s 40-43 40-43 24 s. h.

- ELEM 3000 Curriculum and Standards in Elementary School
- ELEM 3100 Learning and Instruction in Elementary School
- ELEM 3200 Language Arts in Elementary School
- ELEM 3300 K-2 Practicum
- ELEM 3500 Teaching Social Studies in Elementary School
- ELEM 3600 Grades 3-5 Practicum
- ELEM 4300 Classroom Organization and Management in Elementary School
- ELEM 4400 Assessment for Elementary Educators
- **ELEM 4500 Internship I**
- MATE 3050 Mathematics and Methods for Grades Pre-K-2
- MATE 3051 Field Experience in Mathematics Grades K-2
- MATE 3060 Mathematics and Methods for Grades 3-6
- READ 3302 Reading Instruction in the Intermediate Grades
- SCIE 3216 Teaching Science in the Elementary School
5. Cognate—5 s.h.

ENGL 3950 Literature for Children
[Right] or
LIBS 4950 Literature for Children
[After]
MATE 2129 Basic Concepts of Mathematics II

Notes

One of the above literature for children courses may be counted toward general education requirements. Please discuss this option with your academic advisor prior to registration.

New-Core 5. Cognates-16 16-19 s. h.

Note: ENGL 3950 is designated as a humanities general education course and can count as the general education elective.

ENGL 3950 Literature for Children
[After] or
LIBS 4950 Literature for Children
[After]
MATE 2129 Basic Concepts of Mathematics II
MATE 3050 Mathematics and Methods for Grades Pre-K-2
MATE 3051 Field Experience in Mathematics Grades K-2
MATE 3060 Mathematics and Methods for Grades 3-6
READ 3302 Reading Instruction in the Intermediate Grades
SCIE 3216 Teaching Science in the Elementary School
Section II - Program Justification

Primary CIP Code*  13.1203

Section III - Catalog Information

Department*  Department of Elementary and Middle Grades Education

Program Title*  Middle Grades Education, BS

Degree Type*  Bachelor of Science

Program Type*  Bachelors

Program Description*  Program Coordinator: Jamin Carson (136 Speight Building; 252-328-5711; carsonj@ecu.edu)

A minimum GPA of 2.5 is required for admission to the program. Students must maintain a minimum cumulative GPA of 2.5. A minimum grade of C (2.0) is required in each of the professional studies and specialty area courses for middle grades licensure.

Minimum degree requirement is 120 s. h. of credit as follows:

1. General education requirements - 40 s.h.

(For information about courses that carry general education credit see General Education Program.) See note in Section 4. about double-counting general education courses in academic concentrations.
2. Professional studies - 27-28 s.h.

EDTC 4001 Technology in Education
EDUC 3200 Foundations of American Education
[After]
EDUC 3002 Introduction to Diversity
[Right] or
PSYC 2777 Ethnocultural Psychology
[Right] or
SOCI 1010 Race, Gender, Class
[After]
EDUC 4400 Foundations of School Learning, Motivation, and Assessment
[Right] or
PSYC 4305 Educational Psychology
[After]
MIDG 2123 Early Experiences for the Prospective Teacher
MIDG 4324 Internship in the Middle Grades
MIDG 4325 Internship Seminar: Issues in Middle Grades Education
[Before]
READ 3990 Teaching Reading in the Content Areas in the Secondary School
[Right] or
READ 5317 Reading in the Junior and Senior High School
[After]
SPED 4010 Effective Instruction in Inclusive Classrooms

3. Specialty area - 17 s.h.

MIDG 3005 Curriculum I
MIDG 3010 Curriculum II
MIDG 3011 Instruction I
MIDG 3022 Middle Grades Instruction II
MIDG 4001 Organization, Management, and Motivation in the Middle Grades Classroom
MIDG 4010 Instructional Evaluation in Middle Grades
4. Academic concentration-48 35*-48 s. h.

Middle grades majors are required to complete two academic concentrations appropriate for licensure. A methods course is required for certification in each of the two academic concentrations leading to middle grades licensure. No substitutions for methods classes may be made without special middle grades program approval. Middle Grades education majors must have a minimum grade of C (2.0) in each of the concentration courses. A total of 6 credit hours in each academic concentration, except general science, may be double counted toward the general education requirements. For the general science concentration, 7 s. h. may be double-counted toward the general education requirements.

English (24 s.h.)

ENGL 2000 Interpreting Literature
[After]
ENGL 2200 Major American Writers
[Right] or
ENGL 3020 History of American Literature to 1900
[After]
ENGL 3810 Advanced Composition
[Right] or
ENED 3815 Composition Instruction in Grades 9-12
[After]
ENGL 3950 Literature for Children
[Right] or
LIBS 4950 Literature for Children
[After]
ENED 4319 Teaching English and Language Arts in the Middle Grades
ENED 4970 Literature for the Younger Adolescent
LING 2710 English Grammar
[After] ENGL or LING elective above 2999
General Science (24 s.h.)

BIOL 1050 General Biology
CHEM 1020 General Descriptive Chemistry
[After] or higher approved BIOL course
PHYS 1250 General Physics I
CHEM 1120 Introduction to Chemistry for the Allied Health Sciences
[After] or higher approved CHEM course
GEOL 1500 Dynamic Earth
[After] or higher approved GEOL course
PHYS 1050 Physics and the Environment
[After] or higher approved PHYS course
SCIE 3602 Investigations in Physical Science
SCIE 3604 Investigations in Life and Environmental Science
SCIE 3606 Investigations in Earth and Space
SCIE 4319 Teaching Science in the Middle Grades

Mathematics (24 s.h.)

MATE 1267 Functional Relationships
MATE 2067 Data and Probability Explorations
MATE 3067 Algebra and Number Foundations
MATE 3167 Geometry and Measurement
MATE 3267 Concepts in Discrete Mathematics
MATE 3367 Mathematical Modeling
MATE 4319 Teaching Mathematics in the Middle Grades
MATH 2119 Elements of Calculus
Social Studies (24 s.h.)

ECON 2113 Principles of Microeconomics
[AFTER]
GEOG 2100 World Geography: Developed Regions
[Right] or
GEOG 2110 World Geography: Less Developed Regions
[AFTER]
HIED 4319 Teaching Social Studies in the Middle Grades
[AFTER]
HIST 1030 World Civilizations to 1500
[Right] or
HIST 1031 World Civilizations Since 1500
[AFTER]
[Right] or
HIST 1050 American History to 1877
HIST 1051 American History Since 1877
[AFTER]
HIST 3100 North Carolina History
[Right] or
MIDG 3200 North Carolina History Standards Curriculum and Planning in the Middle Grades Classroom
[AFTER]
POLS 1010 National Government
### Engineering - UG - Howard - ENGR 3034

#### C - SHORT Course Revision Form

#### Section II - Course Information

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<td>Credits*</td>
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#### Service Learning

#### Writing Intensive

#### When Offered

#### General Education (GE) Curriculum

#### Diversity (DD/GD)

**Formerly** ENGR 3012

**Same as**

**Lecture/Lab/Studio/Contact Hours:** 3 lecture and 2 lab hours per week.

#### Note

**Prerequisite** ENGR 2450;

**Recommended prerequisite**

**Corequisite**

**Recommended corequisite**

**Prereq/Coreq** MATH 2154.
<table>
<thead>
<tr>
<th>Course Description*</th>
<th>Ideal gas law; conservation of mass and energy in steady-state incompressible fluids; friction losses in a pipe; one-dimensional steady-state conduction; and convective heat transfer for simple geometries. Design, conduct, analysis, and interpretation of laboratory studies.</th>
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## Section II - Course Information

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<td><strong>Diversity (DD/GD)</strong></td>
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<td><strong>Formerly</strong></td>
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<td><strong>Same as</strong></td>
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<td><strong>Lecture/Lab/Studio/Contact Hours:</strong></td>
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### Note

**Prerequisite** ENGR 2450 and ENGR 3034, both with minimum grade of C (2.0); **MATH 2154**.
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<tr>
<td>Prereq/Coreq</td>
</tr>
<tr>
<td>Recommended prereq/coreq</td>
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**Course Description**  
Static fluid forces; conservation of mass, conservation of energy, and Newton's second law for flowing fluids; internal and external flow; and flow systems and machinery.

**School/College**  
College of Engineering and Technology

**Course Prefix AND Number (Ex. ABCD 1234)**  
MENG 4153

**Department**  
Department of Engineering

**Course Discipline**  
Mechanical Engineering
# Section II - Course Information

<table>
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<th>Course Number*</th>
<th>4263</th>
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</table>

**Course Title**  
Engineering Heat Transfer

**Credits**  
3

**Service Learning**

**Writing Intensive**

**When Offered**

**General Education (GE) Curriculum**

**Diversity (DD/GD)**

**Formerly**

**Same as**

**Lecture/Lab/Studio/Contact Hours:**  
3 lecture hours per week.

**Note**

**Prerequisite**  
ENGR 2450 and ENGR 3034, both with minimum grade of C (2.0); MATH 2154.
<table>
<thead>
<tr>
<th>Prereq/Coreq</th>
<th>Recommended prerequisite</th>
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<tbody>
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<td>Prereq/Coreq</td>
<td></td>
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<tr>
<td>Recommended prereq/coreq</td>
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</table>

| Course Description*                | Multi-dimensional steady and transient heat conduction; forced and natural convection; radiation heat transfer; and heat exchangers. |

<table>
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<th>College of Engineering and Technology</th>
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<tr>
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<td>Department*</td>
<td>Department of Engineering</td>
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<td>Course Discipline*</td>
<td>Mechanical Engineering</td>
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Section II - Program Justification

Primary CIP Code* 14.0101

Section III - Catalog Information

Department* Department of Engineering

Program Title* Engineering, BS

Degree Type* Bachelor of Science

Program Type* Bachelors

Program Description* Biomedical Engineering Concentration Program Coordinator: Stephanie George (225 Slay Hall; 252-737-2826; georges@ecu.edu)

Bioprocess Engineering Concentration Program Coordinator: Loren Limberis (223 Slay Hall; 252-328-9715; limberisl@ecu.edu)

Electrical Engineering Concentration Program Coordinator: Jianchu (Jason) Yao (203 Slay Hall; 252-737-1029; yaoj@ecu.edu)

Environmental Engineering Concentration Program Coordinator: Randall Etheridge (204 Slay Hall; 252-737-1930; etheridge15@ecu.edu)

Industrial and Systems Engineering Concentration Program Coordinator: Gene Dixon (205 Slay Hall; 252-737-1031; dixone@ecu.edu)

Mechanical Engineering Concentration Program Coordinator: Jeunghwan (John) Choi (207 John Reis (238 Slay Hall; 252-737-1026 252-328-9607; choijo14@ecu reis@ecu.edu) edu)

Minimum degree requirement for the engineering program is 428 125 s. h. credit as follows:
1. General education requirements including those listed below - 40 s.h.

(For information about courses that carry general education credit see General Education Program.)

BIOL 1050 General Biology
BIOL 1051 General Biology Laboratory
[After] or
BIOL 1100 Principles of Biology I
BIOL 1101 Principles of Biology Laboratory I
[After]
CHEM 1150 General Chemistry I

Note:

-When selecting general education electives, it is important to check first with your advisor to get a list of mathematics and science courses that cannot count toward the engineering degree due to accrediting agency restrictions.-See note in Section 3 regarding cognate courses that will count toward the general education requirement.
2. Engineering foundation - 43 s.h.

<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<td>Engineering Graphics</td>
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<td>ENGR 1016</td>
<td>Introduction to Engineering Design</td>
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<tr>
<td>ENGR 2000</td>
<td>Engineering Design and Project Management I</td>
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<tr>
<td>ENGR 2022</td>
<td>Statics</td>
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<td>ENGR 2050</td>
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<td>ENGR 2070</td>
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<td>ENGR 3800</td>
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<td>ENGR 4010</td>
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<tr>
<td>ENGR 4020</td>
<td>Senior Capstone Design Project II</td>
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</table>

CHEM 1151 General Chemistry Laboratory I
[After]
MATH 2152 Engineering Calculus II
[Right] or
MATH 2172 Calculus II
[After]
MATH 2153 Engineering Calculus III
[Right] or
MATH 2173 Calculus III
[After]
MATH 2154 Engineering Linear Algebra and Differential Equations I
MATH 2171 Calculus I
[Right] *
MATH 3307 Mathematical Statistics I
PHYS 2350 University Physics I
[Right] **
PHYS 2360 University Physics II

Note:

* May be counted *3 s. h. of MATH 2171 will count toward the mathematics general education requirement. ** May be counted **3 s. h. of PHYS 2350 will count toward the general education elective requirement.

4. Concentrations - 22 s.h.

(Choose one)
Biomedical engineering (22 s.h.)

BIME 2080 Foundations of Biomedical Engineering
BIME 4030 Biomechanics and Materials
BIME 4040 Physiological Systems and Modeling for Engineering I
BIME 4050 Physiological Systems and Modeling for Engineering II
BIME 4200 Biomedical Instrumentation

[After] Technical electives, 6 s.h. as approved by the academic advisor.

Bioprocess engineering (22 s.h.)

BIOE 3013 Engineering Applications in Microbial Systems
BIOE 3250 Bioprocess Engineering Systems
BIOE 4006 Bioprocess Engineering Validation and Quality
BIOE 4010 Bioprocess Separation Engineering
BIOE 4020 Bioprocess Plant Design, Simulation and Analysis
CHEM 1160 General Chemistry II
CHEM 1161 General Chemistry Laboratory II
CHEM 2750 Organic Chemistry I
CHEM 2753 Organic Chemistry Laboratory I

Electrical engineering (22 s.h.)

EENG 2410 Digital Electronics
EENG 3013 AC Circuits
EENG 3023 Signals and Systems
EENG 3040 Microprocessors
EENG 3750 Electric Power Systems
EENG 4510 Control System Design

[After] Technical electives, 3 s.h. as approved by the academic advisor.
Environmental engineering (22 s.h.)

CHEM 1160 General Chemistry II
CHEM 1161 General Chemistry Laboratory II
ENVE 3103 Water Quality
ENVE 3203 Water and Wastewater Treatment
ENVE 3303 Air Quality Engineering
ENVE 4103 Engineering Surface Water Hydrology
ENVE 4203 Engineering Groundwater Hydrology

[After] Technical electives, 3 s.h. as approved by the academic advisor.

Industrial and systems engineering (22 s.h.)

ISE 3010 Principles and Methods of Industrial and Systems Engineering
ISE 3060 Systems Optimization
ISE 4010 Work Measurement and Human Factors
ISE 4020 Analysis of Production Systems and Facility Design
ISE 4065 Discrete Systems Modeling

[After] Technical electives, 7 s.h. as approved by the academic advisor.

Mechanical engineering (22 s.h.)

MENG 3073 Engineering Thermodynamics
MENG 3624 Solid Mechanics
MENG 4153 Engineering Fluid Mechanics
MENG 4263 Engineering Heat Transfer
MENG 4650 Machine Design

[After] Technical electives, 7 s.h. as approved by the academic advisor.