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APPROVED FEB 22 2012

**Memorandum**

RECEIVED FEB 09 2012

To: Jeannette Morales

From: Ian Evans, Associate Dean, NSM

Subject: Catalog changes for the Environmental Sciences Major

Date: 7 February 2012.

The Curriculum Committee has reviewed and approved changes to the Environmental Sciences degree. I have attached two pdf files – one showing the old requirements for the degree, the second showing the new requirements. I should like to draw your attention to an issue with the document showing the new requirements:

1. Under the general requirements section there is the following statement (that is in the current UH Undergraduate Catalog) – “In addition, students must earn a minimum 2.00 cumulative GPA in all courses in the major and in Core courses attempted at the university.” I believe that the GPA requirement for Core courses was rescinded some time ago. If so, this language needs to be modified to reflect that fact. Again, I will highlight this wording on the hard copy.

**YOU ARE THE PRIDE**

NEW

# Environmental Sciences Major

## B.S. in Environmental Sciences

The general requirements, including university core curriculum and college requirements, shall apply. In addition to the general requirements, students pursuing the Bachelor of Science in Environmental Sciences must complete the following:

### DEGREE REQUIREMENTS

#### Geology Requirements (8 hours):

Course	Course Name
<b>GEOL 1330</b> and <b>GEOL 1130</b>	Physical Geology and Physical Geology Laboratory
<b>GEOL 1302</b> and <b>GEOL 1102</b> or <b>GEOL 1350</b> and <b>GEOL 1150</b>	Introduction to Global Climate Change and Laboratory Introduction to Meteorology and Laboratory

#### Biology Requirements (8 hours):

Course	Course Name
<b>BIOL 1361</b>	Introduction to Biological Science
<b>BIOL 1161</b>	Introduction to Biological Science Laboratory
<b>BIOL 1362</b>	Introduction to Biological Science
<b>BIOL 1162</b>	Introduction to Biological Science Laboratory

#### Chemistry Requirements (8 hours):

Course	Course Name
<b>CHEM 1331</b>	Fundamentals of Chemistry
<b>CHEM 1111</b>	Fundamentals of Chemistry Laboratory
<b>CHEM 1332</b>	Fundamentals of Chemistry
<b>CHEM 1112</b>	Fundamentals of Chemistry Laboratory

#### Mathematics Requirements (15 hours):

Course	Course Name
<b>MATH 1431</b>	Calculus I
<b>MATH 1432</b>	Calculus II
<b>MATH 2433</b>	Calculus III
<b>MATH 3339</b>	Statistics for Sciences

#### Physics Requirements (8 hours):

Course	Course Name
<b>PHYS 1321</b>	University Physics I
<b>PHYS 1121</b>	Physics Laboratory I
<b>PHYS 1322</b>	University Physics II
<b>PHYS 1122</b>	Physics Laboratory II

**AT LEAST 39 HOURS FROM ONE OF THE FOLLOWING OPTIONS A OR B:**

**OPTION A Environmental Geosciences:**

Requirements (6 hours)

Course	Course Name
<b>GEOL 3340</b>	Geologic Field Methods
<b>GEOL 3370</b>	Mineralogy

**GROUP 1 Electives (student must complete 15 hours selected from the following)**

Course	Course Name
<b>GEOL 3331</b>	Environmental Geology
<b>GEOL 3338</b>	Environmental Hydrogeology
<b>GEOL 4331</b>	Introduction to Geographic Information Systems
<b>GEOL 4334</b>	Environmental Data Analysis
<b>GEOL 4356</b>	Environmental Science Field Research
<b>GEOL 4365</b>	Environmental Geochemistry

**GROUP 2 Electives (student must complete an additional 18 hours of approved electives, see advisor for list)**

**OPTION B Atmospheric Science:**

Requirements (6 hours)

Course	Course Name
<b>GEOL 3342</b>	Introduction to Air Pollution
<b>GEOL 3378</b>	Principles of Atmospheric Science (also PHYS 3378)

**GROUP 1 Electives (student must complete 15 hours selected from the following)**

Course	Course Name
<b>GEOL 3382</b>	Atmospheric Chemistry
<b>GEOL 4334</b>	Environmental Data Analysis
<b>GEOL 4339</b>	Biogeochemistry
<b>GEOL 4342</b>	Air Pollution Meteorology
<b>GEOL 4343</b>	Atmospheric Instrumentation
<b>GEOL 4356</b>	Environmental Science Field Research

**GROUP 2 Electives (student must complete an additional 18 hours of approved electives, see advisor for list)**

- Other Core requirements, excluding capstone (30 hours):
- Electives, including course(s) required for capstone (4 hours):
- TOTAL (minimum number of hours): 120

The Bachelor of Science degree requires completion of a minimum of 120 hours, at least 36 of which are to be advanced hours. Students must earn a minimum 2.0 cumulative GPA in all courses attempted at the university. In addition, students must earn a minimum 2.00 cumulative GPA in all courses in the major and in Core courses attempted at the university. Students must have no more than 6 semester hours with grades below C- in all courses attempted in the major, which includes all GEOL courses and Group 1 and Group 2 courses in the Option Area. Any student exceeding that limit must retake sufficient courses and obtain acceptable grades so that they do **not** exceed the two-course limit.

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## Capstone Requirement

All students in NSM must complete the Capstone requirement. Students may satisfy the Capstone in a number of ways, e.g. by completing an approved minor, a double major, a senior research project, a senior honors thesis, or 6 hours of NSM-designated interdisciplinary capstone courses (e.g. **GEOL 3355 3360**).

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## Departmental Requirements

No GEOL course with a grade below C- can be used as a prerequisite for a more advanced GEOL course.

Students with more than 6 hours in GEOL courses with grades below C- are not allowed to enroll in subsequent GEOL courses without written permission from the undergraduate advisor.

Note that all undergraduate majors should meet with the Faculty Advisor prior to registration each semester.

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## Suggested Program Plan for Environmental Geosciences Option A

### First Year

#### Fall Semester Suggested Program

Courses	Hours
<b>ENGL 1303</b> Freshman Composition I	3
<b>CHEM 1331</b> and <b>1111</b> Fundamentals of Chemistry and Laboratory	4
<b>GEOL 1330</b> and <b>1130</b> Physical Geology and Laboratory	4
<b>MATH 1431</b> Calculus I	4
Total	15

#### Spring Semester Suggested Program

Courses	Hours
<b>ENGL 1304</b> Freshman Composition II	3
<b>CHEM 1332</b> and <b>1112</b> Fundamentals of Chemistry Laboratory	4
<b>GEOL 1350</b> and <b>1150</b> . Introduction to Meteorology and Laboratory	4
or	
<b>GEOL 1302</b> and <b>1102</b> . Global Climate Change and Laboratory	
<b>MATH 1432</b> Calculus II	4
Total	15



## Second Year

### Fall Semester Suggested Program

Courses	Hours
<b>PHYS 1321</b> and <b>1121</b> University Physics I and Laboratory	4
<b>MATH 2433</b> Calculus III	4
<b>GEOL 3370</b> Mineralogy	3
<b>HIST 1377</b> The United States to 1877 or equivalent	3
Elective	1
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>PHYS 1322</b> and <b>1112</b> University Physics II and Laboratory	4
<b>GEOL 3340</b> Field Methods	3
<b>MATH 3339</b> Statistics for Sciences	3
<b>HIST 1378</b> The United States Since 1877 or equivalent	3
Group 1 elective (selected from Option A)	3
Total	16

## Third Year

### Fall Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
<b>BIOL 1361</b> and <b>1161</b> Introduction to Biological Science and Laboratory	4
Group 1 elective (selected from Option A)	3
Group 1 elective (selected from Option A)	3
Social and Behavioral Science Core	3
Humanities Core	3
Total	16

### Spring Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
<b>BIOL 1362</b> and <b>1162</b> Introduction to Biological Science and Laboratory	4
Group 1 elective (selected from Option A)	3
Group 2 elective (selected from Option A)	3
Visual and Performing Arts Core Course	3
Writing in the Discipline Core Course	3
Total	16

## Fourth Year

### Fall Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
Group 1 elective (selected from Option A)	3
Group 2 elective (selected from Option A)	3
Group 2 elective (selected from Option A)	3
Group 2 elective (selected from Option A)	3
<b>POLS 1336</b> U.S. and Texas Constitutions and Politics or equivalent	3
Total	15

### Spring Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
Group 2 elective (selected from Option A)	3
Group 2 elective (selected from Option A)	3
NSM Capstone Course	3
<b>POLS 1337</b> US Government: Congress, President, and Courts or equivalent	3
Total	12



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## Suggested Program Plan for Atmospheric Science Option B

### First Year

#### Fall Semester Suggested Program

Courses	Hours
<b>ENGL 1303</b> Freshman Composition I	3
<b>CHEM 1331</b> and <b>1111</b> Fundamentals of Chemistry and Laboratory	4
<b>GEOL 1350</b> and <b>1150</b> . Introduction to Meteorology and Laboratory or <b>GEOL 1302</b> and <b>1102</b> . Global Climate Change and Laboratory	4
<b>MATH 1431</b> Calculus I	4
Total	15

#### Spring Semester Suggested Program

Courses	Hours
<b>ENGL 1304</b> Freshman Composition II	3
<b>CHEM 1332</b> and <b>1112</b> Fundamentals of Chemistry and Laboratory	4
<b>GEOL 1330</b> and <b>1130</b> Physical Geology and Laboratory	4
<b>MATH 1432</b> Calculus II	4
Total	15

## Second Year

### Fall Semester Suggested Program

Courses	Hours
<b>PHYS 1321</b> and <b>1121</b> University Physics I and Laboratory	4
<b>MATH 2433</b> Calculus III	4
<b>GEOL 3378</b> Principles of Atmospheric Science	3
<b>HIST 1377</b> The United States to 1877 or equivalent	3
Elective	1
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>PHYS 1322</b> and <b>1112</b> University Physics II and Laboratory	4
<b>GEOL 3342</b> Introduction to Air Pollution	3
<b>MATH 3339</b> Statistics for Sciences	3
Group 1 elective (selected from Option B)	3
<b>HIST 1378</b> The United States Since 1877 or equivalent	3
Total	16

## Third Year

### Fall Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
<b>BIOL 1361</b> and <b>1161</b> Introduction to Biological Science and Laboratory	4
Group 1 elective (selected from Option B)	3
Group 1 elective (selected from Option B)	3
Social and Behavioral Science Core	3
Humanities Core	3
Total	16

### Spring Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
<b>BIOL 1362</b> and <b>1162</b> Introduction to Biological Science and Laboratory	4
Group 1 elective (selected from Option B)	3
Group 2 elective (selected from Option B)	3
Visual and Performing Arts Core Course	3
Writing in the Discipline Core Course	3
Total	16

## Fourth Year

### Fall Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
Group 1 elective (selected from Option B)	3
Group 2 elective (selected from Option B)	3
Group 2 elective (selected from Option B)	3
Group 2 elective (selected from Option B)	3
<b>POLS 1336</b> U.S. and Texas Constitutions and Politics or equivalent	3
Total	15

### Spring Semester Suggested Program

<b>Courses</b>	<b>Hours</b>
Group 2 elective (selected from Option B)	3
Group 2 elective (selected from Option B)	3
NSM Capstone Course	3
<b>POLS 1337</b> US Government: Congress, President, and Courts or equivalent	3
Total	12

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# Environmental Sciences Major

## B.S. in Environmental Sciences

The general requirements, including university core curriculum and college requirements, shall apply. In addition to the general requirements students pursuing the Bachelor of Science in Environmental Sciences must complete the following:

### DEGREE REQUIREMENTS

#### Geology Requirements (6-7 hours):

Course	Course Name
<b>GEOL 1330</b> and <b>GEOL 1130</b> or <b>GEOL 1340</b>	Physical Geology and Physical Geology Laboratory or Introduction to Earth Systems
<b>GEOL 1302</b> or <b>GEOL 1350</b>	Introduction to Global Climate Change or Introduction to Meteorology

#### Biology Requirements (8 hours):

Course	Course Name
<b>BIOL 1361</b>	Introduction to Biological Science
<b>BIOL 1161</b>	Introduction to Biological Science Laboratory
<b>BIOL 1362</b>	Introduction to Biological Science
<b>BIOL 1162</b>	Introduction to Biological Science Laboratory

#### Computer Science Requirements (4 hours):

Course	Course Name
<b>COSC 1410</b>	Introduction to Computer Science

#### Chemistry Requirements (8 hours):

Course	Course Name
<b>CHEM 1331</b>	Fundamentals of Chemistry
<b>CHEM 1111</b>	Fundamentals of Chemistry Laboratory
<b>CHEM 1332</b>	Fundamentals of Chemistry
<b>CHEM 1112</b>	Fundamentals of Chemistry Laboratory

#### Mathematics Requirements (15 hours):

Course	Course Name
<b>MATH 1431</b>	Calculus I
<b>MATH 1432</b>	Calculus II
<b>MATH 2331</b>	Linear Algebra
<b>MATH 2433</b>	Calculus III

#### Physics Requirements (8 hours):

Course	Course Name
<b>PHYS 1321</b>	University Physics I
<b>PHYS 1121</b>	Physics Laboratory I
<b>PHYS 1322</b>	University Physics II
<b>PHYS 1122</b>	Physics Laboratory II

#### ENVS Electives Requirements (at least 9 hours):

Course	Course Name
<b>ENVS 3301</b>	Data Analysis in Environmental Science
<b>ENVS 4301</b>	Environmental Science and Public Policy
<b>ENVS 4302</b>	Legislative and Regulatory Aspects of Environmental Science
<b>ENVS 4351</b>	Environmental Mathematics and Differential Equations
<b>ENVS 4352</b>	Environmental Fluid Dynamics

## GROUP 1 ELECTIVES:

### Group 1 Electives (at least 12 hours):

Course	Course Name
<b>MATH 3331</b>	Differential Equations
<b>COSC 3361</b>	Numerical Methods I
<b>GEOL 3331</b>	Environmental Geology
<b>GEOL 3342</b>	Introduction to Air Pollution
<b>GEOL 3377</b>	Oceanography
<b>GEOL 3378</b>	Principles of Atmospheric Science

## GROUP 2 ELECTIVES (AT LEAST 12 HOURS FROM ONE OF THE FOLLOWING OPTIONS 1, 2, 3A OR 3B):

### Option 1: Environmental Chemistry (12 hours):

Course	Course Name
<b>CHEM 3119</b>	Analytical Chemistry Laboratory
<b>CHEM 3221</b>	Fundamentals of Organic Chemistry Laboratory
<b>CHEM 3222</b>	Fundamentals of Organic Chemistry Laboratory
<b>CHEM 3331</b>	Fundamentals of Organic Chemistry
<b>CHEM 3332</b>	Fundamentals of Organic Chemistry
<b>CHEM 3369</b>	Analytical Chemistry
<b>CHEM 4229</b>	Instrumental Methods of Analysis Laboratory
<b>CHEM 4369</b>	Instrumental Methods of Analysis
<b>CHEM 4373</b>	Survey of Physical Chemistry
4000-level	Approved elective

### Option 2: Environmental Modeling (12 hours):

Course	Course Name
<b>MATH 3338</b>	Probability
<b>MATH 3339</b>	Statistics
<b>MATH 3363</b>	Introduction to Partial Differential Equations
<b>MATH 4364</b>	Numerical Analysis
4000-level	Approved elective

### Option 3a: Environmental Geosciences (12 hours):

Course	Course Name
<b>GEOL 3338</b>	Environmental Hydrogeology
<b>GEOL 3340</b>	Geologic Field Methods



GEOL 3370	Mineralogy
GEOL 3383	Remote Sensing
GEOL 4331	Introduction to Geographic Information Systems
GEOL 4366	Groundwater Modeling
Upper division	Approved elective

**Option 3b: Atmospheric Sciences (12 hours):**

Course	Course Name
GEOL 3380	Physical Meteorology
GEOL 3381	Micrometeorology
GEOL 3382	Atmospheric Chemistry
GEOL 3383	Remote Sensing
GEOL 4333	Mesoscale Meteorology
GEOL 4341	Dynamic Meteorology
Upper division	Approved elective

- \* Other Core requirements, excluding capstone (36 hours).
- \* Electives, including course(s) required for capstone (8-9 hours).
- \* TOTAL minimum number of hours: 126

The Bachelor of Science degree requires completion of a minimum of 126 hours, at least 36 of which are to be advanced hours. Students must earn a minimum 2.0 cumulative GPA in all courses attempted at the university. In addition, students must earn a minimum 2.00 cumulative GPA in all courses in the major and in Core courses attempted at the university. Students must have no more than 6 semester hours with grades below C- in all courses attempted in the major, which includes all the ECTS Electives and Group 2 Electives. Any student exceeding that limit must retake sufficient courses and obtain acceptable grades so that they do not exceed the two course limit.

## Capstone Requirement

All students in ESM must complete the Capstone requirement. Students may satisfy the Capstone in a number of ways, e.g. by completing an approved career, a double major, a senior research project, a senior honors thesis, or 9 hours of ESM designated interdisciplinary capstone courses (e.g. GEOL 3355 3360).

## Departmental Requirements

No GEOL course with a grade below C- can be used as a prerequisite for a more advanced GEOL course.

Students with more than 6 hours in GEOL courses with grades below C- are not allowed to enroll in subsequent GEOL courses without written permission from the undergraduate advisor.

Note that all undergraduate majors should meet with the Faculty Advisor prior to registration each semester.

# Suggested Program Plan for Environmental Chemistry Option (1) or Environmental Modeling Option (2)

## FIRST YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>ENGL 1303</b> First Year Writing I	3
<b>CHEM 1331</b> and <b>1111</b> Fundamentals of Chemistry and Fundamentals of Chemistry Laboratory	4
<b>BIOL 1361</b> and <b>1161</b> Introduction to Biological Science and Laboratory	4
<b>MATH 1431</b> Calculus I	4
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>ENGL 1304</b> First Year Writing II	3
<b>CHEM 1332</b> and <b>1112</b> Fundamentals of Chemistry and Fundamentals of Chemistry Laboratory	4
<b>BIOL 1362</b> and <b>1162</b> Introduction to Biological Science and Laboratory	4
<b>MATH 1432</b> Calculus II	4
Total	15

## SECOND YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>GEOL 1350</b> Introduction to Meteorology	3
or	
<b>GEOL 1302</b> Global Climate Change	
<b>HIST 1377</b> The United States to 1877 or equivalent	3
<b>MATH 2331</b> Linear Algebra	3
Social and Behavioral Science Core	3
Humanities Core	3
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>GEOL 1330</b> and <b>1130</b> Physical Geology and Laboratory	3-4
or	
<b>GEOL 1340</b> Introduction to Earth Systems	
<b>COSC 1410</b> Introduction to Computer Science	4
<b>PHYS 1321</b> and <b>1121</b> University Physics I and Laboratory	4

**HIST 1378:** The United States Since 1877  
Total

3  
14-15

## THIRD YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>MATH 2433</b> Calculus III	4
<b>PHYS 1322</b> and <b>1112</b> University Physics II and Laboratory	4
Group 1 elective	3
Group 2 elective (selected from Option 1 or Option 2)	3
Elective	1-2
Total	15

### Spring Semester Suggested Program

Courses	Hours
Group 1 electives	6
Group 2 elective (selected from Option 1 or Option 2)	3
Visual and Performing Arts Core Course	3
Writing in the Discipline Core Course	3
Total	15

## FOURTH YEAR

### Fall Semester Suggested Program

Courses	Hours
Group 1 elective	3
Group 2 elective (selected from Option 1 or Option 2)	3
ENVS electives	6
<b>POLS 1336</b> U.S. and Texas Constitutions and Politics or equivalent	3
Total	15

### Spring Semester Suggested Program

Courses	Hours
Group 2 elective (selected from Option 1 or Option 2)	3
ENVS electives	6
NSM Capstone Course	3
<b>POLS 1337</b> US Government: Congress, President, and Courts or equivalent	3
Total	15

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## Suggested Program Plan for Environmental Geology Option (3a)

## FIRST YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>ENGL 1303</b> Freshman Composition I	3
<b>CHEM 1331</b> and <b>1111</b> Fundamentals of Chemistry and Fundamentals of Chemistry Laboratory	4
<b>BIOL 1361</b> and <b>1161</b> Introduction to Biological Science and Laboratory	4
<b>MATH 1431</b> Calculus I	4
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>ENGL 1304</b> Freshman Composition II	3
<b>CHEM 1332</b> and <b>1112</b> Fundamentals of Chemistry and Fundamentals of Chemistry Laboratory	4
<b>BIOL 1362</b> and <b>1162</b> Introduction to Biological Science and Laboratory	4
<b>MATH 1432</b> Calculus II	4
Total	15

## SECOND YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>GEOL 1350</b> Introduction to Meteorology	3
or	
<b>GEOL 1302</b> Global Climate Change	
<b>HIST 1377</b> The United States to 1877	3
<b>MATH 2331</b> Linear Algebra	3
Social and Behavioral Science Core	3
Humanities Core	3
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>GEOL 1330</b> and <b>1130</b> Physical Geology and Laboratory	4
<b>COSC 1410</b> Introduction to Computer Science	4
<b>PHYS 1321</b> and <b>1121</b> University Physics I and Laboratory	4
<b>HIST 1378</b> The United States Since 1877	3
Total	15

## THIRD YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>MATH 2433</b> Calculus III	4
<b>PHYS 1322</b> and <b>1112</b> University Physics II and Laboratory	4
Group 1 elective	3
Group 2 elective (selected from Option 3a)	3
Elective	1
Total	15

### Spring Semester Suggested Program

Courses	Hours
Group 1 electives	6
Group 2 elective (selected from Option 3a)	3
Visual and Performing Arts Core Course	3
Writing in the Discipline Core Course	3
Total	15

## FOURTH YEAR

### Fall Semester Suggested Program

Courses	Hours
Group 1 elective	3
Group 2 elective (selected from Option 3a)	3
ENVS electives	6
<b>POLS 1336</b> U.S. and Texas Constitutions and Politics or equivalent	3
Total	15

### Spring Semester Suggested Program

Courses	Hours
Group 2 elective (selected from Option 3a)	3
ENVS electives	6
NSM Capstone Course	3
<b>POLS 1337</b> US Government: Congress, President, and Courts or equivalent	3
Total	15

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## Suggested Program Plan for Atmospheric Science Option (3b)

### FIRST YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>ENGL 1303</b> Freshman Composition I	3
<b>CHEM 1331</b> and <b>1111</b> Fundamentals of Chemistry and Fundamentals of Chemistry Laboratory	4
<b>BIOL 1361</b> and <b>1161</b> Introduction to Biological Science and Laboratory	4
<b>MATH 1431</b> Calculus I	4
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>ENGL 1304</b> Freshman Composition II	3
<b>CHEM 1332</b> and <b>1112</b> Fundamentals of Chemistry and Fundamentals of Chemistry Laboratory	4
<b>BIOL 1362</b> and <b>1162</b> Introduction to Biological Science and Laboratory	4
<b>MATH 1432</b> Calculus II	4
Total	15

## SECOND YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>GEOL 1350</b> Introduction to Meteorology	3
<b>HIST 1377</b> The United States to 1877	3
<b>MATH 2331</b> Linear Algebra	3
Social and Behavioral Science Core	3
Humanities Core	3
Total	15

### Spring Semester Suggested Program

Courses	Hours
<b>GEOL 1330</b> and <b>1130</b> Physical Geology and Laboratory	4
<b>COSC 1410</b> Introduction to Computer Science	4
<b>PHYS 1321</b> and <b>1121</b> University Physics I and Laboratory	4
<b>HIST 1378</b> The United States Since 1877	3
Total	15

## THIRD YEAR

### Fall Semester Suggested Program

Courses	Hours
<b>MATH 2433</b> Calculus III	4
<b>PHYS 1322</b> and <b>1112</b> University Physics II and Laboratory	4
Group 1 elective	3
Group 2 elective (selected from Option 3b)	3



Elective	1
Total	15

**Spring Semester Suggested Program**

<b>Courses</b>	<b>Hours</b>
Group 1 electives	6
Group 2 elective (selected from Option 3b)	3
Visual and Performing Arts Core Course	3
Writing in the Discipline Core Course	3
Total	15

**FOURTH YEAR**

**Fall Semester Suggested Program**

<b>Courses</b>	<b>Hours</b>
Group 1 elective	3
Group 2 elective (selected from Option 3b)	3
ENVS electives	6
<b>POLS 1336</b> U.S. and Texas Constitutions and Politics or equivalent	3
Total	15

**Spring Semester Suggested Program**

<b>Courses</b>	<b>Hours</b>
Group 2 elective (selected from Option 13b)	3
ENVS electives	6
NSM Capstone Course	3
<b>POLS 1337</b> US Government: Congress, President, and Courts or equivalent	3
Total	15

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