

# ENGLISH



**Sophia P. Andres, Ph.D.**  
**Chair of the Department of Literature and Languages**  
**Professor of English**

Dr. Andres is Professor of English and Kathlyn Cospers Dunagan Professor in the Humanities at the University of Texas of the Permian Basin where she teaches Romantic literature, Victorian literature and art as well as modern and postmodern British fiction. She is the recipient of the Chancellor's Council Outstanding Teaching Award and the President's Outstanding Research Award. Her work has appeared in several journals: *ELH*, *Journal of Narrative Technique*, *Journal of Narrative Theory*, *Victorians Institute Journal*, *Victorian Newsletter*, *Clio*, *George Eliot—George Henry Lewes Studies* and *Journal of Pre-Raphaelite Studies*. Her recent book, *The Pre-Raphaelite Art of the Victorian Novel: Narrative Challenges to Visual Gendered Boundaries* (2005), was published by Ohio State University Press and was awarded the 2006 South Central Modern Language Association Book Award. She is currently working on a book tentatively titled "Pre-Raphaelite Poetic Visions."

**Mark Wildermuth, Ph.D.**  
**Professor of English**



Dr. Wildermuth is Professor of English and Fellow in the Kathlyn Cospers Dunagan Professorship in Humanities. He is widely known for his interest in films as literature. His book, *Blood in the Moonlight: Michael Mann and Information Age Cinema* was published by McFarland Performing Arts Publications in 2005, and his book *Print, Chaos and Complexity: Samuel Johnson and Eighteenth-Century Media Culture* is forthcoming from the University of Delaware Press. His research has been published in *Philosophy and Rhetoric*, *Rhetoric Society Quarterly*, *The Age of Johnson*, *The Eighteenth Century: Theory and Interpretation*, and *The Journal of Popular Film and Television*.

Administered by the Department of Literature and Languages within the College of Arts and Sciences.

The goals of the English program include the following: first, to help students develop their ability to read and write critically; second, to provide them with a knowledge about the major periods, movements, and genres in British and American literature; third, to enhance their awareness of the cultural contexts of literary texts. Students pursuing an English major or minor will receive training in analytical and imaginative reading, in the analysis of literary and non-literary works and in the professional skills involved in writing, rhetoric, and the analysis of all types of written language. Courses at all levels will give serious attention to the literary voices traditionally excluded from or marginalized within the British and American literary canon. No more than 47 semester credit hours of English may be applied toward the 120 semester credit hour minimum required for a degree.

## Degree Requirements

The total credits required for a B.A. in English are 120.

### General Education

**44 credits**

Complete the requirements shown in the General Education Requirements section of this Catalog, pages 63-64.

### Computer Use

All majors must demonstrate a basic use of computing through either a computer literacy test, COSC 1335, or similar computer science course which requires the actual use of computers.

## **Major Requirements**

The student who chooses English as a major should select courses according to the following guidelines.

1. Two semesters of Freshman English or composition and language study are a prerequisite for the major in English.
2. Thirty semester credit hours of courses at the sophomore level and above are required for the major, with a minimum of 24 semester credit hours at the upper (junior/senior) level.
3. Required courses:
  - ENGL 3300, Theoretical Approaches to Literature
  - One course in American Literature
  - One course in British Literature
  - One course in Fiction
  - One course in Poetry
  - One course in Drama
  - One Language and Rhetoric course
4. At least six semester credit hours of study must be at the senior (4000) level.

## **Course Groups for the Major and Minor**

### **British Literature Courses (select at least one):**

ENGL 2322	British Literature to 1800
ENGL 2323	British Literature since 1800
ENGL 3332	Literature and Art
ENGL 3352	Eighteenth-Century Women Poets
ENGL 4321	Topics in British Poetry
ENGL 4325	Topics in British Drama
ENGL 4332	The Nineteenth-Century British Novel
ENGL 4333	The Twentieth-Century British Novel

### **American Literature Courses (select at least one)**

ENGL 2327	American Literature to 1865
ENGL 2328	American Literature since 1865
ENGL 3306	Ethnic Literature
ENGL 3325	American Women Playwrights
ENGL 4301	Nineteenth-Century American Poetry
ENGL 4302	Twentieth-Century American Poetry
ENGL 4305	American Drama
ENGL 4312	Twentieth-Century American Fiction

### **Electives**

ENGL 3310	Drama: Tragedy & Melodrama
ENGL 3311	Drama: Comedy
ENGL 3330	Film as Literature
ENGL 3333	Literature & Mythology
ENGL 3341	Creative Writing
ENGL 3361	World Novels in Translation
ENGL 3362	Poetry: Forms and Themes

### **Language and Rhetoric Courses**

ENGL 3340	Advanced Composition
ENGL 3371	The English Language
ENGL 3372	English Grammar
ENGL 4340	Advanced Professional Writing
ENGL 4371	Rhetoric and Composition

## Minor in English

The minor in English is composed of eighteen hours of study, at least twelve of which must be junior level or above. Freshman English courses are not included in the number of courses toward the minor. ENGL 3300, Theoretical Approaches to Literature, is required of all students in the minor. The student may select the remaining five courses according to her or his interests and goals, with the provisions that one course must be in British Literature, one course must be in American Literature, and at least one course must be at the senior (4000) level.

### TEXES Requirements

To meet Texas Higher Education Coordinating Board requirements, students seeking certification to teach grades EC-4 or 4-8 must take at least 9 hours of math (may include statistics) at or above college-level algebra and at least 12 hours of science. They should plan accordingly when meeting general education and elective course requirements. Students seeking certification as a 4-8 Generalist must take at least 12 hours of math and 14-16 hours of science. (Students certifying to teach 4-8 Math or Science will have additional hours in their respective disciplines.)

English Language Arts & Reading 4-8: At least 24 semester hours at the sophomore level and above (with 6 hours at the 4000 level), including ENGL 3300; ENGL (American literature); ENGL (British literature); ENGL (fiction); ENGL (poetry); ENGL (drama); ENGL (language/rhetoric). Must also complete EDUC 3322, 4325, 4326, and 4375.

English Language Arts & Reading 8-12: At least 24 semester hours at the sophomore level and above (with 6 hours at the 4000 level), including ENGL 3300; ENGL (American literature); ENGL (British literature); ENGL (fiction); ENGL (poetry); ENGL (drama); ENGL (language/rhetoric). Must also complete COMM 2301; EDUC 4326 and 4375.

English Language Arts, Reading, & Social Studies 4-8: 24 semester hours ENGL at the sophomore level and above (with 6 hours at the 4000 level), including ENGL 3300; ENGL (American literature); ENGL (British literature); ENGL (fiction); ENGL (poetry); ENGL (drama); ENGL (language/rhetoric); ECON 2301; GEOG 1301, 1302; HIST 1301, 1302, 3350; 3341 or 3342; 3345 or 4355; PLSC 2305, 2306; 4335 or 4336; EDUC 3322, 4325, 4326, and 4375.

Students with questions about TEXES requirements should consult their Education advisor.

### Course Listing

Courses without a semester designation are offered in rotation.

#### **ENGL 0399 Fundamentals of Composition (3)**

Fundamentals of Composition will focus on writing effective paragraphs and short compositions and on the conventions of standard written English. The course is intended for students who need to develop the writing skills required for ENGL 1301. Course will be graded on a Pass/Not Pass basis. Students receiving an NP must re-enroll during their next long semester. (Does not count toward a degree.) FS

#### **ENGL 1301 Composition I (3)<sup>+</sup>**

Composition I offers intensive instruction in the writing process (prewriting, drafting, revising, and proofreading), emphasizing the recursive nature of the process and the importance of the relationship among writer, audience, and subject. The course will also explore the connection between writing and critical thinking and the usefulness of writing as a tool for learning in all fields of knowledge. Students enrolling in Composition I will be expected to have a good command of standard written English. Prerequisite: Successful completion of ENGL 0399 or satisfactory placement on UTPB's English placement exam. FS

#### **ENGL 1302 Composition II (3)<sup>+</sup>**

Composition II covers argument, rhetorical analysis and the research paper. In this course students analyze and respond to texts of various kinds through essays and research papers. Students will learn to defend their points of view by using textual evidence and strong rhetoric. Readings and exercises help student learn to write broad-minded, well-informed essays in polished academic prose that moves and educates the reader. Prerequisite: ENGL 1301. FS

#### **ENGL 2322 British Literature to 1800 (3)<sup>+</sup>**

Chronological survey of major works in British literature from the Anglo-Saxon Times through the restoration and late 18th century. Prerequisite: ENGL 1302. FS

**ENGL 2323 British Literature Since 1800 (3)<sup>†</sup>**

Chronological survey of major works of British Literature from the late 18th century (about 1800) to the Modern Period.  
Prerequisite: ENGL 1302. FS

**ENGL 2327 American Literature to 1865 (3)<sup>†</sup>**

Chronological examination of writers, works and movements in fiction, nonfiction and poetry through 1865. Prerequisites:  
ENGL 1302. FS

**ENGL 2328 American Literature Since 1865 (3)<sup>†</sup>**

Chronological examination of writers, works and movements in fiction, nonfiction and poetry from 1865 to the present.  
Prerequisites: ENGL 1302. FS

**ENGL 3300 Theoretical Approaches to Literature (3)**

An introduction to the analysis of literary texts as informed by important methods and schools of literary criticism. Attention to the three major genres of literature – poetry, drama and fiction. Frequent writing assignments. Course available only for English majors, English minors, and those with English as a second teaching field. Prerequisite: Any 2000 level English class.  
FS

**ENGL 3306 Ethnic Literature (3)**

Study of canonical and noncanonical texts from ethnic cultures of the Americas, in historical contexts, from pre-Columbian to the present. All readings in English. Prerequisites: ENGL 1302.

**ENGL 3310 Drama: Tragedy & Melodrama (3)**

Transnational genre course surveying serious dramatic literature from Greek to present-day playwrights. Prerequisite: any 2000 level English course or DRAM 2301 or DRAM 4340.

**ENGL 3311 Drama: Comedy (3)**

Transnational genre course surveying comic drama from Greek to present-day playwrights: Prerequisite: any 2000 level English course. Prerequisite: any 2000 level English course.

**ENGL 3320 American Fiction 1860-1900 (3)**

This course explores the development of the American novel, both canonical and emerging, from Realism through Naturalism. Prerequisite: any 2000 level English course.

**ENGL 3325 American Women Playwrights (3)**

Survey of plays written by American Women in the 20th Century. Prerequisite: any 2000 level English course.

**ENGL 3330 Film as Literature (3)**

Introduction to critical and theoretical approaches and terminology for describing and analyzing films as cultural artifacts and as works of literature. Some emphasis will be given to movements in the history of film (such as German Expressionism, Japanese New Wave Cinema). English elective. Prerequisite: one 2000 level English course. S

**ENGL 3332 Literature and Art (3)**

The study of art within the context of British Literature, American Literature or Comparative Literature with special emphasis on gender constructs. S

**ENGL 3333 Literature & Mythology (3)**

The study of mythology within the context of British Literature, American Literature or Comparative Literature. Prerequisites: ENGL 1301, ENGL 1302. F

**ENGL 3335 American Women Novelists (3)**

This course examines canonical and emerging women writers from the Early Republic up to the present day. We will discuss the ways in which cultural contexts (and contests) gave rise to specific texts and determined their meanings. Prerequisite: any 2000 level English course.

**ENGL 3340 Advanced Composition (3)**

The writing of a series of papers of varying lengths involving a wide range of rhetorical situations. Emphasis is placed on the entire writing process, including pre-writing, drafting, and re-writing. Prerequisite: ENGL 1302.

**ENGL 3341 Creative Writing (3)**

Emphasis on development of the student's own writing through formal experimentation, workshopping, and projects, with significant attention paid to literary conventions of modern and contemporary writing. Prose, poetry or drama may be the topic of the given semester. Prerequisite: ENGL 1302 and permission of the instructor based on a review of a writing portfolio.

**ENGL 3352 Eighteenth-Century Women Poets (3)**

Survey of British women poets writing in the period 1660-1800. Focus is on proto-feminist ideologies developed by these poets and on 20th century feminist approaches to their literature and culture. Prerequisites: ENGL 1302 and any 2000 level English course. F

**ENGL 3361 World Novels in Translation (3)**

The study of a range of novels, non-Western as well as Western, representing various strategies of narration as well as various cultural orientations. Prerequisite: ENGL 1302.

**ENGL 3362 Poetry: Forms and Themes (3)**

The course will focus on the close reading and explication of lyric poetry, with some attention to the epic. Students will be introduced to the skills, vocabulary and methods involved in reading poems, with emphasis on a fairly small number of poems closely studied. Frequent writing assignments. Prerequisite: one 2000 level English course or permission of instructor.

**ENGL 3371 The English Language (3)**

This course covers aspects of English language linguistics including but not limited to phonetics, phonology, morphology, syntax, semantics, stylistics, discourse, varieties and dialects, global Englishes, social factors such as region, age, race, class, ethnicity and gender, the history of English, lexicography, and other relevant topics. Prerequisites: ENGL 1302 and one 2000-level literature class. F

**ENGL 3372 English Grammar (3)**

An analysis of the basic structure of English grammar. The course will present the essential components of English grammar through reading, lecture, discussion, and exercises. Prerequisite: ENGL 1302. S

**ENGL 3389 Multilist Course (3)**

Undergraduate courses which will be offered only once or will be offered infrequently or which are being developed before a regular listing in the catalog.

**ENGL 4302 20th-Century American Poetry (3)**

Historical development of American poetry from 1900 to the present, with emphasis on Modernism; analysis of the theories and practices of major poets and major schools of poetry. Prerequisite: one junior level literature course.

**ENGL 4305 American Drama (3)**

Historical development of American drama; types of dramatic literature and masterpieces in American drama. Prerequisite: ENGL 3300 or DRAM 2301 or DRAM 4340.

**ENGL 4312 20th-Century American Fiction (3)**

Masterpieces in American prose fiction, late 19th century to the present. Prerequisite: ENGL 2327 or 2328 or permission of instructor.

**ENGL 4315 American Romantic Fiction 1800-1860 (3)**

This course examines canonical and emerging writers of the Romantic era. Particular attention will be given to the American Gothic, American Transcendentalism, and the sentimental tradition. Prerequisite: at least one 3000 level course or permission of instructor.

**ENGL 4321 Topics in British Poetry (3)**

Selected topics in British poetry as a literary genre. Prerequisite: ENGL 3300.

**ENGL 4325 Topics in British Drama (3)**

Selected topics in British drama as a literary genre. Prerequisite: ENGL 3300.

**ENGL 4332 The Nineteenth-Century British Novel (3)**

The development of the British novel in the nineteenth and early twentieth centuries. Prerequisite: one junior level literature course. F

**ENGL 4333 The Twentieth-Century British Novel (3)**

The development of the British novel in the twentieth century. Prerequisite: one junior level literature course.

**ENGL 4335 The Age of Johnson (3)**

An overview of the major works of Samuel Johnson.(1709-1784), plus significant works by members of his circle such as Edmund Burke, David Hume, and Oliver Goldsmith. Prerequisite: Coursework in English at the junior level.

**ENGL 4340 Professional Writing (3)**

Intensive work in business and technical writing, with the purpose of developing a portfolio. Workshop format with practicum. This course is intended for students planning careers or graduate study in business, the sciences, and related fields, as well as for English majors and minors planning a career involving business or technical writing. Prerequisite: ENGL 3340 or permission of instructor based on a review of a writing portfolio.

**ENGL 4365 Shakespeare (3)**

A study of Shakespearean drama organized around a genre (Comedy, History, Tragedy) or a theme. May be repeated. Prerequisite: ENGL 3300 or DRAM 2301 or DRAM 4340.

**ENGL 4371 Rhetoric and Composition (3)**

The history and practice of rhetoric; current theories of writing from the perspectives of cognitive psychology, linguistics, sociology, and others. This course is especially relevant for students seeking secondary certification in English or for students who plan to pursue an advanced degree in English. Prerequisite: ENGL 1302 (or equivalent) and at least one 3000 level English course, or permission of the instructor.

**ENGL 4389 Selected Topics (3)**

Undergraduate courses which will be offered only once or will be offered infrequently or which are being developed before a regular listing in the catalog. May be acceptable for graduate credit. Prerequisite: ENGL 3300.

+ Course fulfills general education requirements.

## 2007-2009 DEGREE PLAN: BA IN ENGLISH

### DEGREE REQUIREMENTS:

It is the student's responsibility to read the university catalog and be familiar with degree requirements.

1. Complete at least 120 semester credit hours.
2. Complete at least 54 hours at the junior/senior level.  
At least 30 of these hours must be completed at UTPB
3. Complete at least 18 hours in a minor. At least 9 of these must be at the junior/senior level. Students seeking a second teaching field for secondary certification in English must complete all requirements for the major.
4. Earn at least a C grade in all English courses counting toward the minimum course requirements and maintain at least a GPA of 2.00 for all courses applicable toward the B.A. degree. Students seeking teacher certification must maintain a GPA of at least 2.75 in all English courses beyond Freshman Composition.

### SEMESTER HOURS COMPLETED AT OTHER SCHOOLS:

Lower division total..... \_\_\_\_\_  
 Upper division total ..... \_\_\_\_\_  
 Total hours counted toward degree..... \_\_\_\_\_

### GENERAL EDUCATION REQUIREMENTS (44 sch):

- \_\_\_ \_\_\_ English Composition, 1301 & 1302
- \_\_\_ \_\_\_ Sophomore Literature, 2322, 2323, 2327, 2328
- \_\_\_ \_\_\_ U. S. History, 1301 & 1302
- \_\_\_ \_\_\_ U.S. and State Government, 2305 & 2306
- \_\_\_ \_\_\_ Visual/Performing Arts (3 sch)
- \_\_\_ \_\_\_ Laboratory Science (8 sch)
- \_\_\_ \_\_\_ Social Science (3 sch)
- \_\_\_ \_\_\_ Communication (3 sch)
- \_\_\_ \_\_\_ Mathematics (3 sch)
- \_\_\_ \_\_\_ Mathematics/ComputerScience/Logic/Statistics(3sch)

### MAJOR REQUIREMENTS:

A TOTAL OF THIRTY HOURS (30 sch) of study is required for the major; 6 sch may be at the sophomore (2000) level; 6 sch MUST be at the senior level (4000). *The freshman English courses (1301 & 1302) are not included in the English major.* Included in those 30 hours for the major must be:

1. *ENGL 3300, Theoretical Approaches to Literature* \_\_\_\_\_
2. One course in each category: POETRY \_\_\_\_\_ FICTION \_\_\_\_\_ DRAMA \_\_\_\_\_
3. Distribution as specified among the following groups of courses:

#### BRITISH LITERATURE (one required)

- \_\_\_ \_\_\_ 2322 British Literature to 1800
- \_\_\_ \_\_\_ 2323 British Literature since 1800
- \_\_\_ \_\_\_ 3332 Literature and Art
- \_\_\_ \_\_\_ 3352 18<sup>th</sup> Century Women Poets
- \_\_\_ \_\_\_ 4321 Topics in British Poetry
- \_\_\_ \_\_\_ 4325 Topics in British Drama
- \_\_\_ \_\_\_ 4332 19<sup>th</sup> Century British Novel
- \_\_\_ \_\_\_ 4333 20<sup>th</sup> Century British Novel
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_

#### AMERICAN LITERATURE (one required)

- \_\_\_ \_\_\_ 2327 American Literature to 1865
- \_\_\_ \_\_\_ 2328 American Literature since 1865
- \_\_\_ \_\_\_ 3306 Ethnic Literature
- \_\_\_ \_\_\_ 3325 American Women Playwrights
- \_\_\_ \_\_\_ 4301 19<sup>th</sup> Century American Poetry
- \_\_\_ \_\_\_ 4302 20<sup>th</sup> Century American Poetry
- \_\_\_ \_\_\_ 4305 American Drama
- \_\_\_ \_\_\_ 4311 19<sup>th</sup> Century American Fiction
- \_\_\_ \_\_\_ 4312 20<sup>th</sup> Century American Fiction
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_

#### ELECTIVES

- \_\_\_ \_\_\_ 3310 Drama: Tragedy and Melodrama
- \_\_\_ \_\_\_ 3311 Drama:Comedy
- \_\_\_ \_\_\_ 3330 Film as Literature
- \_\_\_ \_\_\_ 3333 Literature and Mythology
- \_\_\_ \_\_\_ 3341 Creative Writing
- \_\_\_ \_\_\_ 3361 World Novels in Translation
- \_\_\_ \_\_\_ 3362 Poetry: Forms and Themes
- \_\_\_ \_\_\_ Other \_\_\_\_\_

#### LANGUAGE/RHETORIC (one required)

- \_\_\_ \_\_\_ 3340 Advanced Composition
- \_\_\_ \_\_\_ 3371 The English Language
- \_\_\_ \_\_\_ 3372 English Grammar
- \_\_\_ \_\_\_ 4340 Advanced Professional Writing
- \_\_\_ \_\_\_ 4371 Rhetoric and Composition
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_
- \_\_\_ \_\_\_ Other \_\_\_\_\_

#### MINOR OR SECOND TEACHING FIELD

- |          |          |
|----------|----------|
| 1. _____ | 2. _____ |
| 3. _____ | 4. _____ |
| 5. _____ | 6. _____ |
| 7. _____ | 8. _____ |

# ENVIRONMENTAL SCIENCE

Administered by the Department of Physical Sciences within the College of Arts and Sciences. Consult with the departmental office or the College of Arts and Sciences Academic Advising Office for a list of faculty advisors.

Students in the Environmental Science interdisciplinary major at The University of Texas of the Permian Basin will study the interrelationships between the environment and organisms and the effect humans have on the environment. The use of energy sources and management of the natural resources will be studied in reference to the environmental ethical responsibilities.

An Environmental Science major provides the graduates with job opportunities in many different areas including environmental policy and planning, environmental education, natural resource management, pollution control, conservation, lobbying and environmental communication. No minor is required for this degree.

## Degree Requirements

The total semester credit hours required for a B.S. in Environmental Science is **122**.

### General Education

**46 credits**

Complete the requirements shown in the General Education Requirements section on pages 63-64 of this catalog including the following specific courses.

Mathematics	MATH 2413, 2414
Environmental Science	ENSC 1401, 1402

### Computer Use

**3 credits**

All majors must demonstrate a basic use of computing through completion of COSC 1301, COSC 1335, or a similar computer science course which requires the actual use of computers.

### Major Requirements

**73 -79 credits**

#### Environmental Science Foundation Courses (48 sch., 25 must be upper level):

All environmental Science majors must complete the following.

*BIOL 1306-1106	General Biology I	4
*BIOL 1307-1107	General Biology II	4
*CHEM 1311-1111	General Chemistry I	4
*CHEM 1312-1112	General Chemistry II	4
ENSC 3404	Environmental Problems	4
ENSC 3310	Water and Wastewater Treatment	3
ENSC 4310	Environmental Pollution and Control	3
ENSC 4350	Environmental Impact Analysis	3
ENSC 3320	Environmental Law	3
ENSC 4395	Research in Environmental Issues	3
*GEOL 1301-1101	Physical Geology	4
*GEOL 1302-1102	Historical Geology	4
MATH 3301	Statistics	3
PHYS 1301-1101 or 2325-2125	College or University Physics and Lab	4
NTSC 4301	Environmental Ethics	3

\* Only 16 sch in these areas are required – 8 sch in the field of concentration and 8 sch outside the concentration field.

#### Field of Concentration Requirements (13-19 sch, all upper level):

Complete a field of concentration in Biology, Chemistry, or Geology. A Biology concentration requires BIOL 3310-3111, 3230-3231, 3343 and 4342 for 14 sch. A concentration in Chemistry requires completion of CHEM 3411-3113, 3412-3114, 3324-3225,

and 4301-4103 for 19 sch. A Geology concentration requires completion of GEOL 3308-3108, 3316, 3317, and 4316 for 13 sch. Course substitutions are possible in order to make progress towards the degree. Consult your academic advisor.

**Environmental Science Electives (12 sch, all upper division):**

Complete twelve upper level electives chosen with the approval of the advisor. These electives will normally be from the science disciplines, but may be in other disciplines when the courses are on environmental topics.

**Upper Level Electives (0-4 sch, all upper level):**

A minimum total semester credit hours required for the program is 120, of which a minimum of 54 credits must be at the upper level.

**Minor Requirements**

Students who choose this minor should complete one course plus lab (4 semester credit hours) of lower level science courses listed below. These four hours should not be included in the eight hours of science courses required of all students, to satisfy the general education curriculum. The student will also complete at least five (15-16 semester credit hours) of the upper division courses listed below, including ENSC 4310 and ENSC 4350. Courses chosen from this list should be outside the student’s major.

**Lower Level Science Courses (4 hours)**

ENSC 1401	Environmental Science I	4
ENSC 1402	Environmental Science II`	4
BIOL 1306-1106	General Biology I and Lab	4
BIOL 1307-1107	General Biology II and Lab	4
CHEM 1311 / 1111	General Chemistry I and Lab	4
CHEM 1312 / 1112	General Chemistry II and Lab	4
GEOL 1301 / 1101	Physical Geology	4
GEOL 1302 / 1102	Historical Geology	4
PHYS 2325 / 2125	University Physics I	4
PHYS 2326 / 2126	University Physics II	4

**Recommended Courses Satisfying a Minor in Environmental Science (15 hours)**

ENSC 3304	Introduction to Environmental Science	3
BIOL 4372	Ecology	3
ENSC 3310	Water and Wastewater Treatment	3
ENSC 4310	Environmental Pollution and Control	3
ENSC 4350	Environmental Impact Analysis	3
GEOG 3307	Climatology	3
GEOL 3316	Introduction to Groundwater	3
GEOL 3317	Environmental Geology	3
NTSC 4301	Environmental Ethics	3

**Course Listing**

**ENSC 1401 Environmental Science I (4)<sup>†</sup>**

An overview of the scope of environmental science with emphasis on its interdisciplinary nature incorporating key physical sciences such as biology, chemistry, geology, hydrology, and its behavioral interactions. The course will try to focus on interdisciplinary nature of most scientific concepts. The course will explore current issues such as “global warming,” “acid rain,” depletion of ozone layer, depletion of energy resources, human induced climate change, and indoor pollution.

**ENSC 1402 Environmental Science II (4)<sup>†</sup>**

An overview of the scope of environmental science with emphasis on its interdisciplinary nature incorporating key physical sciences such as: biology, chemistry, geology, hydrology and its behavioral interactions. The course will explore current issues of electromagnetic radiation, first and second laws of thermodynamics, microwaves and microwave ovens, the theory of relativity, vitamins and minerals, etc.

**ENSC 3310 Water and Wastewater Treatment (3)**

Sampling, physical, chemical, and biological properties of water, methods of water and wastewater treatments and the quality of reclaimed water will be discussed. Prerequisite: four hours of freshman chemistry and four hours of freshman biology. F

**ENSC 3320 Environmental Law (3)**

To understand how environmental laws are made and how disputes are resolved, the history and the need for some Federal and selected State environmental laws such as National Environmental Policy Act, Pollution Prevention Act, Clean Air Act, Clean Water Act, etc. is taught. S

**ENSC 3404 Environmental Problems (4)**

Man's impact on the physical and biotic structures of the environment. Lab: Interactive computer program, activities on food chain and population. Prerequisite: ENSC 1401 and ENSC 1402 or permission of the instructor. Summer

**ENSC 4310 Environmental Pollution and Control (3)**

Air pollution, meteorology and air quality, measurement of air quality, water pollution, measurement of water quality, water law and standards, solid waste, solid waste measurement, noise pollution, noise measurement and control. Prerequisite: at least one course beyond the freshman level in CHEM or GEOL or BIOL, or permission of the instructor. F

**ENSC 4350 Environmental Impact Analysis (3)**

Framework for environmental assessment; description of the environmental setting; prediction and assessment of impact on air, water, noise, and biological environments; methods of impact analysis, will be discussed. Prerequisite: at least one course beyond the freshman level in CHEM or GEOL or BIOL, or permission of the instructor. S

**ENSC 4390 Internship in Environmental Technology (3)**

Students enrolled in this course will be assigned to one of the environmental industries in Midland/Odessa area to work about 15 hours per week on different projects. Student's academic advisor and industry supervisor will be in contact to check the student's progress in the project. Each student will make regular oral reports to their academic advisors during the semester and submit a written report at the end of the semester. FS

**ENSC 4395 Research in Environmental Issues (3)**

Design and analysis of various projects related to environmental issues and problems. Oral and written reports required. Prerequisite: ENSC 3310 Water and Wastewater treatment. F

† Course fulfills general education requirements.

## 2007-2009 DEGREE PLAN: BS IN ENVIRONMENTAL SCIENCE

### GENERAL EDUCATION REQUIREMENTS (46 hours):

- \_\_\_ \_\_\_ English Composition, 6 credits (2 courses) 1301 & 1302
- \_\_\_ Literature, 3 credits (1 course) 2322, 2323, 2327, 2328
- \_\_\_ \_\_\_ U.S. History, 6 credits (2 courses) 1301, 1302 recommended
- \_\_\_ \_\_\_ U.S. and State Government, 6 credits (2 courses) 2305, 2306
- \_\_\_ \_\_\_ ENSC 1401 & 1402, 8 sch
- \_\_\_ \_\_\_ MATH 2413, Calculus I AND MATH 2414, Calculus II
- \_\_\_ Communication, 3 credits (1 course)
- \_\_\_ Visual and Performing Arts, 3 credits (1 course)
- \_\_\_ Social Science, 3 credits (1 course)

### HOURS FROM OTHER INSTITUTIONS (if any)

- Freshman/ sophomore total..... \_\_\_
- Junior/senior total..... \_\_\_
- Total credits transferred in .....** \_\_\_

### NOTES ON GRADUATING:

1. Read the U. T. Permian Basin catalog and be familiar with the University's requirements for the BS degree. **It is the student's responsibility to read the catalog and be familiar with and fulfill all the requirements for the BS degree.**
2. Complete at least **122** sch for the BS degree.
3. At least **54** sch must be taken at the junior or senior level. At least **30** of these must be completed at U. T. Permian Basin.

### COMPUTER USE:

All majors must demonstrate a basic use of computing through completion of COSC 1301, 1335, or a similar computer science course which requires the actual use of computers.

### MAJOR REQUIREMENTS: 73-79 SEMESTER CREDIT HOURS (Depending on field of concentration)

Environmental Science Foundation Courses (48 sch): All Environmental Science majors must complete the following:

___ ___ *BIOL 1306/1106 & 1307/1107 General Biology I & II	8 sch
___ ___ *CHEM 1311/1111 & 1312/1112 General Chemistry I & II	8 sch
___ ENSC 3404 Environmental Problems	4 sch
___ ENSC 3310 Water and Wastewater Treatment	3 sch
___ ENSC 4310 Environmental Pollution Cont.	3 sch
___ ENSC 4350 Environmental Impact Analysis	3 sch
___ ENSC 3320 Environmental Law	3 sch
___ ENSC 4395 Research in Environmental Issues	3 sch
___ ___ GEOL 1301/1101 & 1302/1102 Physical & Historical Geology	8 sch
___ MATH 3301 or similar Statistics	3 sch
___ PHYS 1301/1101 or 2325/2125 College or University Physics I & Lab	4 sch
___ NTSC 4301 Environmental Ethics	3 sch

\* Only 16 sch in these areas are required – 8 sch in the field of concentration, and 8 sch outside the concentration field.

In addition to the above noted required foundation courses, all Environmental Science majors must complete a Field of Concentration Requirements (13-19 sch, all upper level): Complete a field of concentration in Biology, Chemistry, or Geology as follows:

#### BIOLOGY CONCENTRATION

(14 semester credit hours)

- \_\_\_ BIOL 3310-3111 Invertebrate Zoology
- \_\_\_ BIOL 3230-3231 Botany
- \_\_\_ BIOL 3343 Human Genetics
- \_\_\_ BIOL 4342 Evolution

#### CHEMISTRY CONCENTRATION

(19 semester credit hours)

- \_\_\_ CHEM 3411-3113 Organic I
- \_\_\_ CHEM 3412-3114 Organic II
- \_\_\_ CHEM 3324-3225 Analytic I
- \_\_\_ CHEM 4301-4103 Physical I

#### GEOLOGY CONCENTRATION

(13 semester credit hours)

- \_\_\_ GEOL 3308-3108 Sedimentary Rocks
- \_\_\_ GEOL 3316 Intro to Groundwater
- \_\_\_ GEOL 3317 Environmental Geology
- \_\_\_ GEOL 4316 Earth Resources & Environ.

### ENVIRONMENTAL SCIENCE ELECTIVES (12 sch hours chosen with the approval of the advisor):

\_\_\_\_\_

\_\_\_\_\_

### UPPER LEVEL FREE ELECTIVE(S):

Depending on the area of concentration you may need to take between 0-4 sch of upper level free electives to satisfy The University's 54 sch upper level requirement.

**NO MINOR IS REQUIRED FOR THIS DEGREE.**