All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.

Economics

ECON 1 Principles of Macroeconomics 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An introduction to macroeconomics. Topics covered will include recessions and inflation, national income accounting, money and the banking system, money and the price level, classical macro theory, Keynesian macro theory, monetary and fiscal policy, and international trade.

ECON 2 Principles of Microeconomics 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Examines fundamental microeconomic issues; the allocation of resources and the production function; pricing of output and factors of production; the distribution of wealth and income; consumer motivations and behavior; the nature and behavior of business firms and markets under various degrees of competition; current problems.

ECON 78I Economic Issues in Today's World 3 Units
(Formerly Economics 40I and 40J, respectively.)
Advisory: English Writing 1A or English as a Second Language 5; Economics 1 or 2.
Three hours lecture for the three unit course (36 hours total per quarter); four hours lecture for the four unit course (48 hours total per quarter).
Basic economic analysis of current economic issues. Each topic studied is selected according to its currency and relevance to analysis. Examines fundamental economics issues within the context of current socio-political activity within the local or national economic environment. By learning the economic way of thinking, our students develop the ability to analyze complex, often ill-defined problems, and to think strategically about both intended and unintended consequences. The study of Economics develops a student’s ability to organize thoughts, analyze complex issues, and to make clear and persuasive recommendations. These skills explain why economics majors score higher on law school admissions tests than other majors, and receive among the highest starting salaries. Recent classes have involved experimental economic techniques and their application to the understanding and testing of theory; the changing European economic community; liberal, conservative and radical perspectives on current economic policy; the restructuring of the California and United States economy; public finance options for local, state and federal government units; the use of simulations and modeling in economic analysis; political economy; and, experimental and behavioral economic theories and practices.

Education

EDUC 1 Introduction to Elementary Education in a Diverse Society 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Two hours lecture, three hours laboratory (60 hours total per quarter).
Examination of principles and practices of elementary education in today’s society including observations and supervised participation in the elementary school setting.

EDUC 46 Mathematics for Elementary Education 5 Units
(See general education pages for the requirement this course meets.)
Prerequisite: Mathematics 114 with a grade of C or better, or a qualifying score on Intermediate Algebra Placement Test within the past calendar year.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Mathematics 46. Students may enroll in either department, but not both, for credit.)
Five hours lecture (60 hours total per quarter).
Designed for prospective elementary and middle school teachers. An introduction to the discipline of mathematics as the use of logical, quantitative, and spatial reasoning in the abstraction, modeling, and problem solving of real-world situations. The main topics in the course include the origins of mathematics, mathematical reasoning, and problem solving strategies, theory of sets, integers and integral number theory, rational numbers and proportion, real numbers and decimal notation, and measurement. Throughout the course students will experience the learning of mathematics in a way that models how they can create an active learning environment for their future students.

EDUC 56 Understanding and Working with English Language Learners 3 Units
Advisory: Completion of Child Development 100G (or Psychology 10G) and 55; English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Child Development 56. Students may enroll in either department, but not both, for credit.)
Three hours lecture (36 hours total per quarter).
Developmental and cultural examination of the dual language learner in early childhood programs. Theories and developmental sequence of bilingual language acquisition. Role of teacher and methods for supporting the dual language child. (This course meets NAECY Standard 4b: Teaching and learning: Using developmentally effective approaches; NBPTS Early childhood/Generalist Standard II: Equity, Fairness and Diversity; CEC Special Education Content Standards, Standard 2: Development & Characteristics of Learners; Standard 6: Language.)

EDUC 58 Children's Literature 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as English Literature 58. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Study of the literature of children (pre-elementary through young adult) with an emphasis on poetry, picture books, folk tales, myths, fiction, fantasy, and nonfiction from a variety of cultures, ethnicities and historical periods. Evaluation of the literary quality and the cultural and historical meaning of individual works. Study of the use of children's literature as an educational tool both in the classroom and outside of it.

EDUC 73 Early Childhood Mental Health 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Child Development 73. Students may enroll in either department, but not both, for credit.)
Three hours lecture (36 hours total per quarter).
EDUC 74  
Early Childhood Mental Health  3 Units
Seminar and Fieldwork
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Child Development 74. Students may enroll in either department, but not both, for credit.)
Two hours lecture, three hours laboratory (60 hours total per quarter).
Provides an overview of different approaches to early identification and intervention with children and their families and will help students develop basic support skills for use in dealing with high-risk families, including those with exceptional emotional, social, or physical needs.
(This course meets NAEYC Standard 3, Standard 4b; NBPTS Early Childhood/Generalist Standard I, III, VI, IX; and CEC Special Education Content Standards, Standards 4, 5 and 8.)

Engineering

ENGR 10  
Introduction to Engineering  4 1/2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Mathematics 210 or equivalent.
Three hours lecture, five hours laboratory (96 hours total per quarter).
An introduction to engineering design through a variety of projects, including experimentation, data analysis, and development of computer skills. Exposure to several engineering disciplines through problem solving for the purpose of providing information to assist students in a choice of major.

ENGR 35  
Statics  4 Units
Prerequisite: Engineering 10; Mathematics 1B; Physics 4A.
Three hours lecture, three hours laboratory (72 hours total per quarter).
Principles of statics as applied to particles and rigid bodies in two and three dimensions. Vector solutions for concentrated and distributed loads. Determination of centroids and moments of inertia and the effects of dry friction. Programming computer solutions.

ENGR 37  
Introduction to Circuit Analysis  5 Units
Prerequisite: Mathematics 1D; Physics 4B (may be taken concurrently).
Five hours lecture (60 hours total per quarter).

ENGR 77  
Special Projects in Engineering  1 Unit
ENGR 77X  2 Units
ENGR 77Y  3 Units
Prerequisite: Consent of instructor and division dean.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
Individual special reading, writing, or study projects in Engineering as determined in consultation with the instructor.

English

For courses in reading, vocabulary, and spelling, see "Reading." Placement in English is based on results of standardized tests prior to enrollment. To enroll in English Writing 1A, a student must demonstrate competence in reading and writing skills.

Competence in reading is demonstrated by a satisfactory score on a standard test (see schedule of classes for details) or satisfactory completion of Reading 211, including instructor's recommendation.

Competence in writing is demonstrated by a satisfactory score on a standard test (see schedule of classes for details) or satisfactory completion of English Writing 211, including instructor's recommendation.

Students scoring below the qualifying score for Reading 211 in the reading test should enroll in Reading 200. Those scoring below the qualifying score for English Writing 211 on the writing test should enroll in English Writing 200.

English/Literature

Some courses in this department have recommended competencies. These are determined by placement tests; students who have not taken placement tests or who are unsure of their scores should call the Assessment Office at 408.964.8717.

ELIT 6  
Cinema and the African American  4 Units
(An Historical Analysis of African Americans in African Cinema)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
(Also listed as Intercultural Studies 14 and Film/Television 48. Students may enroll in only one department for credit.)
Four hours lecture (48 hours total per quarter).
A survey of the image and role of the African American film industry. Particular attention will be given to the development of images of racial stereotypes, those works attempting a historical portrayal of the African American experience and the roles played by key African Americans in the evolution of film as an art and feature films as an industry in the United States.

ELIT 10  
Introduction to Fiction  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Intensive study of fiction; reading, discussion and analysis of structure and meaning in selected novels and short stories.

ELIT 11  
Introduction to Poetry  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Intensive study of poetry; reading, discussion, and analysis of structure and meaning in selected poems.

ELIT 12  
Introduction to Dramatic Literature  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Intensive study of dramatic literature; reading, discussion, and analysis of structure and meaning in selected plays.

ELIT 17  
Introduction to Shakespeare  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Analysis of representative Shakespearean sonnets, histories, tragedies, and comedies, placed within the literary and social context of the Renaissance as well as the context of contemporary culture.

ELIT 19  
Introduction to the Bible as Literature  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An introduction to the study of the Bible, in English, from a literary, cultural, and historical point of view, with consideration of its influence on our culture. Selected readings from Hebrew Bible, Greek New Testament, and Apocalypse.

ELIT 20  
Major Authors  4 Units
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 1A.
Four hours lecture (48 hours total per quarter).
Reading and analysis of representative works of one, two, or three major authors through lecture, discussion, and critical writing. Emphasis on author or authors' stylistic innovations as well as historical, class, cultural, ethnic, and gender issues relevant to the texts and biographies.

ELIT 21  
Women in Literature  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
(Also listed as Women's Studies 21. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Intensive study of representative literary works by or about women including an analysis of different historical, cultural, and critical perspectives.

ELIT 22  
Mythology and Folklore  4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An intercultural survey of prehistoric, historic, and contemporary world mythology and folklore which examines the relationship between a culture's myths and folktales and its art, literature, and social values.

ELIT 24  
Asian American Literature  4 Units
(Formerly English Literature 52.)
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Intercultural Studies 24. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Introduction to Asian American literature. Readings in Twentieth and Twenty-First Century works, with an emphasis on three relevant themes: problems of identity as it relates to class, gender, mixed heritages, and sexuality; politics and the history of Asian American activism and resistance; and diversity of cultures within the Asian American community.

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.
ELIT 25 Introduction to Linguistics 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
(Also listed as Linguistics 1. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Introduction to the nature of language. Origin and development of spoken and written languages, how people learn languages, and how languages change, with emphasis on the history of English. Basics of linguistic description including systems of phonetics and phonology, semantics, morphology and syntax. Study of general linguistic principles as they apply across languages.

ELIT 39 Contemporary Literature 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Critical examination of representative, contemporary literary works of the post-WWII period, with emphasis on more recent works and intercultural offerings. Attention to key trends, styles, and issues in a global context.

ELIT 44 International Literature (Fiction) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Reading and critical analysis of representative works of international fiction, including works from Africa, Asia, Latin America, Pacific Islands, and Australia. Literary, cultural, and cross-cultural interpretation, evaluation, and comparison. Cross-cultural interpretation and literary analysis of short stories and novels.

ELIT 46A Major British Writers (Medieval and Renaissance) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Reading and critical analysis of representative works by major writers such as Chaucer, Shakespeare and Milton.

ELIT 46B Major British Writers (Neo-Classical and Romantic) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5; or consent of the instructor.
Four hours lecture (48 hours total per quarter).
Reading and critical response to representative works by major writers such as Pope, Behn, Swift, Johnson, Wordsworth, Coleridge, Percy and Mary Godwin Shelley, Keats, Austen, Montagu, and the Bronte sisters.

ELIT 46C Major British Writers (Victorian and Modern) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Reading and critical response to representative works by major writers such as the Brontes, Tennyson, Barrett Browning, Browning, Dickens, Arnold, Hopkins, Wilde, Lawrence, Hardy, Yeats, Conrad, Joyce, Eliot, Beckett, Woolf and Auden.

ELIT 48A Major American Writers (Colonial to Romantic, 1620-1865) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Reading and critical analysis of representative works by diversive writers such as William Bradford, Anne Bradstreet, Jonathan Edwards, Ben Franklin, Thomas Jefferson, James Fenimore Cooper, Edgar Allan Poe, Nathaniel Hawthorne, Herman Melville, Frederick Douglass, Harriet Jacobs, Harriet Beecher Stowe, Elias Boudinot, Chief Seattle, Sojourner Truth, Ralph Waldo Emerson, Margaret Fuller, Henry David Thoreau.

ELIT 48B Major American Writers (The Advent of Realism, 1865-1914) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Reading and critical analysis of representative works by major writers such as Walt Whitman, Emily Dickinson, Mark Twain, Henry James, William Dean Howells, Charlotte Perkins Gilman, Charles Chesnutt, Mary Wilkins Freeman, Kate Chopin, Stephen Crane, Booker T. Washington, W.E.B. DuBois, Black Elk, and Robert Frost.

ELIT 48C Major American Writers (The Modern Age, 1914-the Present) 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
Reading and critical analysis of representative works by major writers such as Faulkner, Hemingway, Hurston, Morrison, Fitzgerald, Hughes, Wright, Ellison, Williams, Cisneros, Stevens, Sexton, Eliot, Vonnegut, Pynchon, O’Connor, Plath, Carver, Wilson, and O’Neill.

ELIT 58 Children’s Literature 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Education 58. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Study of the literature of children (pre-elementary through young adult) with an emphasis on poetry, picture books, folk tales, myths, fiction, fantasy, and nonfiction from a variety of cultures, ethnicities and historical periods. Evaluation of the literary quality and the cultural and historical meaning of individual works. Study of the use of children’s literature as an educational tool both in the classroom and outside of it.

ELIT 78 Special Topics in Literature 1 Unit
ELIT 78X 2 Units
ELIT 78Y 3 Units
ELIT 78Z 4 Units
Advisory: English Writing 1A or English as a Second Language 5, or recommendation of instructor or counselor.
One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).
Intensive study and analysis of a special topic in literature.

ELIT 79 Special Topics: Shakespeare in Performance 2 Units
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture-laboratory (48 hours total per quarter).
Discussions of selected plays and an extended field trip to live performances of the plays at the annual Oregon Shakespeare Festival. Costs to be borne by the student.

English/Writing

Some courses in this department have recommended competencies. These are determined by placement tests; students who have not taken placement tests or who are unsure of their scores should call the Assessment Office at 408.864.8717.

EWRT 1A Composition and Reading 5 Units
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211); or equivalent placement (normally based on results of the English Placement Tests).
Four hours lecture (40 hours total per quarter).
Introduction to university level reading and writing, with an emphasis on analysis. Close examination of a variety of texts (personal, popular, literary, professional, academic) from culturally diverse traditions. Practice in common rhetorical strategies used in academic writing. Composition of clear, well-organized, and well-developed essays, with varying purposes and differing audiences, from personal to academic.

EWRT 1B Reading, Writing and Research 5 Units
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 1A.
Five hours lecture (60 hours total per quarter).
Development of analytical, integrative skills in reading and writing. Academic (interpretive, analytical, argumentative) writing based largely on reading of literary/imaginative texts linked by a common theme or issue. Outside research leading to analysis, comparison, and synthesis in documented research paper.

EWRT 1C Literature and Composition 5 Units
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 1B.
Five hours lecture (60 hours total per quarter).
Applies the analytical, critical, and synthesis skills developed in English Writing 1A and 1B to the ways meaning can be made in diverse cultural, social, and historical contexts in prose, poetry, and drama by reading and analyzing texts and critical interpretations and by composing critical responses, analyses, and arguments.

EWRT 2 Critical Reading, Writing and Thinking 5 Units
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 1A.
Five hours lecture (60 hours total per quarter).
Develops critical thinking skills and the ability to apply these skills to reading and writing. Develop analytical and argumentative academic essays based on reading of complex texts, and the use of outside research leading to analysis, comparison, and synthesis and a documented research paper.

EWRT 30 Introduction to Creative Writing 4 Units
(Formerly English Writing 52.)
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211).
Four hours lecture (48 hours total per quarter).
Introduction to the writing of fiction, poetry, drama, and creative nonfiction, through both critical analysis and intensive practice.
EWRT 40  Fiction Writing  4 Units  
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211).  
Four hours lecture (48 hours total per quarter).  
Development of fiction writing skills through critical analysis and intensive practice.

EWRT 41  Poetry Writing  4 Units  
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211).  
Four hours lecture (48 hours total per quarter).  
Development of poetry writing skills through critical analysis and intensive practice.

EWRT 42  Writing It Real: Creative Nonfiction and Memoir Writing  4 Units  
(Formerly English Writing 54.)  
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211).  
Four hours lecture (48 hours total per quarter).  
Development of skills in writing creative nonfiction and memoir through critical analysis and intensive practice.

EWRT 64  Technical Writing Seminar  5 Units  
Prerequisite: Business 62 or 63; or English Writing 62 or 63; or Technical Writing 62 or 63.  
(Also listed as Business 64 and Technical Writing 64. Students may enroll in only one department for credit.)  
Five hours lecture (60 hours total per quarter).  
Technical communication and editing skills applied through the preparation and presentation of a complete document according to the standards of the student’s chosen technical field.

EWRT 65  Literary Magazine, National Edition  2 Units  
EWRT 65X  3 Units  
Advisory: English Writing 1A or English as a Second Language 5.  
Two hours lecture for the two unit course (24 hours total per quarter); two hours lecture, three hours laboratory for the three unit course (60 hours total per quarter).  
Emphasis on collaborative evaluation and selection of fiction, poetry, and other literary submissions for professional annual magazine publication including attention to management and planning as well as design.

EWRT 68  Literary Magazine: Student Edition  2 Units  
EWRT 68X  3 Units  
Advisory: English Writing 1A or English as a Second Language 5.  
Two hours lecture for the two-unit course (24 hours total per quarter); two hours lecture and three hours laboratory for the three unit course (36 hours total per quarter).  
Collaborative evaluation and selection of fiction, poetry, photography, drawings, and other literary and artistic work for student edition of literary magazine. Emphasis on layout, design, production, publicity, event planning, and magazine distribution along with soliciting, submission management, manuscript evaluation, and copy editing.

EWRT 77  Special Projects in English  1 Unit  
EWRT 77X  2 Units  
EWRT 77Y  3 Units  
(Formerly English Writing 56, 56X and 56Y respectively.)  
Prerequisite: Consent of instructor and division dean.  
Advisory: English Writing 1A or English as a Second Language 5.  
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).  
Pass-No Pass (P-NP) course.  
Special reading, writing, or study projects in English as determined in consultation with the instructor.

EWRT 81  Extended Writing Strategies  1 Unit  
Advisory: None.  
One hour lecture (12 hours total per quarter).  
An exploration of writing as a multistep process in order to determine proper audience, organization, and argumentative stance for optimal rhetorical effect.

EWRT 97  Introduction to Peer Tutoring in Writing  3 Units  
Prerequisite: English Writing 1A or English as a Second Language 5; must be hired to work as a De Anza tutor.  
(Also listed as Learning Assistance 97. Students may enroll in either department, but not both, for credit.)  
Three hours lecture (36 hours total per quarter).  
Required training for De Anza writing tutors. Introduction to the theory and practice of tutoring writing, including strategies and approaches to help students from diverse linguistic backgrounds at various stages of the writing process. Students read about, observe, discuss, write about and practice the craft of tutoring writing. After an initial orientation, students in the class begin tutoring, and reflect on their tutoring experiences as part of the class.

EWRT 200  Fundamentals of Writing  5 Units  
Credit course - Does not apply to De Anza Associate degree.  
Prerequisite: Qualifying score on the English Placement Test.  
Five hours lecture (60 hours total per quarter).  
Pass-No Pass (P-NP) course.  
Practice focused, purposeful writing in several formats to different audiences with a variety of sentence structures responding to, engaging with or inspired by written or visual texts. Edit writing to correct errors in the major conventions of Standard Written English.

EWRT 211  Preparatory Reading and Writing Skills  5 Units  
(Formerly English Writing 100.)  
Credit course - Does not apply to De Anza Associate degree.  
Prerequisite: English Writing 200 and Reading 200 (or Language Arts 200); or a qualifying score on the English Placement Test.  
Five hours lecture (60 hours total per quarter).  
Pass-No Pass (P-NP) course.  
Develop the abilities necessary for college-level reading and essay writing. Emphasize writing in response to critical questions about assigned texts.

EWRT 274  Grammar and Proofreading for Academic Writing  4 Units  
(Formerly English Writing 174.)  
Credit course - Does not apply to De Anza Associate degree.  
(Recommended for students whose native language is not English and students who wish to improve their grammar and proofreading skills.)  
Prerequisite: English as a Second Language 261, 262 and 263; or English Writing 200.  
(Also listed as English as a Second Language 274. Students may enroll in either department, but not both, for credit.)  
Four hours lecture (48 hours total per quarter).  
Focus on helping students become successful academic writers by addressing their needs (a) to understand grammatical structures fundamental to college writing and (b) to develop effective proofreading skills.

ESL 100  High Beginning English as a Second Language  10 Units  
Credit course - Does not apply to De Anza Associate degree.  
Prerequisite: Qualifying score on the English Placement Test.  
Ten hours lecture (120 hours total per quarter).  
Development of English speaking, listening, reading and writing skills. Practice in listening to and using basic forms of conversational English with comprehensible pronunciation. Development of basic reading comprehension and vocabulary. Practice in writing simple and compound sentences, short narratives, explanations and descriptions.

ESL 210  Practice in Speaking and Conversation  1/2 Unit  
Credit course - Does not apply to De Anza Associate degree.  
(Formerly English as a Second Language 244.)  
One hour lecture-laboratory (12 hours total per quarter).  
Pass-No Pass (P-NP) course.  
English speaking and conversation skills practiced in a variety of contexts to develop vocabulary, comprehensibility and cultural awareness.
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<th>Course Code</th>
<th>Course Title</th>
<th>Credit</th>
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<tbody>
<tr>
<td>ESL 211</td>
<td>Listening in Context</td>
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<td>ESL 211X</td>
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<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td>Prerequisite: English as a Second Language 251.</td>
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<td></td>
<td>One hour lecture-laboratory for the one-half unit course (12 hours total per quarter); two hours lecture-laboratory for the one unit course (24 hours total per quarter).</td>
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<td>Pass-No Pass (P-NP) course.</td>
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<td></td>
<td>English learning practice in a variety of contexts to expand vocabulary, comprehensibility and cultural awareness.</td>
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<td>ESL 213</td>
<td>Vocabulary and Idioms in Context</td>
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<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 244.</td>
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<td>One hour lecture-laboratory for the one-half unit course (12 hours total per quarter); two hours lecture-laboratory for the one unit course (24 hours total per quarter).</td>
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<td>Pass-No Pass (P-NP) course.</td>
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<td>Vocabulary expansion: reading and listening exposure to vocabulary and idioms in a variety of contexts with follow-up spoken and written practice.</td>
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<td>ESL 214</td>
<td>English for Academic Skills</td>
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<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td>Prerequisite: English as a Second Language 261, 262 and 263.</td>
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<td>One hour lecture-laboratory (12 hours total per quarter).</td>
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<td>Academic skills with emphasis on improving skills in reading, writing and aurally comprehending academic English to prepare students for college-level general education courses.</td>
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<tr>
<td>ESL 216</td>
<td>Advanced Reading Practice</td>
<td>1/2</td>
<td>1/2</td>
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<tr>
<td>ESL 216X</td>
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<td>1</td>
<td>1</td>
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<td></td>
<td>(English as a Second Language 216 was formerly English as a Second Language 116.)</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 252.</td>
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<td></td>
<td>One hour lecture-laboratory for the one-half unit course (12 hours total per quarter); two hours lecture-laboratory for the one unit course (24 hours total per quarter).</td>
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<td></td>
<td>Pass-No Pass (P-NP) course.</td>
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<td></td>
<td>Extensive reading to expand vocabulary, develop critical reading skills, and improve ability to analyze reading selections through small group discussion.</td>
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<tr>
<td>ESL 222</td>
<td>Reading Comprehension</td>
<td>1/2</td>
<td>1/2</td>
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<tr>
<td>ESL 222X</td>
<td>(Formerly English as a Second Language 224.)</td>
<td>1</td>
<td>1</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 244.</td>
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<tr>
<td></td>
<td>One hour lecture-laboratory (12 hours total per quarter).</td>
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<td></td>
<td>Pass-No Pass (P-NP) course.</td>
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<td></td>
<td>Reading practice and vocabulary development to improve comprehension of topics and issues reported by the news media.</td>
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<tr>
<td>ESL 223</td>
<td>Reading and Vocabulary Building</td>
<td>1/2</td>
<td>1/2</td>
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<tr>
<td>ESL 223X</td>
<td>(English as a Second Language 223 was formerly English as a Second Language 123.)</td>
<td>1</td>
<td>1</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 234.</td>
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<td></td>
<td>One-hour lecture-laboratory for the one-half unit course (12 hours total per quarter); two hours lecture-laboratory for the one unit course (24 hours total per quarter).</td>
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<td></td>
<td>Pass-No Pass (P-NP) course.</td>
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<td></td>
<td>Develop an appreciation for reading and sharing ideas in English while improving reading skills, retention, and vocabulary.</td>
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<tr>
<td>ESL 230</td>
<td>Studies in American Language and Culture</td>
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<td>1</td>
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<td>ESL 230W</td>
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<td>2</td>
<td>2</td>
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<td>ESL 230X</td>
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<td>ESL 230Y</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite/Advisory: None.</td>
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<td></td>
<td>One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).</td>
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<td></td>
<td>Pass-No Pass (P-NP) course.</td>
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<td></td>
<td>Develop conversation, discussion and listening skills for clear communication in a variety of contexts. Investigate and analyze customs and attitudes in American culture from a multicultural perspective.</td>
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<tr>
<td>ESL 234</td>
<td>Low Intermediate English as a Second Language</td>
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<td></td>
<td>(Formerly English as a Second Language 134.)</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: Qualifying score on the English as a Second Language Placement Test.</td>
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<td></td>
<td>Ten hours lecture (120 hours total per quarter).</td>
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<td></td>
<td>Development of English speaking, listening, reading and writing skills. Practice in listening to and using basic forms of conversational English to ask and answer questions on a variety of cultural topics. Development of basic reading comprehension and vocabulary practice. Practice in writing simple and compound sentences, short narratives, explanations, and descriptions.</td>
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<tr>
<td>ESL 244</td>
<td>Intermediate English as a Second Language</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: Qualifying score on the English as a Second Language Placement Test; or English as a Second Language 234 with a grade of C or better.</td>
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<td></td>
<td>Ten hours lecture (120 hours total per quarter).</td>
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<td></td>
<td>Development of English speaking, listening, reading and writing skills with an emphasis on explicit, direct grammar instruction. Vocabulary-building and writing are emphasized. Pronunciation practice and discussion of cross-cultural topics are also included.</td>
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<tr>
<td>ESL 251</td>
<td>High Intermediate Listening and Speaking</td>
<td></td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 244; or a qualifying score on the English as a Second Language Placement Test.</td>
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<td></td>
<td>Co-requisite: English as a Second Language 251 students may also take English as a Second Language 252 and 253 concurrently.</td>
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<td></td>
<td>Three hours lecture (36 hours total per quarter).</td>
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<td></td>
<td>English speaking and listening practice in a variety of contexts. Development of vocabulary appropriate in both formal and informal situations.</td>
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<tr>
<td>ESL 252</td>
<td>High Intermediate Reading</td>
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<td>(Formerly English as a Second Language 152.)</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 244; or a qualifying score on the English as a Second Language Placement Test.</td>
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<td></td>
<td>Co-requisite: English as a Second Language 252 students may also take English as a Second Language 251 and 253 concurrently.</td>
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<td></td>
<td>Three hours lecture (36 hours total per quarter).</td>
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<td></td>
<td>Development of high intermediate English reading comprehension and vocabulary building skills in extended written materials.</td>
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<td>ESL 253</td>
<td>High Intermediate Grammar and Writing</td>
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<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 244; or a qualifying score on the English as a Second Language Placement Test.</td>
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<td></td>
<td>Co-requisite: English as a Second Language 253 students may also enroll in English as a Second Language 251 and 252 concurrently.</td>
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<td></td>
<td>Four hours lecture (48 hours total per quarter).</td>
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<td></td>
<td>Develop skills in using level-specific grammar and sentence structure in writing. Write organized and well-developed descriptive, narrative, and explanatory paragraphs.</td>
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<td>ESL 254</td>
<td>American Language and Culture</td>
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<tr>
<td></td>
<td>Through Movies and Television Shows</td>
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<td></td>
<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td></td>
<td>Prerequisite: English as a Second Language 251; or a qualifying score on the English as a Second Language Placement Test.</td>
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<td></td>
<td>Three hours lecture (36 hours total per quarter).</td>
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<td></td>
<td>Pass-No Pass (P-NP) course.</td>
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<td></td>
<td>Develop an understanding of American culture, language, common idioms and slang through viewing and discussing American films and television.</td>
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<td>ESL 260</td>
<td>Accent Reduction (for Non-Native</td>
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<td>Speakers)</td>
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<td>Credit course - Does not apply to De Anza Associate degree. (Restricted to students whose native language is not English.)</td>
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<td>Advisory: English as a Second Language 251.</td>
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<td></td>
<td>Two hours lecture, three hours laboratory (60 hours total per quarter).</td>
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</table>
ESL 261 Low Advanced Listening and Speaking 3 Units
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Prerequisite: English as a Second Language 252 or a qualifying score on the English as a Second Language Placement Test.
Three hours lecture (36 hours total per quarter).
Emphasis on listening comprehension and proficiency in speaking in academic settings, development of vocabulary, pronunciation and note-taking skills.
Co-requisite: English as a Second Language 252 and 253; or a qualifying score on the English as a Second Language Placement Test.

ESL 262 Low Advanced Reading 3 Units
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Prerequisite: English as a Second Language 252 and 253; or a qualifying score on the English as a Second Language Placement Test.
Co-requisite: English as a Second Language 262 students may also enroll in English as a Second Language 261 and 263 concurrently.
Three hours lecture (36 hours total per quarter).
Development of advanced reading comprehension, vocabulary building skills, and improved reading rate in extended written materials.

ESL 263 Low Advanced Grammar and Writing 4 Units
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Prerequisite: English as a Second Language 252 and 253; or a qualifying score on the English as a Second Language Placement Test.
Co-requisite: English as a Second Language 263 students may also enroll in English as a Second Language 261 and 262 concurrently.
Four hours lecture (48 hours total per quarter).
Develop skills for writing clear, organized, well-developed, multiple paragraph compositions that demonstrate analytical thinking and level-appropriate grammar, sentence structure and vocabulary.

ESL 272 Advanced Reading and Vocabulary 5 Units
(Formerly English as a Second Language 172.)
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Prerequisite: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 262 and 263; or a qualifying score on the English as a Second Language Placement Test.
Co-requisite: English as a Second Language 272 students may also enroll in English as a Second Language 273 concurrently.
Five hours lecture (60 hours total per quarter).
Development of academic vocabulary and reading skills through extensive reading of college level material in English.

ESL 273 Introduction to the Essay 5 Units
(Formerly English as a Second Language 173.)
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Prerequisite: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263 with a grade of C or better; or a qualifying score on the English as a Second Language Placement Test.
Co-requisite: English as a Second Language 273 students may also enroll in English as a Second Language 272 concurrently.
Five hours lecture (60 hours total per quarter).
Principles of essay writing.

ESL 274 Grammar and Proofreading for Academic Writing 4 Units
(Formerly English as a Second Language 174.)
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Prerequisite: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263; or English Writing 200.
(Also listed as English Writing 274. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
Focus on helping students become successful academic writers by addressing their needs (a) to understand grammatical structures fundamental to college writing and (b) to develop effective proofreading skills.

ESL 280 English As a Second Language for Child Development and Education 1 Unit
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English and who are enrolled in the Child Development Department.)

ESL 280X 2 Units
ESL 280Y 3 Units

ESCI 1 Environmental Science 4 Units
(Formerly Environmental Science 51.)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An introduction to environmental science as a branch of the sciences and its relation to the scientific field including the scientific method. Review of the principles, concepts and terminology of the environmental and ecological literacy including restoration ecology, landscape ecology, sustainable studies and ecosystem management. Agenda 21 and other environmental indicator tools as they relate to human use of the earth's systems including the hydrosphere, atmosphere, lithosphere and biosphere and the impact on cultural, ethnic and gender groups will be explored.
(One-day field trip outside of scheduled class time may be required for this course.)

ESCI 1L Environmental Science Laboratory 1 Unit
(Formerly Environmental Science 51L.)
(See general education pages for the requirement this course meets.)
Co-requisite: Environmental Science 1L students must also enroll in, or have completed, Environmental Science 1.
Advisory: English Writing 1A or English as a Second Language 5.
Three hours laboratory (36 hours total per quarter).
An introduction to environmental science as a branch of the sciences including the scientific method and its relation to the scientific field in a laboratory and field setting. Applications of scientific, environmental, ecological and sustainability principles as they relate to human societies will be explored.

ESCI 19 Environmental Biology 5 Units
(Formerly Biology 19.)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture, three hours laboratory (84 hours total per quarter).
An introduction to environmental biology as a branch of the environmental sciences and its relation to the scientific field. Review of the principles of environmental biology, ecology and conservation as they relate to natural resource use, the biodiversity crisis, pollution, human population and the impacts on all cultural, ethnic and gender groups.
(Field trip outside of scheduled class time may be required for this course.)

ESCI 20 Introduction to Biodiversity 5 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5; Environmental Science 19.
Four hours lecture, three hours laboratory (84 hours total per quarter).
Introduction to biodiversity conservation as a branch of the environmental sciences, conservation biology and related scientific fields. Includes survey of species and ecosystem diversity, elements of biological classification; evolutionary trends and the mechanisms of evolution; ecology and the importance and problems of biodiversity conservation today.

ESCI 21 Biodiversity 2 5 Units
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture, three hours laboratory (84 hours total per quarter).
A survey of the California Floristic Province, emphasizing the ways California's biodiversity is sampled and studied. Includes hands-on fieldwork surveying vegetation and animal populations; discussion of societal impacts of biodiversity loss and conservation; and the importance of biodiversity conservation today.
(Off-campus field trips will be required.)

ESCI 30 Conservation Biology 5 Units
(Formerly Biology 30.)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture, three hours laboratory (84 hours total per quarter).
An introduction to conservation biology as a branch of the environmental sciences with particular focus on maintaining genetic, species and ecological diversity of life on Earth. Contemporary bio-conservation issues will be explored and adaptive, community-based conservation techniques applied to develop practical problem-solving techniques and test-taking and study skills to help students successfully understand Child Development courses, text books, class and group discussions, and writing and interview assignments.

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.
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E solving approaches to the biodiversity crisis including habitat fragmentation. In addition cultural, economic and philosophical aspects of biodiversity conservation will be explored. (Off-campus field trips will be required.)

ESCI 50 Introduction to Wildlife Corridor Technician: Connectivity 4 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Explores wildlife corridors (connectivity) practice and technology in the 21st century including the scientific principles of corridor ecology, landscape ecology and ecosystem (adaptive) management. Applies the principles (theory) of wildlife corridor technology to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 54 Wildlife Corridor Technician: Data Analysis 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Three hours lecture (36 hours total per quarter).
Explores the data analysis techniques (including least cost path analysis), protocol and equipment utilized in wildlife corridor technology. Applies the data analysis techniques utilized in the wildlife corridor discipline to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 55 Wildlife Corridor Technician: Corridor Design 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Three hours lecture (36 hours total per quarter).
Examines the process of wildlife corridor (connectivity) design in the 21st century, incorporating the principles and challenges of corridor ecology, ecosystem (adaptive) management and the urban-wildlife interface. Applies the principles of wildlife corridor design to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 56 Wildlife Corridor Technician: Plant Survey Techniques 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Three hours lecture (36 hours total per quarter).
Examines the plant survey techniques and plant community ecology principles utilized in wildlife corridor design, preservation or restoration. Applies these plant survey techniques to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 57 Wildlife Corridor Technician: Wildlife Tracking 2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Six hours laboratory (72 hours total per quarter).
Wildlife tracking field studies lab course exploring wildlife movement and wildlife corridors locally. Applies the principles of wildlife corridor technology to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 58 Wildlife Corridor Technician: Wildlife Tracking and Landscape Linkages for California 2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Six hours laboratory (72 hours total per quarter).
Wildlife tracking and landscape linkages field studies lab course exploring wildlife movement, habitat utilization, data collection and analysis and in the Central Coast Region of California as part of the first large scale statewide landscape connectivity study conducted by the Wildlife Corridor Technician (WCT) Program, Environmental Studies Department, De Anza College, entitled: Safe Passage for Coyote Valley; A Wildlife Linkage for the Highway 101 Corridor, A User’s Guide to Protecting Highway Crossings for Wildlife While Connecting California’s Students with Science and Nature. Applies the wildlife tracking principles and techniques as well as relevant state and federal legislation and policy to an actual statewide corridor case study to assist in the preservation, protection and restoration of native species, ecosystems and landscape connectivity statewide.

ESCI 61 Introduction to Photovoltaic (PV) Technology 3 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Three hours lecture (36 hours total per quarter).
An introduction to the fundamentals of photovoltaic (PV) basics including how solar cells convert sunlight to electricity, solar potential, types of solar systems, system size requirement and design, net metering options, rebate programs, and related topics for your home or business. An emphasis on the benefits of renewable energy technology as well as how to understand and review multiple bids and analyzing the economics of a PV installation. Good introductory course for students considering the North American Board of Certified Energy Practitioners (NABCEP) certification program. (Out-of-class field trips may be required for this course.)

ESCI 63 Photovoltaic (PV) Technology Field Project 2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Environmental Science 61.
Six hours laboratory (72 hours total per quarter).
A photovoltaic (PV) technology field studies course emphasizing hands-on learning of solar angle/orientation and energy use calculation, PV systems design and installation for residential and commercial projects. Good field studies course for students considering the North American Board of Certified Energy Practitioners (NABCEP) certification program. (Out-of-class field trips are required for this course.)

ESCI 77 Special Projects in Environmental Science 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
ESCI 77X 2 Units
ESCI 77Y 3 Units
Prerequisite: Consent of instructor and division dean.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
Individual research in environmental science. Specific projects determined in consultation with the instructor. Outside reading and written report required.

ESCI 82 Central Coast Wildlife Corridors: 1 Unit
Coyote Valley
ESCI 82X 2 Units
ESCI 82Y 3 Units
ESCI 82Z 4 Units
Requisite/Advisory: None.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
An exploration of the Coyote Valley Wildlife Corridor as an integral component of the Central Coast Wildlife Corridor Regional Landscape (CCWCLR). This field studies course will emphasize wildlife field identification techniques, animal tracking and bird survey protocols, field observation and data collection. These field studies will assist in the long-term preservation, protection and restoration of native species and ecosystems of the Central Coast Region.

ESCI 87 Central Coast Wildlife Corridors: 1 Unit
Diablo Range
ESCI 87X 2 Units
ESCI 87Y 3 Units
ESCI 87Z 4 Units
Requisite/Advisory: None.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
An exploration of the Diablo Range Wildlife Corridor as an integral component of the Central Coast Wildlife Corridor Regional Landscape (CCWCLR). This field studies course will emphasize wildlife field identification techniques, animal tracking and bird survey protocols, field observation and data collection. These field studies will assist in the long-term preservation, protection and restoration of native species and ecosystems of the Central Coast Region.

ESCI 88 Central Coast Wildlife Corridors: 1 Unit
Santa Cruz Mountains
ESCI 88X 2 Units
ESCI 88Y 3 Units
ESCI 88Z 4 Units
Requisite/Advisory: None.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
An exploration of the Santa Cruz Mountains Wildlife Corridor as an integral component of the Central Coast Wildlife Corridor Regional Landscape (CCWCLR). This field studies course will emphasize wildlife field identification techniques, animal tracking and bird survey protocols, field observation and data collection. These field studies will assist in the long-term preservation, protection and restoration of native species and ecosystems of the Central Coast Region.

ESCI 90 Santa Clara County Field Studies: 1 Unit
Tule Elk
Requisite/Advisory: None.
Three hours laboratory (12 hours total per quarter).
Field observation of the tule elk (Cervus elaphus nannodes) found in Santa Clara County, California with an emphasis on the history of tule elk reintroduction, habitat utilization, home range characteristics, behaviors and other natural history insights. The underlying social, economic and political issues associated with the near extinction and restoration of this subspecies of North American elk will be discussed. (Off-campus field trips will be required.)

150 All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.

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Environmental Studies

E S 1 Introduction to Environmental Studies 4 Units
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An interdisciplinary study of the use of the earth’s natural resources by human civilizations, past and present, and the role that economics, ethics, law, history, politics, culture and gender inequality have played in resource use and distribution. (One field trip may be required outside of class time.)

E S 2 Humans, the Environment, and Sustainability
(Formerly Environmental Studies 52.)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
A study of human evolution, biology and ecology, including human civilizations, past and present, and the interaction with the environment. Environmental worldviews (ethics), past and present, of the various cultural, ethnic, gender and socioeconomic groups will be explored. (One field trip may be required outside of class time.)

E S 3 Imagination of the Environment
(Formerly Environmental Studies 53.)
(See general education pages for the requirement this course meets.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An introduction to the academic discipline of Environmental Studies through historical and contemporary analysis of nature-based imagery. What those representations indicate about past and present environmental changes will be discussed. Roles of the artist as naturalist, scientist and conservationist will be explored, as well as visual representation by a diverse range of cultural groups. (One field trip outside of class may be required for this course.)

E S 4 Introduction to Environmental Law
(Formerly Environmental Studies 60.)
Advisory: English Writing 1A or English as a Second Language 5.
Four hours lecture (48 hours total per quarter).
An introduction to environmental law and regulation in the U.S. and California, addressing the areas of air quality, water quality, waste management, natural resources management and preservation, energy and land use, along with international environmental agreements (such as the Kyoto Protocol) and environmental equity concerns.

E S 5 Introduction to Environmental Resource Management and Pollution Prevention
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Two hours lecture (24 hours total per quarter).
An introduction to the field of environmental resource management and pollution prevention, surveying the areas of environmental law, policy, and regulation, environmental health, pollution control (treating or capturing pollution/waste at its source prior to release into the environment), pollution prevention (reducing or eliminating pollution/waste at its source through use of the “three Rs”: Reduce-Reuse-Recycle), and efficient/sustainable use of natural resources (air, water, land, etc.). Includes overviews of: 1) U.S. and California environmental laws, regulations, and policy; 2) Environmental health issues, 3) Pollution control technologies, 4) Pollution prevention approaches and techniques (Life Cycle Assessment, Design for the Environment, Product Stewardship, Green Building, Green Chemistry, Energy Management, Water Conservation, etc.) and 4) Environmental resource management tools, including Environmental Management Systems (such as ISO 14001) and Sustainability Management Plans.

E S 6 Introduction to Environmental Health
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Explores the effects that environmental hazards - such as air and water pollution, industrial and hazardous waste, food and water-borne diseases, and pesticides and other toxic chemical-containing products, including consumer products - have on human health. Investigates laws, regulations, standards and policies governing environmental and occupational exposure and the means to reduce human health risks from such exposure through the risk assessment and risk management processes.

E S 7 Introduction to Environmental Studies 4 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Field observation of raptors (bird of prey) found in Santa Clara County, California with an emphasis on the natural history such as habitat utilization, breeding biology, behaviors, identification and migration. Local conservation issues associated with raptors will also be looked at. (Off-campus field trips will be required.)

E S 8 Introduction to Environmental Management Tools: 2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Two hours lecture (24 hours total per quarter).
Examines Environmental Management Tools (applying the lessons of nature to industrial processes, products and systems) and associated sustainable design concepts, principles and tools (Biomimicry, Life Cycle Impact Assessments, Design for the Environment, Design for Recycling/Reuse, Water/Energy/Materials Conservation, Green Building, Green Chemistry). Also includes examination of Product Stewardship (Extended Produces to enhance resource reuse/recycling efforts and prevent pollution. Explores associated job and career opportunities.

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E S 63 Agenda 21: Blueprint for Sustainability 1 Unit
Requisite/Advisory: None.
One hour lecture (12 hours total per quarter).
An overview of Agenda 21, an action plan to implement the principles and agreements of the Rio de Janeiro Summit in 1992, the largest-ever meeting of 179 nations. Examines the seven themes of Agenda 21 to ensure that all people, regardless of the implementation of it regardless of race, ethnicity or socioeconomic status.

E S 64 AB 32 (CA Global Warming Solutions 1 Act of 2006)
Requisite/Advisory: None.
One hour lecture (12 hours total per quarter).
An overview of California’s Global Warming Solutions Act of 2006, AB 32. The course also includes an overview of strategies to implement this act within an organization and a look at the reduction of greenhouse gas emissions (GHG) by three percent per year.

E S 65 Environmental Stewardship 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
One hour lecture (12 hours total per quarter).
Explores the role of environmental stewardship principles, including those of other cultural, ethnic and gender groups, and the use of such practices in establishing a common ground for community-based decision-making.

E S 66 Environmental Leadership 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
One hour lecture (12 hours total per quarter).
Explores the role of environmental leadership in the 21st Century, including development and implementation of leadership skills and models. Apply those leadership skills and models developed to address local environmental case studies.

E S 67 Environmental Team-Building 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
One hour lecture (12 hours total per quarter).
Explores the concept of team-building in the 21st Century, including development and implementation of team-building skills and models. Apply those team-building skills and models developed to address local environmental case studies.

E S 68 Community-Based Coalitions and Stakeholders 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
One hour lecture (12 hours total per quarter).
Explores the concept of environmental community-based coalitions in the 21st Century, including identifying and integrating key stakeholders. Apply the community-based model of collaboration to address local environmental case studies.

E S 69 Energy Reliability and Your Organization 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
An overview of strategies to assist in preparing an energy management action plan for your organization and staff. The strategies include model board policy, administrative guidelines, assembling an energy management action team, assessing the impact of energy policy on society, and an overview of key stakeholders in the energy field.

E S 70 Introduction to Energy Management Technology 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
An overview of the field of Energy Management and its importance in today’s society, including future implications, and discussion of careers and impact on modern culture and society. This module introduces the whole building concept of team-building skills and models developed to address local environmental case studies.

E S 71 The Building Envelope 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Examines Energy Management Technology and the importance and applications of building performance, controls and monitoring using the Kirsch and campus-wide lab setting. This module introduces building performance tools and equipment, energy audit technology, and an overview of the whole building concept and related energy and conservation strategies.

E S 71LX The Building Envelope and Climate Responsive Building Design and Construction Laboratory 1 Unit
Prerequisite: Environmental Studies 71 (may be taken concurrently).
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).

E S 71LY The Building Envelope and Climate Responsive Building Design and Construction Laboratory 2 Units
Prerequisite: Environmental Studies 71 (may be taken concurrently).
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).

E S 71LZ The Building Envelope and Climate Responsive Building Design and Construction Laboratory 3 Units
Prerequisite: Environmental Studies 71 (may be taken concurrently).
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).

E S 72 Heating, Ventilating and Air Conditioning (HVAC) Systems 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
An introduction to HVAC systems, the systems that provide heating, cooling, humidity control, filtration, and comfort control to facilities. Examines various HVAC systems and their interrelationship with other building systems. Students will consider HVAC technologies that can help facilities managers achieve the goals of lowering energy costs, becoming more environmentally friendly, and enhancing indoor air quality.

E S 72LX Heating, Ventilating and Air Conditioning (HVAC) Systems Laboratory 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Examines HVAC systems, the systems that provide heating, cooling, humidity control, filtration, and comfort control to facilities. Examines various HVAC systems and their interrelationship with other building systems using the Kirsch Center for Environmental Studies and campus-wide lab setting. Students will consider HVAC technologies that can help facilities managers achieve the goals of lowering energy costs, becoming more environmentally friendly, and enhancing indoor air quality.

E S 73 Electric Motors and Drives 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Examines the opportunities for lowering energy consumption through energy-efficient motors and motor controls, including an introduction to the technology of high efficiency motors and variable frequency drives. Techniques to increase current carrying capacity, improve voltage to equipment, reduce power losses, and lower electric bills will be discussed.

E S 74 Lighting Distribution Systems 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Provides an introduction to the fundamentals of lighting and energy management lighting techniques. Discusses the different types of lighting and day-lighting applications used in commercial and institutional buildings, while describing the quality and quantity of lighting needed for certain applications, measuring efficiency,
color rendering, ballasts, etc. Lighting design that provides visual comfort at lower energy costs will be emphasized.

(One out-of-class field trip may be required for this course.)

**E S 75 Electric Power Systems** 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
An introduction to electric power systems, focusing on distribution components such as transformers, switch gear, distribution panels, and wiring. Power systems analysis, preventive maintenance, and record keeping techniques will be discussed. Emphasis will be placed on opportunities within a facilities distribution system to save energy, increase equipment life, and reduce unscheduled outages.

(One out-of-class field trip may be required for this course.)

**E S 76 Energy Star Products** 1 Unit
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
One hour lecture (12 hours total per quarter).
An introduction to Energy Star products including high efficiency, high performance commercial, industrial and residential equipment and appliances that reduce energy consumption and save money.

**E S 76A Solar Thermal Systems** 1 Unit
(Formerly Environmental Studies 77.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
One hour lecture (12 hours total per quarter).
An overview of solar thermal systems including water heating technologies which reduce energy use to generate hot water including maintaining equipment and insulation, reducing hot water use and water temperatures, reducing heat losses from the system, and utilizing waste heat sources and renewable energy technologies, including solar.

**E S 77X Special Projects in Environmental Studies** 1 Unit
Prerequisite: Consent of instructor and division dean.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
Individual research in environmental studies. Specific projects determined in consultation with the instructor. Outside reading and written report required.

**E S 77Y Energy Management Systems and Controls** 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Describes the most commonly used controls and energy management systems in commercial and institutional applications. Topics will include complex automatic systems for major energy-consuming equipment, as well as simple controls, including time clocks, occupancy sensors, photocells, and programmable thermostats. Computer-based energy management systems, as well as control systems to reduce peak electrical demand will be discussed.

(One out-of-class field trip may be required for this course.)

**E S 77Z Renewable and Alternative Energy Systems** 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
An introduction to the potential for renewable and alternative energy systems when adding power generation capacity for a site or large facility. Life-cycle cost comparisons between renewable energy systems and conventional power generation and the added potential of reducing peak power demand will be emphasized. Topics include photovoltaic power systems, wind energy systems, and fuel cells.

(One out-of-class field trip may be required for this course.)

**E S 80 California Field Studies** 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).
Field observation of the native plants and animals of aquatic and terrestrial ecosystems of various natural areas worldwide, including tropical regions of the Americas, with an emphasis on endangered, rare, protected and reintroduced species. Social, economic and political issues associated with habitat and species loss as well as the impacts on cultural, ethnic and socioeconomic groups will be explored.

(Out-of-class field trips may be required.)

**E S 85A California Native Plants and Animals** 2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Two hours lecture (24 hours total per quarter).
Environmental education and interpretative methods focusing on the native plants and animals of California with an emphasis on local case studies and endangered species. Interpretive techniques utilized in environmental education will be reviewed. Preparations for lead tours through the Cheeseman Environmental Study Area (ESAs), outdoor lab. Teaching environmental education and interpretive techniques to various ethnic, cultural and socioeconomic groups will be explored.

(Field project required.)

**E S 85B Cheeseman Environmental Study Area Interpretive Training and Other Docent Activities** 2 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture, three hours laboratory (48 hours total per quarter).
Interpretive techniques of environmental education and environmental outreach utilizing the Cheeseman Environmental Study Area outdoor lab and the Kirsch Center for Environmental Studies. Students will refine the techniques required for leading tours and interpreting California native plant and animal communities in the Environmental Study Area, as well as in any other outdoor settings. Students will lead tours through the Cheeseman Environmental Study Area and the Kirsch Center for Environmental Studies. Strategies for teaching environmental education and nature-based learning with various cultural, ethnic and socioeconomic groups will also be explored.

(Out-of-class field trips may be required.)

**E S 86 Global Field Studies** 4 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Field observation of the native plants and animals of aquatic and terrestrial ecosystems of various natural areas worldwide, including tropical regions of the Americas, with an emphasis on endangered, rare, protected and reintroduced species. Social, economic and political issues associated with habitat and species loss as well as the impacts on cultural, ethnic and socioeconomic groups will be explored.

(Field trip required. Note that this field studies class may require a trip abroad.)

**E S 90 Environmental Research and Field Methods** 4 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
Four hours lecture (48 hours total per quarter).
Explores the various methods used to conduct research and field studies on environmental topics. Application of legal policy and field research principles and techniques, including review of local case studies. Preparation of press releases, reports on current environmental issues, persuasive oral advocacy of environmental topics and case law research.

**E S 93 Sustainability Across the Curriculum** 1 Unit
Prerequisite/Advisory: None.
One hour lecture (12 hours total per quarter).
An overview of strategies needed to implement sustainability courses across the curriculum in academic institutions utilizing the seven central themes of Agenda 21. The critique of education and educators in communicating the link between human and planetary health and in building a sustainable society will be examined.

**E S 95 Introduction to Environmental Careers** 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture (12 hours total per quarter).
Learn about saving the planet through environmental careers, including ecosystem management, restoration ecology, corridors ecology, energy management technology, environmental stewardship, environmental education, watershed management, environmental law, pollution prevention and more. Opportunities for internships and employment in business, industry, public agencies, academia and nonprofit agencies will be explored. Students will prepare an academic plan for their two- or four-year degree, certificate or workplace.

**E S 95A Environmental Studies Internship** 1 Unit
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).
A work experience internship seminar. The seminar will prepare student interns for internships in business, industry or government related to the student’s field of study. The internship must occur during the last year of study prior to completion of a degree or certificate program.

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