DANC 25A    Theory and Technique of Salsa Dance I    1 Unit
(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 Physical Education 25A. Students may enroll in either department, but not both, for credit.)
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 25A and Physical Education 25A may be taken up to three times for credit as long as the topics are different each time.)
Introduction to the discipline and creative art of salsa dance. Exposure to basic forms of social dance in a salsa dance context. Developing a working vocabulary of traditional salsa dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.
DANC 27A    Dance Workshop (Student Productions, the De Anza Dancers)    1 Unit
DANC 27B    2 Units
DANC 27C    3 Units
DANC 27D    4 Units
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
Two hours lecture-laboratory for each unit of credit (24 hours total for each unit of credit per quarter).
(Any combination of Dance 27A, 27B, 27C and 27D may be taken up to three times for credit.)
An introduction to the basic techniques of dance production and performance.
DANC 27A    Theory and Technique of Jazz Dance I    1 Unit
(See general education pages for the requirement this course meets.)
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
(Also listed as Physical Education 37A. Students may enroll in either department, but not both, for credit.)
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 37A and 37B, and Physical Education 37A and 37B may be taken up to six times for credit.)
Introduction to the discipline and creative art of jazz dance. Body conditioning, exposure to the history of major international influences, artists, and works. The development of a working vocabulary; and practice of basic techniques.
DANC 37B    Theory and Technique of Jazz Dance II    2 Units
(See general education pages for the requirement this course meets.)
Prerequisite: Dance 37A or Physical Education 37A.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
(Also listed as Physical Education 37B. Students may enroll in either department, but not both, for credit.)
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 37A and 37B, and Physical Education 37A and 37B may be taken up to six times for credit.)
Exploring elements of time, space, shape and motion as related to jazz dance. Body conditioning, exposure to major international influences, artists, and works. The development of a working vocabulary in significant jazz dance styles; and practice of intermediate level techniques.
DANC 38A    Appreciation of Dance    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.
Four hours lecture (48 hours total per quarter).
A study of dance as a cultural phenomenon, form of communication, socialization, recreation, artistic expression, and entertainment, exploring the history, traditions and works of outstanding artists.
DANC 48    Technical Production for Dance and Theatre    2 Units
(Formerly Dance 56.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Theatre 48. Students may enroll in either department, but not both, for credit.)
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 48 and Theatre 48 may be taken up to three times as long as the topics/projects in musical drama, dance concert, etc. are different each time.)
Introduction to the theoretical, technical and craft of dance and theatre production with practical experience in public presentation.
DANC 49A    Topics in Theory and Technique of World Dance    1 Unit
(Formerly Dance 50A.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Physical Education 49A. Students may enroll in either department, but not both, for credit.)
Two hours lecture-laboratory (24 hours total per quarter).
(Any combination of Dance 49A and Physical Education 49A may be taken up to six times as long as the topics in specific dances and cultures are different each time.)
Introduction to the art of world dance. Course will provide exposure to forms of dance from an international perspective. Students will learn to perform the basic skills of classical, traditional, and folk dances from various world cultures, while developing a working vocabulary of traditional dance movements. Students will attempt to gain an understanding and appreciation of the cultural and historical contexts that produced the specific dance forms.
DANC 65B    Theory and Technique of Salsa Dance II    2 Units
(See general education pages for the requirement this course meets.)
Prerequisite: Dance 25A or Physical Education 25A.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Physical Education 65B. Students may enroll in either department, but not both, for credit.)
Four hours lecture-laboratory (48 hours total per quarter).
(Any combination of Dance 65B or Physical Education 65B may be taken up to six times for credit.)
An intermediate/advance discipline and creative art of salsa dance. Exposure to intermediate/advanced forms of social dance in a salsa dance context. Developing a working vocabulary of traditional salsa dance movements and an understanding of the cultural and historical contexts that produced the specific dance styles.
DANC 78L    Special Topics in Dance    1/2 Unit
DANC 78M    1 Unit
DANC 78N    2 Units
DANC 78P    3 Units
DANC 78Q    4 Units
Prerequisite: Enrollment by audition.
Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.
(Also listed as Physical Education 78L-Q. Students may enroll in either department, but not both, for credit.)
Two hours lecture-laboratory for each unit of credit (24 hours total for each unit of credit per quarter).
(Any combination of Dance 78L-Q and Physical Education 78L-Q may be taken up to three times for credit, not to exceed 12 units, as long as the topics are different each time.)
Special topics that incorporate theory and practice within the discipline of dance.

Drama

(See Dance and/or Theatre Arts)

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
ECON 78J  4 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 four 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 41  Class Practices in Middle School Science and Mathematics  2 Units
(Formerly Education 61.)
Prerequisite: Qualifying score on the Math Placement Test within the last calendar year; or Mathematics 114 and a college level science course, both with a grade of C or better; current TB test, finger printing, and background check.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.
(Also listed as Physical Sciences, Mathematics, and Engineering 41. Students may enroll in either department, but not both, for credit.)
One hour lecture, three hours laboratory (48 hours total per quarter).
Pass-No Pass (P-NP) course.
Introduction to the teaching and learning of science and mathematics in middle school classrooms for prospective science and mathematics teachers. Pairs of students are placed in local middle school classrooms to observe, participate and assist a Mentor Teacher in science and mathematics instruction. Students also participate in a weekly seminar on campus and discuss the best means to teach appropriate science and mathematics concepts at the middle school level.

EDUC 46  Mathematics for Elementary Education  5 Units
(See general education pages for the requirements; 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: Child Development 10G and 55.
(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 bilingual child in early childhood programs. Theories and developmental sequence of bilingual language acquisition. Role of teacher and methods for supporting the bilingual child.

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 biography, 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).
Examination of child development and mental health theory. Assessment and screening to identify childhood mental health challenges. Implementation of mental health interventions and strategies. An exploration of how violence impacts the physical and psychological well-being of adults and children.

EDUC 74  Early Childhood Mental Health Seminar and Fieldwork  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 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 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.

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 the instructor and division dean.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
(Any combination of Engineering 77, 77X and 77Y may be taken up to six times, not to exceed 18 units, as long as the projects are different each time.)
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.
Competition 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.
Competition 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 408.864.8717.
ELIT 1  Introduction to Film  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 Film/Television 1. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
An introduction to the international art of cinema through the techniques and procedures of filmmaking, including screenwriting, cinematography, directing, editing, and sound; through the formal properties of film, such as mise-en-scène, structure, and style; through the relationships between film and society, and through the critical analysis of works of film art.
ELIT 4  National Cinemas  4 Units
Advisory: English Writing 1A or English as a Second Language 5.
(Also listed as Film/Television 42. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
(Any combination of English Literature 4 and Film/Television 42 may be taken up to three times for credit as long as the topic matter is different each time.)
Analysis of selected national cinemas in terms of major periods, themes and formal parameters, and in relation both national and international cultural histories. The national cinema studied changes each quarter (see subtitle in the quarterly schedule of classes).
ELIT 5  Film Artists  4 Units
Advisory: English Writing 1A or English as a Second Language 5.
(Also listed as Film/Television 43. Students may enroll in either department, but not both, for credit.)
Four hours lecture (48 hours total per quarter).
(Any combination of English Literature 5 and Film/Television 43 may be taken up to three times for credit as long as the topic matter is different each time.)
Analysis of the works of specific film artists, such as directors, Alfred Hitchcock or Orson Welles; or analysis of the works of artists practicing a specific film craft, such as screenwriting, acting, cinematography or editing. The topic studied changes each quarter (see subtitle in the quarterly schedule of classes).
ELIT 6  Cinema and the African American (An Historical Analysis of African Americans in American Cinema)  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 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.)
Prerequisite: 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).
(May be taken two times for credit as long as the topic differs each time.)
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.
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 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).
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 46A 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 diverse writers such as William Bradford, Anne Bradstreet, Jonathan Edwards, Ben Franklin, Thomas Jefferson, James W. 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 46B 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 concurrent total of instructor or counselor.
One hour lecture for each unit of credit (12 hours total for each unit of credit per quarter).
(Any combination of English Literatures 78X, 78Y, 78Z may be taken up to six times, not to exceed 18 units, as long as the topics are different each time.) Intensive study and analysis of a special topic in literature.

ELIT 97 Special Topics: Shakespeare in Performance
2 Units
Advisory: English Writing 1A or English as a Second Language 5.
One hour lecture, three hours laboratory (48 hours total per quarter).
(May be taken six times for credit, as the topics are different each time.) 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 408.864.5717.

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).
Five hours lecture (60 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. Develops 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
(See general education pages for the requirement this course meets.)
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211); plus co-requisite lab classes in each case; or equivalent placement into English Writing 1A.
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.

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.
EWRT 40 Fiction Writing 4 Units  
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211).  
Advisory: English Writing 30.  
Four hours lecture (48 hours total per quarter).  
Pass-No Pass (P-NP) course.  
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).  
Advisory: English Writing 30.  
Four hours lecture (48 hours total per quarter).  
Pass-No Pass (P-NP) course.  
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 144.)  
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 50 Creative Writing Workshop 4 Units  
Prerequisite: English Writing 211 and Reading 211 (or Language Arts 211).  
Four hours lecture (48 hours total per quarter).  
Further development of creative writing skills through careful analysis, intensive practice, and collaborative critique.

EWRT 61 Introduction to Technical Writing 5 Units  
Prerequisite: English Writing 1A or English as a Second Language 5.  
(Also listed as Business 61 and Technical Writing 61. Students may enroll in only one department for credit.)  
Five hours lecture (60 hours total per quarter).  
Technical writing skills focusing on basic techniques of exposition for the technical field, functional description, process writing, technical vocabulary, correct usage, and accurate editing.

EWRT 62 Survey of Technical Writing 5 Units  
Prerequisite: Business 61 or English Writing 61 or Technical Writing 61 (may be taken concurrently).  
(Also listed as Business 62 and Technical Writing 62. Students may enroll in only one department for credit.)  
Five hours lecture (60 hours total per quarter).  
Technical writing skills focusing on short document formats, production of sections of various technical documents, and incorporation of graphics within text.

EWRT 63 Technical Publications 5 Units  
Prerequisite: Business 61 or English Writing 61 or Technical Writing 61.  
(Also listed as Business 63 and Technical Writing 63. Students may enroll in only one department for credit.)  
Five hours lecture (60 hours total per quarter).  
Technical writing and editing skills applied through individual and group assignments with emphasis on planning, scheduling, and producing longer reports, manuals, and instructions. Development of organizational skills and individual documentation solutions.

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 1 Unit  
Advisory: English Writing 1A or English as a Second Language 5.  
(Also listed as Journalism 65W and 65X. Students may enroll in either department, but not both, for credit.)  
Two hours lecture-laboratory for the one-unit course (24 hours total per quarter); two hours lecture-laboratory and three hours laboratory for the two-unit course (60 hours total per quarter).  
(Any combination of English Writing 65, 65X and Journalism 65W, 65X may be taken up to six times for credit. Submissions vary each quarter, so content is different. Students build upon previous experience and develop higher-level skills.)  
Pass-No Pass (P-NP) course.  
Collaborative evaluation and selection of fiction, poetry, photography, drawings, and other literary and artistic work for literary magazine. Magazine design and production. Additional editorial, production, management, or marketing work for English Writing 65X and Journalism 65X.

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).  
(Any combination of English Writing 77, 77X and 77Y may be taken up to six times for credit, not to exceed 18 units, as long as the projects are different each time.)  
Pass-No Pass (P-NP) course.  
Special reading, writing, or study projects in English as determined in consultation with the instructor.

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 100 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).  
(May be taken two times for credit.)  
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 201 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; 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.

English as a Second Language

ESL 5 Advanced 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 English as a Second Language 272 and 273; or a qualifying score on the English as a Second Language Placement Test.  
Five hours lecture (60 hours total per quarter).  
Close reading and analysis of a variety of personal, societal, academic, and literary texts representing culturally diverse perspectives. Practice of the techniques of expository, response, and argumentative writing based on personal experience, critical reading, and critical thinking. Composition of clear, organized, and well-developed essays with varied rhetorical strategies and for differing audiences.
ESL 6  Critical Reading and Research for Writing  5 Units
(See general education pages for the requirement this course meets.)
(Restricted to students whose native language is not English.)
Prerequisite: English Writing 1A or English as a Second Language 5.
Five hours lecture (60 hours total per quarter).
Development of analytical, integrative and research skills in reading and writing.
Academic writing based largely on analytic and interpretive reading of culturally
diverse literature. Outside research leading to analysis, comparison, and synthesis
in a documented research paper.

ESL 200  High Beginning English as a Second  10 Units
Language
Credit course - Does not apply to De Anza Associate degree.
Prerequisite: Qualifying score on the English as a Second Language 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.
(Restricted to students whose native language is not English.)
Prerequisite: English as a Second Language 244.
One hour lecture-laboratory (12 hours total per quarter).
(May be taken up to three times for credit.)
Pass-No Pass (P-NP) course.
Develop the ability to analyze reading selections through small group discussion.

ESL 211  Listening in Context  1/2 Unit
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 211 was formerly English as a Second Language 111.)
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 251.
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).
Pass-No Pass (P-NP) course.

ESL 213  Vocabulary and Idioms in Context  1/2 Unit
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 213 was formerly English as a Second Language 113.)
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 244.
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).
Pass-No Pass (P-NP) course.

ESL 214  English for Academic Skills  1/2 Unit
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 261, 262 and 263.
One hour lecture-laboratory (12 hours total per quarter).
(May be taken up to three times for credit.)
Pass-No Pass (P-NP) course.

ESL 216  Advanced Reading Practice  1/2 Unit
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.
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).
Pass-No Pass (P-NP) course.

ESL 222  Reading Comprehension  1/2 Unit
(Formerly English as a Second Language 224.)
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 244.
One hour lecture-laboratory (12 hours total per quarter).
(May be taken up to three times for credit.)

ESL 223  Reading and Vocabulary Building  1/2 Unit
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 223 was formerly English as a Second Language 123.)
(Formerly English as a Second Language 116.)

ESL 230  Studies in American Language and Culture  1 Unit
ESL 230W  2 Units
ESL 230X  3 Units
ESL 230Y  4 Units
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 134.)
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 144.)
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 223 was formerly English as a Second Language 123.)

ESL 230  Studies in American Language and Culture  1 Unit

ESL 234  Low Intermediate English as a Second  10 Units
Language
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 134.)
Prerequisite: Qualifying score on the English as a Second Language Placement Test.
Ten hours lecture (120 hours total per quarter).

ESL 244  Intermediate English as a Second  10 Units
Language
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 144.)
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.
Ten hours lecture (120 hours total per quarter).

ESL 251  High Intermediate Listening and Speaking  3 Units
Credit course - Does not apply to De Anza Associate degree.
(Formerly English as a Second Language 251 students may also take English as a Second Language 252 and 253 concurrently.
Three hours lecture (36 hours total per quarter).
English speaking and listening practice in a variety of contexts. Development of
vocabulary appropriate in both formal and informal situations.

All courses are for unit credit and apply to a De Anza associate degree unless otherwise noted.
ESL 252 High Intermediate Reading 3 Units
(Formerly English as a Second Language 152.)
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 244; or a qualifying score on the
English as a Second Language Placement Test.
Co-requisite: English as a Second Language 252 students may also take English
as a Second Language 251 and 253 concurrently.
Three hours lecture (36 hours total per quarter).
Development of high intermediate English reading comprehension and vocabulary
building skills in extended written materials.

ESL 253 High Intermediate 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 244; or a qualifying score on the
English as a Second Language Placement Test.
Co-requisite: English as a Second Language 253 students may also enroll in
English as a Second Language 251 and 252 concurrently.
Four hours lecture (48 hours total per quarter).
Develop skills in using level-specific grammar and sentence structure in writing. Write
organized and well-developed descriptive, narrative, and explanatory paragraphs.

ESL 254 American Language and Culture Through Movies and Television Shows 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 251; or a qualifying score on the
English as a Second Language Placement Test.
Three hours lecture (36 hours total per quarter).
Develop an understanding of American culture, language, common idioms and
slang through viewing and discussing American films and television.

ESL 260 Accent Reduction (for Non-Native Speakers) 3 Units
Credit course - Does not apply to De Anza Associate degree.
(Restricted to students whose native language is not English.)
Advisory: English as a Second Language 251.
Two hours lecture, three hours laboratory (60 hours total per quarter).
Pass-No Pass (P-NP) course.
Emphasis on production of speech that is intelligible and accurate, through study
and practice of English language sound system, stress, linking, reduction, rhythm,
and intonation patterns.

ESL 261 Low Advanced Listening and Speaking 3 Units
(Formerly English as a Second Language 161.)
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 261 students may also enroll in
English as a Second Language 251, 252 and 253 concurrently.
Three hours lecture (36 hours total per quarter).
Speaking and listening: emphasis on comprehension and analysis of information;
expression of students' ideas using a variety of levels of sophistication. Development
of listening, pronunciation and note-taking skills.

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 251 and 253 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 251 and 252 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.
(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; 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
ESL 280X 2 Units
ESL 280Y 3 Units
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.)
Co-requisite: English as a Second Language 280, 280X and 280Y students must also enroll in Child Development 10G or 10H; and Child Development 12, 50, 51,
54, 56 and 64.
Advisory: English as a Second Language 251, 252, and 253; or a qualifying score on the English as a Second Language placement test.
One hour lecture for each unit of credit (12 hours total for each unit of credit per
quarter).
Language support for non-native English speakers taking Child Development
courses, including listening/speaking, reading, writing, and vocabulary building
strategies and test-taking and study skills to help students successfully understand
Child Development courses, textbooks, class and group discussions, and writing
and interview assignments.

Environmental Science

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 sciences 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.  
(Off-campus field trips may be required for this course.)

ESCI 19  Environmental Biology  5 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, 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.  
(Off-campus field trips 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; evolution, the trends and the mechanisms of evolution; ecology and the importance and problems of biodiversity conservation today.

ESCI 30  Conservation Biology  5 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, 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 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.  
(Out-of-class field trips may be required for this course.)

ESCI 52  Wildlife Corridor Technician: Animal Tracking Techniques  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 techniques of animal tracking and observation. Applies the field (practical) techniques used in wildlife corridor technology to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 53  Wildlife Corridor Technician: Data Collection  1 Unit  
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.  
Three hours laboratory (36 hours total per quarter).  
Explores the data collection techniques, protocol and equipment utilized in wildlife corridor technology. Applies the data collection techniques used in the wildlife corridor discipline 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 used 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.  
(Out-of-class field trips are required for this course.)

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 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.  
Six hours laboratory (72 hours total per quarter).  
Advanced tracking field studies lab course exploring wildlife movement and activities along the 37th parallel (Santa Cruz Mountains through the Diablo Range). Applies the principles of wildlife corridor technology to assist in the preservation, protection and restoration of native species and ecosystems.

ESCI 57  Wildlife Corridor Technician: Advanced 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).  
Advanced tracking field studies lab course exploring wildlife movement and activities analysis along the 37th parallel (Santa Cruz Mountains through the Diablo Range) and statewide (C to C: Coyote Valley to Carrizo Plains National Monument). Applies the advanced tracking principles and techniques to a statewide corridor case study (California’s New Model for Corridors, Connectivity, Children & Capital) to assist in the preservation, protection and restoration of native species and ecosystems statewide.

ESCI 58  Wildlife Corridor Technician: Advanced Tracking  2 Units  
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.  
Twelve hours laboratory (144 hours total per quarter).  
Advanced tracking, level 2, field studies lab course exploring wildlife movement, activities and analysis along the 37th parallel (Santa Cruz Mountains through the Diablo Range) and statewide, with particular focus on the Coyote Valley to Carrizo Plains National Monument. Applies the advanced tracking principles and techniques to a statewide corridor case study (California’s New Model for Corridors, Connectivity, Children & Capital) to assist in the preservation, protection and restoration of native species and ecosystems 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 are required for this course.)

ESCI 63  Photovoltaic (PV) Technology Field Project  2 Units  
Advisory: Environmental Sciences 61; 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).  
A photovoltaic (PV) technology field studies course emphasizing hands-on learning of solar cell 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.)
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 86 Central Coast Wildlife Corridors: 1 Unit
Pajaro River Drainage

ESCI 86X 2 Units
ESCI 86Y 3 Units
ESCI 86Z 4 Units

Requisite/Advisory: None.
Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter).
(Any combination of Environmental Sciences 85, 85X, 85Y and 85Z may be taken up to six times, not to exceed 18 units, as long as the topics are different each time.)
An exploration of the Pajaro River drainage Wildlife Corridor as an integral component of the Central Coast Wildlife Corridor Regional Landscape (CCWCRL). 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).
(Any combination of Environmental Sciences 87, 87X, 87Y and 87Z may be taken up to six times, not to exceed 18 units, as long as the topics are different each time.)
An exploration of the Diablo Range Wildlife Corridor as an integral component of the Central Coast Wildlife Corridor Regional Landscape (CCWCRL). 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).
(Any combination of Environmental Sciences 88, 88X, 88Y and 88Z may be taken up to six times, not to exceed 18 units, as long as the topics are different each time.)
An exploration of the Santa Cruz Mountains Wildlife Corridor as an integral component of the Central Coast Wildlife Corridor Regional Landscape (CCWCRL). 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: Tule Elk  1 Unit
Requisite/Advisory: None.
One hour lecture (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.)

ESCI 91  Santa Clara County Field Studies: American Badger  1 Unit
Requisite/Advisory: None.
One hour lecture (12 hours total per quarter).
Field observation of the American badger (taxidea taxus) found in Santa Clara County, California with an emphasis on habitat utilization, breeding biology, behaviors, identification and migration. Local conservation issues associated with badgers will also be looked at. (Off-campus field trips will be required.)

ESCI 92  Santa Clara County Field Studies: Raptors  1 Unit
Requisite/Advisory: None.
One hour lecture (12 hours total per quarter).
Field observation of raptors (bird of prey) found in Santa Clara County, California. Special emphasis will be placed on the natural history of raptors 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.)

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.)  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).
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  Imagery of the Environment
(Formerly Environmental Studies 53.)  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 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 6  Introduction to Environmental Law  4 Units
(Formerly Environmental Studies 80.)
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).
Today's environmental careers demand proficiency in environmental law. Environmental law is a critical subject of study as it is one of the primary ways that we, as a society, create and establish environmental protections. Includes information regarding laws about land use, energy, natural resources, air, water, and hazardous materials and waste. Current events, citizen action and impacts on various cultural, ethnic, and gender groups will be discussed.

E S 50  Introduction to Pollution Prevention, Hazardous Waste, and Environmental Justice  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).
What kind of effects do hazardous wastes have on our health and the health of the environment? How will California, with its increasing population, provide public leadership and innovative solutions regarding environmental justice, green chemistry, and other political, social, and environmental issues? These above topics will be explored with respect to pollution prevention and environmental statutes. Requirements and applications of federal, state and local laws and regulations governing hazardous materials will be discussed. Cultural, ethnic, socioeconomic, and gender groups will be discussed in depth especially with respect to environmental injustice and racism.

E S 55  Ten Steps to Effective Learning in Environmental Studies  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).
Effective learning strategies in environmental studies including energy management technology, conservation biology, environmental education, ecological restoration, watershed management, environmental law, and other related coursework. Effective learning strategies throughout all disciplines will be discussed. Students will prepare a personal 10-step learning strategies plan. Emphasis on strategies to enhance learning for all cultural, ethnic, and gender groups.

E S 56  Environmental Health and Justice  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).
Are you concerned about environmental health and justice? Explores biological, chemical and physical environmental hazards to human health. Investigates laws and regulations concerning environmental exposure and the means to reduce human health risks. Current events, citizen action and impacts on cultural, ethnic, and gender groups will be discussed in general, and as they relate to environmental health and justice.

E S 58  Introduction to Green Building  1 Unit
Advisory: English Writing 211 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 strategies to implement a green building project within your organization. Strategies include green building policy and guidelines including LEED (Leadership in Energy and Environmental Design), assembling a green team, assessing the impact of construction and buildings on society, and an overview of key stakeholders in the construction field.

E S 61A  Environmental Protection and Pollution Prevention with Emphasis on Local and Regional Communities  4 Units
(Formerly Environmental Studies 21.)
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Environmental Studies 6 (may be taken concurrently).
Four hours lecture (48 hours total per quarter).
Explores environmental protection and pollution prevention with emphasis on local and regional communities. The strategies include model green building policies and guidelines including LEED (Leadership in Energy and Environmental Design), assembling a green team, assessing the impact of construction and buildings on society, and an overview of key stakeholders in the construction field.

E S 61B  Environmental Protection and Pollution Prevention with Emphasis on the State and Federal Levels  4 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273; Environmental Studies 6 (may be taken concurrently).
Four hours lecture (48 hours total per quarter).
Examines environmental protection and pollution prevention with emphasis on the state and federal levels. Topics discussed will include agency missions and guiding principles, agency philosophies, and agency contacts. Agencies participating include the California Environmental Protection Agency, the U.S. Department of Agriculture, the U.S. Environmental Protection Agency, the California Department of Fish & Game, and other local boards and commissions. Impacts on cultural, ethnic, and gender groups will be discussed.

E S 62A  Introduction to ISO 14001 and Sustainability Management Plans (SMP)  1 Unit
Advisory: English Writing 211 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 emerging field of voluntary compliance of environmental regulation including sustainability management plans (SMP), in the U.S. and abroad. Assess ISO 14001, a voluntary environmental standard developed by the International Organization for Standardization (ISO), as a strategy to minimize an organization’s environmental impact.
<table>
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<tr>
<th>Course Code</th>
<th>Course Title</th>
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<tbody>
<tr>
<td>E S 62B</td>
<td>ISO 14001: Environmental Management Systems (EMS) and Sustainability Management Plans (SMP)</td>
</tr>
<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>One hour lecture (12 hours total per quarter). The next step in ISO 14001 implementation is the development of an Environmental Management System (EMS) and Sustainability Management Plans (SMP). Explore a step-by-step approach, using a consensus-based model, to develop an ISO 14001 EMS and SMP.</td>
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<tr>
<td>E S 62C</td>
<td>ISO 14001: Integration of an Environmental Management System (EMS) and Sustainability Management Plan (SMP)</td>
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<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>One hour lecture (12 hours total per quarter). Explores strategies and principles in the adoption, implementation and integration of an ISO 14001 Environmental Management System (EMS) and Sustainability Management Plan (SMP) for an organization including both internal and external stakeholders in environmental management.</td>
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<tr>
<td>E S 62D</td>
<td>ISO 14001: Voluntary Audit</td>
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<tr>
<td>One hour lecture (12 hours total per quarter). Explores strategies and procedures utilized in the process of voluntary audits of an ISO 14001 Environmental Management System (EMS)and a Sustainability Management Plan (SMP) by an organization.</td>
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<tr>
<td>E S 63</td>
<td>Agenda 21: Blueprint for Sustainability</td>
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<tr>
<td>Requisite/Advisory: None.</td>
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<tr>
<td>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 central themes of Agenda 21 to ensure that all people benefit by the implementation of it regardless of race, ethnicity or socioeconomic status.</td>
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<tr>
<td>E S 64</td>
<td>AB 32 (CA Global Warming Solutions Act of 2006)</td>
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<tr>
<td>Requisite/Advisory: None. 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 (GHQ) by three percent per year.</td>
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<tr>
<td>E S 65</td>
<td>Environmental Stewardship</td>
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<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>One hour lecture (12 hours total per quarter). Explores the role of environmental citizenship including personal responsibility and participation in local environmental case studies along the 37th parallel. Develop an understanding of environmental stewardship principles, including those of other cultural, ethnic and gender groups, and the use of such practices in establishing common ground for community-based decision-making.</td>
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<tr>
<td>E S 66</td>
<td>Environmental Leadership</td>
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<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>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 these leadership skills and models developed to address local environmental case studies.</td>
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<tr>
<td>E S 67</td>
<td>Environmental Team-Building</td>
</tr>
<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>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.</td>
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<tr>
<td>E S 68</td>
<td>Community-Based Coalitions and Stakeholders</td>
</tr>
<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>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.</td>
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<tr>
<td>E S 69</td>
<td>Energy Reliability and Your Organization</td>
</tr>
<tr>
<td>Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.</td>
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<tr>
<td>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. (One out-of-class field trip may be required for this course.)</td>
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<tr>
<td>E S 70</td>
<td>Introduction to Energy Management Technology</td>
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<tr>
<td>Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.</td>
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<tr>
<td>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 and related energy and conservation issues including the building envelope, HVAC systems, lighting, energy management and controls and renewable energy technologies. (One out-of-class field trip may be required for this course.)</td>
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<tr>
<td>E S 70LX</td>
<td>Energy Management Technology and Principles of Building Performance Laboratory</td>
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<tr>
<td>E S 70LY</td>
<td>Energy Management Technology</td>
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<tr>
<td>E S 70LZ</td>
<td>Energy Management Technology</td>
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<tr>
<td>Prerequisite: Environmental Studies 70 (may be taken concurrently).</td>
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<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter). Examines Energy Management Technology and the importance and applications of building performance, controls and monitoring using the Kirsch and campus-wide lab settings. 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. (Out-of-class field trips will be required for this course.)</td>
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<tr>
<td>E S 71</td>
<td>The Building Envelope</td>
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<td>Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.</td>
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<tr>
<td>One hour lecture (12 hours total per quarter). An introduction to the building shell as the primary physical component of any facility which controls energy flow between the interior and exterior of the building. The goal is to develop a qualitative and analytical understanding of the thermal performance of major building envelope components. Topics include walls, doors, glazing (windows), roofing and building skin as well as climatic responsive building design. (One out-of-class field trip may be required for this course.)</td>
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<tr>
<td>E S 71LX</td>
<td>The Building Envelope and Climate Responsive Building Design and Construction Laboratory</td>
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<tr>
<td>E S 71LY</td>
<td>The Building Envelope and Climate Responsive Building Design</td>
</tr>
<tr>
<td>E S 71LZ</td>
<td>The Building Envelope and Climate Responsive Building Design</td>
</tr>
<tr>
<td>Prerequisite: Environmental Studies 71 (may be taken concurrently).</td>
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<tr>
<td>Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.</td>
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<tr>
<td>Three hours laboratory for each unit of credit (36 hours total for each unit of credit per quarter). Examines the building shell as the primary physical component of any facility which controls energy flow between the interior and exterior of the building using the Kirsch and campus-wide lab setting. The goal is to experience a hands-on understanding of the thermal performance of major building envelope components. Topics include walls, doors, glazing (windows), roofing and building skin as well as climatic responsive building design and construction. (Out-of-class field trips will be required for this course.)</td>
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<tr>
<td>E S 72</td>
<td>Heating, Ventilating and Air Conditioning Systems</td>
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<tr>
<td>Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or English as a Second Language 272 and 273.</td>
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<tr>
<td>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. Examine 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. (One out-of-class field trip may be required for this course.)</td>
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</table>
E S 72LX  Heating, Ventilating and Air Conditioning (HVAC Systems Laboratory)  1 Unit
E S 72LY  2 Units
E S 72LZ  3 Units
Prerequisite: Environmental Studies 72 (may be taken concurrently).
Advisory: Environmental 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).
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. (Out-of-class field trips will be required for this class.)

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

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 facility’s 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  (Formerly Environmental Studies 77)  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 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
E S 77Y  2 Units
E S 77Z  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).
(Any combination of Environmental Studies 77X, 77Y and 77Z may be taken up to six times, not to exceed 18 units, as long as the projects are different each term.)
Individual research in environmental studies. Specific projects determined on consultation with the instructor. Outside reading and written report required.

E S 78  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).
Examines 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 78LX  Energy Management Systems and Controls Laboratory  1 Unit
E S 78LY  2 Units
E S 78LZ  3 Units
Prerequisite: Environmental Studies 78 (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).
Examines the controls and energy management systems in commercial, residential 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. Students will interact with computer-based energy management systems, as well as control systems to reduce peak electrical demand both at the Kirsch Center for Environmental Studies as well in the campus-wide lab setting. (Out-of-class field trips will be required for this course.)

E S 79  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 79LX  Renewable and Alternative Energy Systems Laboratory  1 Unit
E S 79LY  2 Units
E S 79LZ  3 Units
Prerequisite: Environmental Studies 79 (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).
Examines renewable and alternative energy systems for residential, commercial and other large-scale applications. Life-cycle cost comparisons between renewable energy systems (including aspects of passive solar design) and conventional power generation and the added potential of reducing peak power demand will be emphasized. Students will explore the photovoltaic power systems, wind energy systems, solar thermal systems and fuel cells either located at the Kirsch Center Environmental Studies, campus-wide lab setting or other off-campus sites. (Out-of-class field trips will be required for this class.)

E S 80  California Field Studies  1 Unit
E S 80X  2 Units
E S 80Y  3 Units
E S 80Z  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 for each unit of credit (12 hours total for each unit of credit per quarter).
Field observation of California’s native plants and animals in aquatic and terrestrial ecosystems, with an emphasis on endangered, rare, protected and reintroduced species. The underlying social, economic and political issues associated with habitat and species loss will be discussed, as well as impacts on various cultural, ethnic and socioeconomic groups. (Off-campus 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 interpretive 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.
Prepares students to lead tours of the Cheeseman Environmental Study Area's
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  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).
Interpretative 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.
(Of-campus field trips are required for this course.)

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
methods, 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 91X  Environmental Education and Nature Based Learning  2 Units
(Formerly Environmental Studies 100X and 100Z respectively)
Credit course - Does not apply to De Anza Associate degree.
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
Two hours lecture for the two unit course (24 hours total per quarter); four hours
lecture for the four unit course (48 hours total per quarter).
Environmental education for educators emphasizing environmental and ecological
concepts, nature-based learning and other curricula, interpretive techniques,
development of classroom lesson plans, a review of field trip sites and other
resources available to educators. The Cheeseman Environmental Studies Area and
local field trip sites will be explored. Teaching environmental curricula to various
ultural, ethnic and socioeconomic groups will be discussed.
(Local field trips may be required.)

E S 93  Sustainability Across the Curriculum  1 Unit
Requisite/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 critical role 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 not-for-profit 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
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 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.

E S 96  Environmental Stewardship of the Earth's Natural Resources for Educators  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 for the two unit course (24 hours total per quarter); four hours
lecture for the four unit course (48 hours total per quarter).
Explores environmental stewardship principles and concepts as an essential
component of education in the 21st Century. Explores stewardship of the Earth’s
natural resources at the local, state, national and international levels including policy,
mission statements and guiding principles of resource agencies, special districts,
academic institutions, non-profits, citizen groups and others. Assesses the value
to students, our communities and our environment of integrating stewardship of
the Earth's natural resources into the standard-based curriculum for K-12 and
community college core curriculum including an emphasis on all cultural, ethnic
and socioeconomic groups.

E S 96Z  Environmental Stewardship of the Earth's Natural Resources for Educators  4 Units
Advisory: English Writing 211 and Reading 211 (or Language Arts 211), or
English as a Second Language 272 and 273.
Two hours lecture for the two unit course (24 hours total per quarter); four hours
lecture for the four unit course (48 hours total per quarter).
Explores environmental stewardship principles and concepts integrated into a
teaching and learning model as an essential component of education in the 21st
Century. Explores the role of leadership training in protection of the Earth’s natural
resources and the value of the institutionalization of leadership guidelines into
mission statements, guiding principles and policies of resource agencies, special
districts, academic institutions, non-profits and citizen groups. Assesses the value
to students, our communities and our environment of integrating environmental
leadership into the standard-based curriculum for K-12 and the community college
core curriculum including an emphasis on all cultural, ethnic and socioeconomic
groups.

E S 96B  Environmental Education for Educators  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 for the four unit course (48 hours total per quarter).
Explores the various methods of teaching environmental education and
interpretive techniques utilized in environmental education will be reviewed.
(Formerly Environmental Studies 100X and 100Z respectively.)

E S 96C  Environmental Education for Educators  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 for the six unit course (72 hours total per quarter).
Explores the various methods of teaching environmental education and
interpretive techniques utilized in environmental education will be reviewed.
(Formerly Environmental Studies 100X and 100Z respectively.)