

# 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, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area, one field trip may be required outside of class time.*

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 inequity have played in resource use and distribution.

## **E S 2 Humans, the Environment, and Sustainability 4 Units**

(Formerly Environmental Studies 52.)

(See general education pages for the requirement this course meets.)

*Advisory: English Writing 1A or English as a Second Language 5.*

*Four hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One field trip may be required outside of class time.)*

A study of human evolution, biology, and ecology, including human civilizations, past and present, and the interaction with the environment. Environmental world views (ethics), past and present, of the various cultural, ethnic, gender and socioeconomic groups will be explored.

## **E S 3 Imagery of the Environment 4 Units**

(Formerly Environmental Studies 53.)

(See general education pages for the requirement this course meets.)

*Advisory: English Writing 1A or English as a Second Language 5.*

*Four hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One field trip outside of class may be required for this course.)*

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 a naturalist, scientist and conservationist will be explored, as well as visual representation by a diverse range of cultural groups.

## **E S 50 Introduction to Pollution Prevention, Hazardous Waste, and Environmental Justice 4 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture.*

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 relating to 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.*

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 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture.*

Are you concerned about your health as well as the subject of 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 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.*

*One hour lecture.*

An overview of strategies to implement a green building project within your organization. The strategies include model 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 60 Introduction to Environmental Law 4 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*

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 61A Environmental Protection and Pollution Prevention with Emphasis on Local and Regional Communities 4 Units**

*Advisory: Environmental Studies 60 (may be taken concurrently); English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*

Explores environmental protection and pollution prevention with emphasis on local and regional communities. Topics discussed will include agency missions and guiding principles, agency philosophies, and agency contacts. Agencies participating include Cal/OSHA, County toxics enforcement, EPA, Bay Area Air Quality Management District. Environmental impacts on cultural, ethnic, and gender groups will be discussed.

## **E S 61B Environmental Protection and Pollution Prevention with Emphasis on the State and Federal Levels 4 Units**

*Advisory: Environmental Studies 1 and 60 (Environmental Studies 60 may be taken concurrently); English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*

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. For each of the following: California Department of Fish & Game, California Integrated Waste Management Board, California Energy Commission, California Department of Forestry, California Board of Mining and Reclamation, California Environmental Protection Agency, the U.S. Department of Agriculture, the U.S. Department of the Interior, U.S. Fish and Wildlife Service and local boards and commissions. Impacts on cultural, ethnic, and gender groups will be discussed.

## **E S 62A Introduction to ISO 14001 1 Unit**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One-hour lecture.*

Explore the emerging field of voluntary compliance of environmental regulation 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.

## **E S 62B ISO 14001: Environmental Management Systems (EMS) 1 Unit**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One-hour lecture.*

The next step in ISO 14001 implementation is the development of an Environmental Management System (EMS). Explore a step-by-step approach, using a consensus-based model, to develop an ISO 14001 EMS plan.

## **E S 62C ISO 14001: Integration of an EMS Plan 1 Unit**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One-hour lecture.*

Explore strategies and principles in the adoption, implementation and integration of an ISO 14001 EMS plan for an organization including both internal and external stakeholders' environmental management.

## **E S 62D ISO 14001: Voluntary Audit 1 Unit**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One-hour lecture.*

Explore strategies and procedures utilized in the process of voluntary audits of an ISO 14001 Environmental Management System (EMS) plan by an organization.

**E S 65 Environmental Stewardship 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*  
 Explore 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.

**E S 66 Environmental Leadership 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*  
 Explore the role of environmental leadership in the 21st century, including development and implementation of leadership skills and models. Apply those leadership skills and models developed to address local environmental case studies.

**E S 67 Environmental Team-Building 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*  
 Explore the concept of team-building in the 21st century, including development and implementation of team-building skills and models. Apply those team-building skills and models developed to address local environmental case studies.

**E S 68 Community-Based Coalitions and Stakeholders 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*  
 Explore the concept of environmental community-based coalitions in the 21st century, including identifying and integrating key stakeholders. Apply the community-based model of collaboration to address local environmental case studies.

**E S 69 Energy Reliability and Your Organization 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 An overview of strategies to assist in preparing an energy management action plan for your organization and staff. The strategies include model board policy, administrative guidelines, assembling an energy management action team, assessing the impact of energy policy on society, and an overview of key stakeholders in the energy field.

**E S 70 Introduction to Energy Management Technology 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 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.

**E S 71 The Building Envelope 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 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.

**E S 72 Heating, Ventilating and Air Conditioning (HVAC) Systems 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 An introduction to HVAC systems, the systems that provide heating, cooling, humidity control, filtration, and comfort control to facilities. Examines various HVAC systems and their interrelationship with other building systems. Students will consider HVAC technologies that can help facilities managers achieve the goals of lowering energy costs, becoming more environmentally friendly, and enhancing indoor air quality.

**E S 73 Electric Motors and Drives 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 Examines the opportunities for lowering energy consumption through energy-efficient motors and motor controls, including an introduction to the technology of high efficiency motors and variable frequency drives. Techniques to increase current carrying capacity, improve voltage to equipment, reduce power losses, and lower electric bills will be discussed.

**E S 74 Lighting Distribution Systems 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 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.

**E S 75 Electric Power Systems 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 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.

**E S 76 Energy Star Products 1 Unit**  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*  
 An introduction to Energy Star products including high efficiency, high performance commercial, industrial and residential equipment and appliances that reduce energy consumption and save money.

**E S 76A Solar Thermal Systems 1 Unit**  
*(Formerly Environmental Studies 77.)*  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture.*  
 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 temperature, 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.*  
*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*Three hours laboratory for each unit of credit.*  
*(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 topics/projects are different each time.)*  
 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 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*  
*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*  
 Describes the most commonly used controls and energy management systems in commercial and institutional applications. Topics will include complex automatic systems for major energy-consuming equipment, as well as simple controls, including time clocks, occupancy sensors, photocells, and programmable thermostats. Computer-based energy management systems, as well as control systems to reduce peak electrical demand will be discussed.

**E S 79 Renewable and Alternative Energy Systems 1 Unit**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One hour lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (One out-of-class field trip may be required for this course.)*

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.

**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 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One hour lecture for each unit of credit, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*

*(Off-campus field trips may be required.)*

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.

**E S 85A California Native Plants and Animals 2 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Two hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area. (Field project required.)*

Environmental education and interpretative methods focusing on the native plants and animals of California with an emphasis on local case studies and endangered species. Interpretive techniques utilized in environmental education will be reviewed. 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.

**E S 85B Cheeseman Environmental Study Area Interpretive Training and Other Docent Activities 2 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One hour lecture, three hours laboratory, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*

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 socio-economic groups will also be explored. Off-campus field trips are required for this course.

**E S 86 Global Field Studies 4 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture. (Field trip required.)*

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. Note that this field studies class may require a trip abroad.

**E S 90 Environmental Research and Field Methods 4 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*Four hours lecture, one additional hour to be arranged in the Kirsch Center Resource Center or the Cheeseman Environmental Study Area.*

Explores the various methods used to conduct research and field studies on environmental topics. Application of legal policy and field research principles and techniques, including review of local case studies. Preparation of press releases, reports on current environmental issues, persuasive oral advocacy of environmental topics and case law research.

**E S 95 Introduction to Environmental Careers 1 Unit**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One hour lecture.*

Learn about saving the planet through environmental careers, including ecosystem management, restoration ecology, corridors ecology, energy management technology, environmental stewardship, environmental education, watershed management, environmental law, pollution prevention and more. Opportunities for internships and employment in business, industry, public agencies, academia and nonprofit agencies will be explored. Students will prepare an academic plan for their two- or four-year degree, certificate or workplace.

**E S 95A Environmental Studies Internship 1 Unit****E S 95B 2 Units****E S 95C 3 Units****E S 95D 4 Units**

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One hour lecture for each unit of credit.*

A work experience internship seminar that may be taken concurrently with Cooperative Education 50. 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 100X Environmental Education 2 Units****E S 100Z 4 Units**

*(Environmental Studies 100X was formerly Environmental Studies 100.)*

*Credit course - Does not apply to De Anza Associate degree.*

*Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.*

*One hour lecture for each unit of credit (field trips may be required).*

Environmental education for K-12 educators emphasizing environmental and ecological concepts, Project Learning Tree, Project WET and Project WILD K-12 environmental curricula, interpretative techniques, development of classroom lesson plans and a review of field trip sites and other resources available to teachers. This course will utilize the Environmental Studies Area and other field trip sites. Teaching environmental curricula to various cultural, ethnic, and gender groups will be discussed.

## Film and Television Production

**F/TV 1 Introduction to Film 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 English Literature 1. Student may enroll in either department, but not both, for credit.)*

*Four hours lecture.*

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-scene, structure, and style; through the relationships between film and society, and through the critical analysis of works of film art.

**F/TV 2A History of Cinema (1895-1950) 4 Units****F/TV 2AW 4 1/2 Units**

*(See general education pages for the requirement this course meets.)*

*Advisory: English Writing 1A or English as a Second Language 5.*

*(Student may enroll in either Film/Television 2A or Film/Television 2AW, but not both, for credit.)*

*Four hours lecture and one-half hour additional lecture for each one-half unit, as an additional one-half hour lecture per week or as two additional three hour lecture meetings per quarter.*

A survey of the international development of the motion picture to 1950 as a distinct form of artistic expression, through classic films, notable artists, and key events; an investigation of the aesthetic, technological, economic, and social factors that contributed to the evolution of film; an examination of the value systems reflected in and shaped by these works from diverse cultures. Film/Television 2AW will cover expanded topics in historiography, such as problems and approaches to historical film research and analysis.

**F/TV 2B History of Cinema (1950-Present) 4 Units****F/TV 2BW 4 1/2 Units**

*(See general education pages for the requirement this course meets.)*

*Advisory: English Writing 1A or English as a Second Language 5.*

*(Student may enroll in either Film/Television 2B or Film/Television 2BW, but not both, for credit.)*

*Four hours lecture and one-half hour of additional lecture for each one-half unit, as an additional one-half hour lecture per week or as two additional three hour lecture meetings per quarter.*

A survey of the international development of the motion picture since 1950 as a distinct form of artistic expression, through classic films, notable artists, and key events; an investigation of the aesthetic, technological, economic, and social factors that contributed to the evolution of film; an examination of the value systems reflected in and shaped by these works from diverse cultures. Film/Television 2BW will cover expanded topics in historiography, such as problems and approaches to historical film research and analysis.

**F/TV 10 Introduction to Electronic Media 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 Humanities 17. Student may enroll in either department, but not both, for credit.)  
 Four hours lecture, one additional hour to be arranged.  
 A survey course of the history, aesthetics, technology and social impacts of electronic media, including film, broadcasting and the Internet. Explores the role of government, advertising, audiences, and emerging technologies, their futures and impacts on global societies.

**F/TV 20 Basic Digital Film/Video Production 4 Units**  
 (Formerly Film/Television 51A.)  
 Corequisite: Film/Television 20 students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.  
 Three hours lecture, three hours laboratory.  
 Digital video production, film-style production techniques including mini-DV and HDV formats: camera operation and procedures, basic principles and techniques of sound and scriptwriting; and film and nonlinear editing.

**F/TV 22 16mm Film Production I 4 Units**  
 (Formerly Film/Television 52A.)  
 Prerequisite: Film/Television 20.  
 Corequisite: Film/Television 22 students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 Logistics, scriptwriting, sound recording, film and sound editing. Methods by which visual and aural elements of a motion picture may be organized. The study and analysis of exemplary motion pictures as well as of the student's own work.

**F/TV 41 Film Genres 4 Units**  
 Advisory: English Writing 1A or English as a Second Language 5.  
 (Also listed as English Literature 3. Student may enroll in either department, but not both, for credit.)  
 Four hours lecture.  
 (Any combination of Film/Television 41 and English Literature 3 may be taken up to three times for credit as long as the topic matter is different each time.)  
 Analysis of specific film genres such as action-adventure, comedy, film noir, gangster, horror, musical, science fiction, thriller, war film or western within global, historical, social, cultural, industrial and aesthetic contexts. The genre studied changes each quarter (see subtitle in quarterly class schedule).

**F/TV 42 National Cinemas 4 Units**  
 Advisory: English Writing 1A or English as a Second Language 5.  
 (Also listed as English Literature 4. Student may enroll in either department, but not both, for credit.)  
 Four hours lecture.  
 (Any combination of Film/Television 42 and English Literature 4 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 to both national and international cultural histories. The national cinema studied changes each quarter (see subtitle in quarterly class schedule).

**F/TV 43 Film Artists 4 Units**  
 Advisory: English Writing 1A or English as a Second Language 5.  
 (Also listed as English Literature 5. Student may enroll in either department, but not both, for credit.)  
 Four hours lecture.  
 (Any combination of Film/Television 43 and English Literature 5 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 quarterly class schedule).

**F/TV 45 History of Experimental Film/Video 4 Units**  
 (Formerly Film/Television 78.)  
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.  
 Four hours lecture.  
 History and development of experimental film/video; origins in European experimental cinema, American underground film, avant-garde painting, sculpture, music and theater. Evolution of experimental video and electronic developments.

**F/TV 48 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 English Literature 6. Student may enroll in only one department, for credit.)  
 Four hours lecture, one additional hour to be arranged.

A survey of the image and role of the American film industry in the United States. Particular attention will be given to the development of images of racial stereotypes, those works attempting an historical portrayal of the African American experience and the roles played by key African Americans in the evolution of film as an art and North American feature films as an industry.

**F/TV 50 Introduction to Film/ Television Directing 4 Units**  
 Prerequisite: Film/Television 20.  
 Corequisite: Film/Television 50 students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 (May be taken twice for credit.)  
 Development and execution of short, single-camera-style projects focusing on the skills of directing and editing.

**F/TV 51A Intermediate Digital Film and Video Production 4 Units**  
 (Formerly Film/Television 55B.)  
 Prerequisite: Film/Television 20 or 55A.  
 Corequisite: Film/Television 51A students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 Principles of digital video in the preproduction and production of a short project using camcorders, lighting and sound equipment and post production digital editing.

**F/TV 52A 16mm Film Production II 4 Units**  
 (Formerly Film/Television 52B.)  
 Prerequisite: Film/Television 22.  
 Corequisite: Film/Television 52A students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 Advanced sound film editing, laboratory procedures, interior and exterior lighting techniques, color cinematography. Emphasis on individual student projects.

**F/TV 52B 16mm Film Production III 4 Units**  
 (Formerly Film/Television 52C.)  
 Prerequisite: Film/Television 22 and 52A.  
 Corequisite: Film/Television 52B students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 (May be taken twice for credit as long as the topics are different each time.)  
 Advanced production and post-production techniques, including sync-sound production and editing, music editing, preparing for the sound mix. Emphasis on individual projects.

**F/TV 53 Non-linear Editing 4 Units**  
 Prerequisite: Film/Television 20.  
 Corequisite: Film/Television 53 students must also enroll in Film/Television 54, 54X, or 54Y.  
 Three hours lecture, three hours laboratory.  
 Concepts and techniques of non-linear digital film and video editing, including organization of the editing process, working the timeline and audio editing, with emphasis on the principles and aesthetics of film and video editing.

**F/TV 54 Film/Television Production Laboratory 1/2 Unit**  
**F/TV 54X 1 Unit**  
**F/TV 54Y 2 Units**  
**F/TV 54Z 3 Units**  
 Corequisite: Film/Television 54 students must also enroll in a Film/Television production course.  
 Three hours laboratory for each unit of credit.  
 (Any combination of Film/Television 54, 54X, 54Y, and 54Z may be taken up to six times, not to exceed 18 units for the family of courses.)  
 Supervised use of film and television laboratory equipment and facilities to fulfill assigned projects in other film and television production courses.

**F/TV 55A Video Studio Production 4 Units**  
 Advisory: English Writing 1A or English as a Second Language 5.  
 Three hours lecture, three hours laboratory.  
 An introduction to multi-camera television studio production, the basic procedures and techniques, with emphasis on camera, audio, graphics, scripting, directing and producing.

**F/TV 56 Experimental Film/Video Workshop 4 Units**  
 Prerequisite: Film/Television 20 or consent of instructor.  
 Corequisite: Film/Television 54, 54X, 54Y or 54Z.  
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.  
 Three hours lecture, three hours laboratory.  
 (Repeatable six times, not to exceed 18 units.)  
 Concepts, principles and techniques related to the production of an experimental film or video. Examination of the historical roots of experimental film and video. Emphasis on experimentation in the production of a film or video work.

**F/TV 57A Nonfiction Workshop I: The Documentary 4 Units**  
 (Formerly Film/Television 57.)  
*Prerequisite:* Film/Television 20.  
*Corequisite:* Film/Television 57A students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 (May be taken twice for credit.)  
 Nonfiction concepts, principles and techniques as related to the production of a documentary video. Examination of the historical roots in nonfiction film and television. Emphasis on extensive production work in documentary programs.

**F/TV 57B Nonfiction Workshop II: The Documentary 4 Units**  
*Prerequisite:* Film/Television 57A.  
*Corequisite:* Film/Television 57B students must also enroll in Film/Television 54, 54X, 54Y, or 54Z.  
 Three hours lecture, three hours laboratory.  
 (May be taken twice for credit.)  
 Advanced techniques in nonfiction film and television, including cinematography, sound, lighting, post-production editing, and directing. Analysis of the modern film and television documentary. Emphasis on production of a documentary video.

**F/TV 58R Film/Television Production Workshop 1/2 Unit**  
**F/TV 58S 1 Unit**  
**F/TV 58T 2 Units**  
**F/TV 58U 3 Units**  
**F/TV 58V 4 Units**  
**F/TV 58W 5 Units**  
**F/TV 58X 6 Units**  
**F/TV 58Y 7 Units**  
**F/TV 58Z 8 Units**  
*Prerequisite:* Film/Television 20.  
 Two hours lecture-laboratory for each unit of credit.  
 (Any combination of Film/Television 58R-Z may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)  
 A workshop in film or video production in which the student works independently or with a crew to produce a film or video to refine skills in cameras, lighting, directing, post-production, and other related skills. The number of units is dependent on the production.

**F/TV 59 Role of the Media Producer 4 Units**  
*Advisory:* Film/Television 20 or 55A; English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173; Mathematics 200 or 210.  
 Four hours lecture.  
 Roles and responsibilities of the media producer. Skills and knowledge required in developing a production proposal; including development, audience analysis, location scouting, production schedule, and budgeting.

**F/TV 60A Scriptwriting for Film and Video I 4 Units**  
*Advisory:* English Writing 1A or English as a Second Language 5.  
 Four hours lecture.  
 Introduction to scriptwriting for film and video; the role of the script in media production; format and structure in the script; the basic skills of scriptwriting for fiction and nonfiction.

**F/TV 60B Scriptwriting for Film and Video II 4 Units**  
*Prerequisite:* Film/Television 60A.  
*Advisory:* English Writing 1A or English as a Second Language 5.  
 Four hours lecture.  
 Intermediate course in scriptwriting for fiction and nonfiction film and video projects; examination of structure and characterization in dramatic narrative; consideration of approach and structure in nonfiction; emphasis on development and revision of script projects.

**F/TV 60C Scriptwriting for Film and Video III 4 Units**  
*Prerequisite:* Film/Television 60B.  
*Advisory:* English Writing 1A or English as a Second Language 5.  
 Four hours lecture, one additional hour to be arranged.  
 Advanced course in scriptwriting for fiction and non-fiction film and video projects; examination of classical and experimental structures in fiction and non-fiction; further practice in the development and revision of script projects.

**F/TV 61 TV Scriptwriting for Training and Communications 4 Units**  
*Prerequisite:* Film/Television 60A.  
*Advisory:* English Writing 1A or English as a Second Language 5.  
 Four hours lecture, one additional hour to be arranged.  
 Scriptwriting for business and institutional film and video; structure, format, and elements of programs for information, training, marketing, and corporate communication.

**F/TV 62 Lighting for Television and Film 4 Units**  
*Advisory:* English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173; Mathematics 101 or 112.  
 Three hours lecture, three hours laboratory.  
 Introduction to the basic principles of studio and location lighting for film, television,

animated, and com posited production. Focus on evaluation of the aesthetic styles and techniques of media lighting in professional production. An analysis and application of basic electricity, lighting instruments, dimming equipment, light color, media, and gaffer equipment. Practical experience in film and television productions.

**F/TV 63A Studio and Remote Audio Production 4 Units**  
*Advisory:* English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173; Mathematics 101 or 112.  
 Three hours lecture, three hours laboratory.

Study of the art and techniques of radio, television, film and media audio recording. Emphasis on preproduction and production in studio and on location. Examines the aesthetics of design and sound mixing, the technologies of analog and digital audio, and manipulation of sound in the aural and recorded environment. Practical experience in media production.

**F/TV 65 Current Practices in the Film/Video Profession 4 Units**  
*Advisory:* English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.  
 Four hours lecture.

Current creative, technical, economic, and employment conditions in film and video as seen by working professionals.

**F/TV 66A Basic Techniques of Animation: 3D Media 3 Units**  
 (Formerly Film/Television 66.)

Two hours lecture, two hours lecture-laboratory.

An exploration of the techniques of three-dimensional stop-motion and non-cel animation, as applied to a variety of art media (puppet, clay, pixillation, shadow puppets and other under-camera art media). Principles of movement and timing, lighting and cinematography, and multiplane dimensionality, with application to both computer and traditional drawn animation.

**F/TV 67G Drawing for Animation: Human Figure 3 Units**  
*Prerequisite:* Film/Television 69 (may be taken concurrently).

Two hours lecture, three hours laboratory.

Life drawing workshop, designed specifically for animators for study of staging, posing, movement, drapery and character design. Exercises include quick gesture drawings, silhouette form composition, constructive drawings techniques, multiple-pose memory sketches and analysis of action to determine key and breakdown drawings. Emphasis on rendering anatomical details of heads and hands and on keeping character volume consistent when drawn from a variety of angles.

**F/TV 67H Drawing for Animation: Animal Expression 3 Units**  
*Prerequisite:* Film/Television 69 (may be taken concurrently).

Two hours lecture, three hours laboratory.

Drawing workshop, designed specifically for animators and focusing on animals, birds, insects and objects as anthropomorphic characters. Exercises include quick gesture drawings, silhouette form composition, constructive drawing technique and fast-pose memory sketches from live models and reference film. Design and construction of model sheets for both realistic and stylized characters. Analysis of comparative anatomy and locomotion.

**F/TV 67I Drawing for Animation: Layout and Visual Development 3 Units**

*Prerequisite:* Film/Television 70H.

Two hours lecture, three hours laboratory.

Drawing and art direction workshop for animators, concentrating on expanding storyboards into full layouts. Development of visual style for an animated film production. Design of props and backgrounds, utilizing one-point, two-point and three-point perspective, and including simulation of elaborate camera movements. Drawn representation of telephoto or wide-angle lens perspective and depth of field.

**F/TV 68 Sound for Animation 3 Units**  
 Two hours lecture, two hours lecture-laboratory.

Principles of soundtrack design to accompany the unique properties of the animated image. Aesthetics and techniques of film music. Recording, editing and mixing of voice, music and sound effects using location, studio and library sources. Methods of lip-synched character dialogue, musical synchronization to animation, and sound effects ambiences.

**F/TV 69 Principles of Animation: Character and Motion 3 Units**

Two hours lecture, two hours lecture-laboratory.

Investigation of the fundamental principles of movement and timing when animating characters or objects, progressing from simple to complex motion. Experience in creating character weight, power and emotion; portraying the forces of nature in "effects" animation and manipulating the quality of the line and the image. Close analysis of the animation technique in exemplary professional films.

**F/TV 70G Screenwriting for Animation 4 Units**  
*Advisory:* Film/Television 66 and/or 69; English Writing 1A or English as a Second Language 5.

Four hours lecture.

Conceptual development and scriptwriting for animated film. Contrast of the role of the treatment and the script in animation to that in live-action production. Comparison of screenplay formats for television, feature films and short forms. Examination of structure and characterization in dramatic narrative. Investigation of methodology and structure in nonfiction forms of animation.

<p><b>F</b> <b>F/TV 70H</b>      <b>The Animation Storyboard</b>      <b>3 Units</b>  <i>(Formerly Film/Television 70.)</i>  <i>Advisory: Film/Television 66 and/or 69.</i>  <i>Two hours lecture, two hours lecture-laboratory.</i>  <i>(May be taken twice for credit.)</i>            Methods of planning and designing animated films using the storyboard technique. Focus on translating concepts into visuals, selecting camera angles and choosing editing style. Exploration of animation's unique cinematic vocabulary and its potential for personal expression, social advocacy and/or literary adaptation.</p>	<p><b>F/TV 75J</b>      <b>The Animated Feature Film</b>      <b>4 Units</b>  <i>Advisory: English Writing 1A or English as a Second Language 5.</i>  <i>Four hours lecture.</i>            A survey of the evolution of the full-length animated film from its origins in the silent cinema to the present, including rare masterworks. Emphasis on hand-drawn, puppet and computer creations from England, France, Russia, Czechoslovakia and Japan, as well as Hollywood and the San Francisco Bay Area. Close analysis of social messages, historical significance and exemplary artistic technique.</p>
<p><b>F/TV 71</b>      <b>Animated Film Production Workshop</b>      <b>3 Units</b>  <i>Prerequisite: Film/Television 66A, 69, 84A or consent of instructor.</i>  <i>Two hours lecture, two hours lecture-laboratory.</i>  <i>(Film/Television 71 may be taken up to six times, not to exceed 18 units, as course content is different each time it is offered.)</i>            Practice in refinement of animation motion design and timing. Development of initial concept stages for a short personal film in any style of animation (e.g. drawn), stop-motion or computer, suitable for public screening, including Creation of storyboards, character models, soundtracks and motion tests. Course content and lecture-demonstration material are driven by student projects and change completely each quarter.</p>	<p><b>F/TV 75K</b>      <b>Japanese Animation</b>      <b>4 Units</b>  <i>Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.</i>  <i>Four hours lecture.</i>            An examination of the post-1960s evolution of animated films in Japan, a national cinema famed for its exciting range of subject matter and outstanding graphics. Screening of exemplary and influential works by distinguished artists, writing collectives and production studios. Close analysis of social content, reflections of history, adaptations of literature and artistic technique.</p>
<p><b>F/TV 72</b>      <b>Advanced Animation Workshop</b>      <b>3 Units</b>  <i>Prerequisite: Film/Television 71.</i>  <i>Two hours lecture, two hours lecture-laboratory.</i>  <i>(Film/Television 72 may be taken up to six times, not to exceed 18 units, as course content is different each time it is offered.)</i>            Creation of visual and audio elements for production of a personal film in any style of animation (e.g. drawn), stop-motion or computer, which can serve both as the student's diploma film and as a professional portfolio piece. Investigation of career options and marketing strategies as they pertain to each project. Formulation of portfolios and demo reels. Course content and lecture-demonstration material are driven by student projects and change completely each quarter.</p>	<p><b>F/TV 76</b>      <b>Special Topics in Film Studies</b>      <b>1/2 Unit</b>  <b>F/TV 76W</b>      <b>1 Unit</b>  <b>F/TV 76X</b>      <b>2 Units</b>  <i>Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.</i>  <i>One hour lecture for each unit of credit.</i>  <i>(Any combination of Film/Television 76, 76W, and 76X may be taken six times, not to exceed 18 units, as long as the topics/projects are different each time.)</i>            Concentrated investigation of an influential film artist, studio, national cinema, genre, movement, or historical period. The topic studied is different for each section of this course and may include Bay Area film festival and nonprofit-organization screenings and events.</p>
<p><b>F/TV 73</b>      <b>Animation Production Laboratory</b>      <b>1/2 Unit</b>  <b>F/TV 73X</b>      <b>1 Unit</b>  <b>F/TV 73Y</b>      <b>2 Units</b>  <b>F/TV 73Z</b>      <b>3 Units</b>  <i>Corequisite: Film/Television 73, 73X-Z students must also enroll in an animation production course.</i>  <i>Three hours laboratory for each unit of credit.</i>  <i>(Any combination of Film/Television 73, 73X, 73Y, and 73Z may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)</i>            Supervised use of film and television laboratory equipment and facilities to fulfill assigned projects in other animation production courses.</p>	<p><b>F/TV 77X</b>      <b>Animation History Area Studies</b>      <b>1 Unit</b>  <b>F/TV 77Y</b>      <b>2 Units</b>  <i>(Formerly Film/Television 87X and 87Y respectively.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Advisory: English Writing 1A or English as a Second Language 5.</i>  <i>One hour lecture for each unit of credit.</i>  <i>(Any combination of Film/Television 77X and 77Y may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)</i>  <i>Pass-No Pass (P-NP) course.</i>            Concentrated investigation of an influential animated film director, studio, genre, movement, national cinema, historical period or applied technique. The topic studied is different for each section of this course (e.g. Aardman and the U.K., Disney, the Canadian Film Board, Bay Area Animation, the Animated Documentary or visiting animators).</p>
<p><b>F/TV 75G</b>      <b>History of Animation</b>      <b>4 Units</b>  <i>(Formerly Film/Television 75.)</i>  <i>(See general education pages for the requirement this course meets.)</i>  <i>Advisory: English Writing 1A or English as a Second Language 5.</i>  <i>Four hours lecture.</i>            An international survey of the historical development of the animated film, from its pre-cinema origins to a contemporary art form, with emphasis on the contributions of major studios, including Bray, Sullivan, Fleischer, Disney, Warner Brothers, UPA, Zagreb, Shanghai, the Canadian Film Board and England's Channel Four, as well as many works by important independent artists. Close analysis of social messages, historical significance and exemplary artistic technique.</p>	<p><b>F/TV 79G</b>      <b>Workshop with Professional Traditional Animator</b>      <b>3 Units</b>  <i>Two hours lecture; two hours lecture-laboratory.</i>  <i>(Any combination of Film Television 79G and 79H may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)</i>            Intensive workshop in a specialized area of drawn or puppet animation production (e.g. writing, storyboard, layout, fabrication, lighting, motion design, soundtrack construction, etc.) with an instructor with full-time experience on feature films or national television commercials at a major Bay Area animation studio (Industrial Light &amp; Magic, Wild Brain, Twitching Image/Skellington, Phil Tippett Studios, etc.) Repeatable as instructors, topics and/or student productions vary.</p>
<p><b>F/TV 75H</b>      <b>Classic Hollywood Animation</b>      <b>4 Units</b>  <i>Advisory: English Writing 1A or English as a Second Language 5.</i>  <i>Four hours lecture.</i>            An exploration of films produced by major American animation studios during their Golden Age (1933-1948), analyzing their development of narrative form and perfection of animation technique. Appraisal of the films' controversial social content regarding race, gender and international politics. Studios include Disney, Fleischer, Warner Brothers, M-G-M, Columbia, Lantz, Terry and the George Pal Puppets.</p>	<p><b>F/TV 79H</b>      <b>Workshop with Professional Computer Animator</b>      <b>4 Units</b>  <i>Three hours lecture; three hours laboratory.</i>  <i>(Any combination of Film Television 79G and 79H may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)</i>            Intensive workshop in a specialized area of computer animation production (e.g. character/prop modeling, texturing, lighting, skeletal articulation; animation, special visual effects or compositing techniques) with an instructor with full-time experience on feature films or national television commercials at a major Bay Area animation studio (Industrial Light &amp; Magic, Pixar, PDI/Dreamworks, Wild Brain, Phil Tippett, Electronic Arts, etc.) Repeatable as instructors, software and/or student productions vary.</p>
<p><b>F/TV 75I</b>      <b>Contemporary World Animation</b>      <b>4 Units</b>  <i>Advisory: English Writing 1A or English as a Second Language 5.</i>  <i>Four hours lecture.</i>            A survey of international animation from 1970 to the present, concentrating on England, Canada, Eastern Europe, Japan, China and other animation centers, including many masterworks never released in North America. Emphasis on short films created by independent artists in art media ranging from traditional hand-drawn to puppets, cutouts, clay and computer. Close analysis of social messages, historical significance and exemplary artistic technique.</p>	<p><b>F/TV 80G</b>      <b>Independent Projects in Animation</b>      <b>2 Units</b>  <i>Prerequisite: Demonstrated skill; consent of instructor.</i>  <i>Four hours lecture-laboratory.</i>  <i>(Film/Television 80G may be taken up to six times, as long as the topics/projects are different each time.)</i>            Advanced individual and group creative projects in animation production or animation history.</p>
	<p><b>F/TV 80H</b>      <b>Animated Film Completion for Certificate/Degree</b>      <b>1 Unit</b>  <i>Prerequisite: Culminating film project at point of completion.</i>  <i>Three hours laboratory.</i>            A course designed to record the completion of a student's certificate/degree film. Students enroll in this course only in the quarter in which the film will be completed.</p>

**F/TV 81 Seminar in Animation Production Topics 1/2 Unit**  
**F/TV 81X 1 Unit**  
**F/TV 81Y 2 Units**  
**F/TV 81Z 3 Units**

*Two hours lecture-laboratory for each unit of credit.*

*(Any combination of Film/Television 81, 81X, 81Y, and 81Z may be taken six times, not to exceed 18 units, as long as the topics/projects are different each time.)*

Intensive workshop in a specialized area of animation production (e.g. puppet animation, gesture drawing, special visual effects, the role of the producer, advanced computer techniques).

**F/TV 83A Introduction to 2D Computer Animation 3 Units**  
*Prerequisite: Film/Television 66A or 69 (either may be taken concurrently).*

*Two hours lecture, three hours laboratory.*

*(Film/Television 83A may be repeated only if the Animation program switches to a different software. No combination of Film/Television 83A and 83B may be taken more than four times or exceed 16 units.)*

Utilization of the computer in the creation of two-dimensional animation with application to educational CD-ROMs, video games, television or the Internet. Strengths and limitations compared to traditional animation techniques. Concentration on methods of creating sequences of character movement in the drawn image, timing soundtracks for synchronization, constructing storyboard reels, and adding color and texture to artwork.

**F/TV 83B Advanced 2D Computer Animation 4 Units**

*Prerequisite: Film/Television 83A.*

*Three hours lecture, three hours laboratory.*

*(Film/Television 83B may be repeated only if the Animation program switches to a different software. No combination of Film/Television 83A and 83B may be taken more than four times or exceed 16 units.)*

Deployment of computer software in the production of professional narrative drawn animation, such as feature films or television series. Emphasis on digitizing and layering imagery, designing simple and complex movements of the virtual camera, and employing digital coloring techniques in lieu of traditional cel inking and painting.

**F/TV 84A Introduction to 3D Computer Animation 4 Units**

*Prerequisite: Film/Television 83A.*

*Three hours lecture, three hours laboratory.*

*(Any combination of Film/Television 84A, 84B, and 84C may be taken up to six times, not to exceed 18 units, for the family of courses as long as the Animation program switches to a different software.)*

Orientation to the concepts and production process of three-dimensional (3D) computer animation. Introduction to the software interface, to basic design and construction of computer models, and to fundamentals of texturing, lighting and rendering, culminating in the creation of 3D cinematic stills.

**F/TV 84B Intermediate 3D Computer Animation 4 Units**

*Prerequisite: Film/Television 84A.*

*Three hours lecture, three hours laboratory.*

*(Any combination of Film/Television 84A, 84B, and 84C may be taken up to six times, not to exceed 18 units, for the family of courses as long as the Animation program switches to a different software.)*

Application of the classic principles of traditional animation regarding movement and timing to computer animation. Digital motion design in a professional software program via techniques such as keyframing, motion path animation and shape blending. Fundamentals of rigging models for expressive movement, including introduction to forward and inverse kinematics. Principles of simulated cinematography and visual aesthetics.

**F/TV 84C Advanced 3D Computer Animation 4 Units**

*Prerequisite: Film/Television 84B.*

*Three hours lecture, three hours laboratory.*

*(Any combination of Film/Television 84A, 84B, and 84C may be taken up to six times, not to exceed 18 units, for the family of courses as long as the Animation program switches to a different software.)*

Utilization of sophisticated professional computer programs to produce individual or collaborative animated projects with increasingly complex character models, animated movements, lighting schemes and visual effects. Exploration of advanced computer animation procedures, such as particle systems, or digital compositing, including the use of complementary software.

**F/TV 85 Motion Graphics 3 Units**

*Prerequisite: Arts 55B.*

*(Also listed as Arts 85. Student may enroll in either department, but not both, for credit.)*

*Six hours lecture-laboratory.*

The analysis and interpretation of the arts and design involved in the production of "on-the-air" graphic design. The creative integration of "type" and "image" in motion is stressed through the use of directed laboratory exercises. Software used includes Adobe Photoshop, Adobe Premier, Macromedia FreeHand, Macromedia Director, Macromedia Flash.

**F/TV 92 Topics: Guest Artist/Industry Professional 1/2 Unit**

*One and one-half hours lecture-laboratory.*

*(May be taken up to six times for credit as long as the topics are different each time.)*

The investigation of techniques and procedures utilized by a guest artist for the production and development of their work. Concepts, theory, and practice pertaining to the specific topic as predetermined by the guest artist or industry professional.

**F/TV 98G Fiction Workshop (The Writer, Producer, Director) 3 Units**

*Prerequisite: Film/Television 20, 50, and 60A; or Film/Television 22A or 51A.*

*Six hours lecture-laboratory.*

*(Any combination of Film/Television 98G, 98H, and 98J may be taken up to six times, not to exceed 18 units, for the family of courses.)*

Advanced workshop in the writing, producing, or directing of complex scenes or multiple scene works of narrative/dramatic film or video.

**F/TV 98H Fiction Workshop (Technical Crew) 3 Units**

*Prerequisite: Film/Television 20, 55A, 62 or 63A.*

*Six hours lecture-laboratory.*

*(Any combination of Film/Television 98G, 98H, and 98J may be taken up to six times, not to exceed 18 units, for the family of courses.)*

Advanced workshop in cinematography, art direction, sound recording, and other techniques and craft skills essential to the production of narrative/dramatic film and video projects.

**F/TV 98J Fiction Workshop (Editing/Post Production) 3 Units**

*Prerequisite: Film/Television 20, 22, or 51A.*

*Six hours lecture-laboratory.*

*(Any combination of Film/Television 98G, 98H, and 98J may be taken up to six times, not to exceed 18 units, for the family of courses.)*

Advanced workshop in the post-production phase including elements of picture and sound editing and sound mixing for narrative/dramatic film and video projects.

## French

**FREN 1 Elementary French (First Quarter) 5 Units**

*(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.*

*Five hours lecture, one hour laboratory.*

Introduction to the language and cultures of the French-speaking countries. Basic speaking, listening, reading and writing of French will be introduced and practiced within a cultural framework. Emphasis will be on language as an expression of culture. Language laboratory practice to reinforce pronunciation, grammar and syntax.

*(FREN 1+2+3, or FREN 10 = CAN FREN SEQ A)*

**FREN 2 Elementary French (Second Quarter) 5 Units**

*(See general education pages for the requirement this course meets.)*

*Prerequisite: French 1.*

*Five hours lecture, one hour laboratory.*

Further development of material presented in French 1. Continuation of introduction to the language and cultures of the French-speaking countries. Basic speaking, listening, reading and writing of French will be introduced and practiced within a cultural framework. Emphasis will be on language as an expression of culture. Language laboratory practice to reinforce pronunciation, grammar and syntax.

*(FREN 1+2+3, or FREN 10 = CAN FREN SEQ A)*

**FREN 3 Elementary French (Third Quarter) 5 Units**

*(See general education pages for the requirement this course meets.)*

*Prerequisite: French 2.*

*Five hours lecture, one hour laboratory.*

Further development of material presented in French 1 and French 2. Completion of introduction to the language and cultures of the French-speaking countries. Basic speaking, listening, reading and writing of French will be introduced and practiced within a cultural framework. Emphasis will be on language as an expression of culture. Language laboratory practice to reinforce pronunciation, grammar and syntax.

*(FREN 1+2+3, or FREN 10 = CAN FREN SEQ A)*

**FREN 4 Intermediate French (First Quarter) 5 Units**

*(See general education pages for the requirement this course meets.)*

*Prerequisite: Demonstrated proficiency in the language competency descriptions for level three, or equivalent of level three.*

*Five hours lecture.*

Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the French-speaking world. Review of the linguistic functions and grammar structures of first-year French. Development of reading, writing, speaking and listening skills at the first intermediate level.

*(FREN 4 + 5 + 6 = CAN FREN SEQ B)*

**FREN 5 Intermediate French (Second Quarter) 5 Units**

*(See general education pages for the requirement this course meets.)*

*Prerequisite: Demonstrated proficiency in the language competency descriptions for level four, or equivalent of level four.*

*Five hours lecture.*

Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the French-speaking world. Review of the linguistic functions and grammar structures of first-year French. Development of reading, writing, speaking and listening skills at the second intermediate level.

*(FREN 4 + 5 + 6 = CAN FREN SEQ B)*

**FREN 6 Intermediate French (Third Quarter) 5 Units**  
 (See general education pages for the requirement this course meets.)  
 Prerequisite: Demonstrated proficiency in the language competency descriptions for level five, or equivalent of level five.  
 Five hours lecture.  
 Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the French-speaking world. Review of the linguistic functions and grammar structures of first-year French. Development of reading, writing, speaking and listening skills at the third intermediate level.  
 (FREN 4 + 5 + 6 = CAN FREN SEQ B)

**FREN 10 Intensive French (First Year) 15 Units**  
 Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263.  
 One hundred eighty hours lecture, thirty-six hours laboratory for the quarter.  
 Development and practice of skills for oral and written communication supported by essentials of grammar, syntax, vocabulary and pronunciation. Language of instruction is primarily French.  
 (FREN 1+2+3, or FREN 10 = CAN FREN SEQ A)

**FREN 13A Intermediate Conversation (First Quarter) 3 Units**  
 Prerequisite: French 3, or three years of high school French, or equivalent.  
 Three hours lecture.  
 Review and development of conversational skills in the targeted functions studied in first-year French with attention to fluency, vocabulary, idiom, and pronunciation. Practice in conversational exchanges and strategies. Discussion of culturally relevant topics and situations.

**FREN 13B Intermediate Conversation (Second Quarter) 3 Units**  
 Prerequisite: French 4 or 13A, or four years of high school French, or equivalent.  
 Three hours lecture.  
 Continued practice and development of conversational skills in the targeted functions studied in first-year French with increased attention to fluency, vocabulary, idiom, and pronunciation. Practice in conversational exchanges and strategies emphasizing improvisational skills. Discussion of culturally relevant topics and situations.

**FREN 13C Advanced Conversation 3 Units**  
 Prerequisite: French 5 or 13B, or equivalent.  
 Three hours lecture.  
 Continued practice and development of conversational skills in the targeted functions studied in first-year French, with greater communicative competence. Increased control of conversational exchanges and strategies. Discussion of culturally relevant topics and situations.

**FREN 77 Special Projects in French 1 Unit**  
**FREN 77X 2 Units**  
**FREN 77Y 3 Units**  
 (Formerly French 40, 40X, and 40Y.)  
 Prerequisite: Consent of instructor and division dean.  
 Three hours laboratory for each unit of credit.  
 (Any combination of French 77, 77X, and 77Y may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)  
 Special reading, writing, or study projects in any discipline in French, determined in consultation with the instructor.

**FREN 90A Introductory French (First Quarter) 3 Units**  
 Three hours lecture, one hour laboratory.  
 A practical course in the French language, approached by intensive drills in the patterns and idioms of daily speech supported by sufficient grammar to give flexibility in the spoken language.

**FREN 90B Introductory French (Second Quarter) 3 Units**  
 Prerequisite: French 90A.  
 Three hours lecture, one hour laboratory.  
 Continuation of French 90A.

**FREN 90C Introductory French (Third Quarter) 3 Units**  
 Prerequisite: French 90B.  
 Three hours lecture, one hour laboratory.  
 Continuation of French 90B.

## Geography

**GEO 1 Physical Geography 4 Units**  
 (See general education pages for the requirement this course meets.)  
 Advisory: English Writing 1A or English as a Second Language 5;  
 Mathematics 200 or 210.  
 Four hours lecture.  
 An introduction to the basic physical elements of geography and the diverse physical environment in which we live. Topics include the global patterns of weather and climate, land forms, soils and vegetation along with human modification of natural environments.  
 (CAN GEOG 2)

**GEO 4 Cultural Geography 4 Units**  
 (Formerly Geography 50.)  
 (See general education pages for the requirement this course meets.)  
 Advisory: English Writing 1A or English as a Second Language 5;  
 Mathematics 200 or 210.  
 Four hours lecture.

Examining the location of people and activities throughout the world and understanding the reasons for the distribution. Topics covered include population and migration, human impact on landscape, the geography of language, religion and ethnicity, economic activities, political organization and settlement patterns including the urban environment.

**GEO 10 World Regional Geography 4 Units**  
 (See general education pages for the requirement this course meets.)  
 Advisory: English Writing 1A or English as a Second Language 5;  
 Mathematics 200 or 210.  
 Four hours lecture.

An introduction to the major distinctive regions of the world; their natural environment, people, resources, agriculture, manufacturing, trade, cities and the problems relating to contemporary society in each of the regions. Understanding the increasing interdependencies among and between regions.

## Geology

**GEOL 10 Introductory Geology 5 Units**  
 (See general education pages for the requirement this course meets.)  
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.

Four hours lecture, three hours laboratory and a one-day field trip.  
 Analysis of the composition, structure, and description of the earth's external and internal features. Examination of the concepts and principles upon which geologic knowledge is based. One Saturday field trip is required.  
 (CAN GEOL 2)

**GEOL 77 Special Projects in Geology 1 Unit**  
**GEOL 77X 2 Units**  
**GEOL 77Y 3 Units**

(Formerly Geology 40, 40X, and 40Y.)  
 Prerequisite: Consent of instructor and division dean.  
 Three hours laboratory for each unit of credit.  
 (Any combination of Geology 77, 77X, and 77Y may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)  
 Pass-No Pass (P-NP) course.  
 Individual special reading, writing, or study projects in Geology as determined in consultation with the instructor.

## German

**GERM 1 Elementary German (First Quarter) 5 Units**  
 (See general education pages for the requirement this course meets.)  
 Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.

Five hours lecture, one hour laboratory.  
 Introduction to the language and cultures of the German-speaking countries. Basic speaking, listening, reading and writing of German will be introduced and practiced within a cultural framework. The emphasis will be on language as an expression of culture. Language laboratory practice to reinforce pronunciation, grammar and syntax.  
 (GERM 1+2+3, or GERM 10 = CAN GERM SEQ A)

**GERM 2 Elementary German (Second Quarter) 5 Units**  
 (See general education pages for the requirement this course meets.)  
 Prerequisite: German 1 or equivalent.

Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.  
 Five hours lecture, one-hour laboratory.  
 Further development of material presented in German 1. Continuation of introduction to the language and cultures of the German-speaking countries. Basic speaking, listening, reading and writing of German will be introduced and practiced within a cultural framework. The emphasis will be on language as an expression of culture. Language laboratory practice to reinforce pronunciation, grammar and syntax.  
 (GERM 1+2+3, or GERM 10 = CAN GERM SEQ A)

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<p><b>GERM 3 Elementary German (Third Quarter) 5 Units</b>  <i>(See general education pages for the requirement this course meets.)</i>  <i>Prerequisite: German 2 or equivalent.</i>  <i>Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.</i>  <i>Five hours lecture, one-hour laboratory.</i>            Further development of material presented in German 1 and 2. Completion of introduction to the language and cultures of the German-speaking countries. Basic speaking, listening, reading and writing of German will be introduced and practiced within a cultural framework. The emphasis will be on language as an expression of culture. Language laboratory practice to reinforce pronunciation, grammar and syntax.            (GERM 1+2+3, or GERM 10 = CAN GERM SEQ A)</p>	<p><b>GUID 104 Introductory Spelling Strategies 4 Units</b>  <i>(Formerly Guidance 101K.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Advisory: Guidance 100 and/or placement by Educational Diagnostic Center Learning Specialist or Disability Support Services counselor. Basic word processing proficiency or concurrent enrollment in Special Education 140 or 145, or Computer Applications and Office Systems 70AA.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            A multi-sensory approach to improving basic spelling skills for the student with special needs utilizing a phonetic sound-symbol base to aid in decoding and encoding language. Development of word attack skills utilizing the six-syllable spelling patterns and knowledge of roots, prefixes, and suffixes. Specialized learning strategies are utilized including simultaneous use of visual, auditory and kinesthetic modalities.</p>
<p><b>GERM 4 Intermediate German (First Quarter) 5 Units</b>  <i>(See general education pages for the requirement this course meets.)</i>  <i>Prerequisite: Demonstrated proficiency in the language competency descriptions for level three, or equivalent of level three.</i>  <i>Five hours lecture.</i>            Development of reading, writing, speaking and listening skills at that first intermediate level. Reading and discussion of texts dealing with the literature, arts, history, geography and culture of the German-speaking world. Review and expansion of the linguistic functions and grammar structures of first-year German.            (GERM 4+5+6 = CAN GERM SEQ B)</p>	<p><b>GUID 107 EDC Introductory Writing and Grammar Skills 4 Units</b>  <i>(Formerly Guidance 101P.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            Basic writing and editing skills for students with specialized learning needs preparing for college level writing activities. Write structured paragraphs on a variety of topics using compensatory written learning strategies Practice parts of speech, capitalization, punctuation, sentence structure, and paragraph development. Guidance 100 and/or placement by EDC or DSS advisor is desirable.</p>
<p><b>GERM 5 Intermediate German (Second Quarter) 5 Units</b>  <i>(See general education pages for the requirement this course meets.)</i>  <i>Prerequisite: Demonstrated proficiency in the language competency descriptions for level four, or equivalent of level four.</i>  <i>Five hours lecture.</i>            Development of reading, writing, speaking and listening skills at the second intermediate level. Reading and discussion of texts dealing with literature, arts, history, geography and culture of the German-speaking world. Review and expansion of the linguistic functions and grammar structures of first-year German.            (GERM 4+5+6 = CAN GERM SEQ B)</p>	<p><b>GUID 109 Arithmetic Skills and Strategies 4 Units</b>  <i>(Formerly Guidance 101U.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Advisory: Guidance 100.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            This is a transition class for students with special learning needs. The class is designed to improve skills in mathematics by addressing areas of difficulty common to students with disabilities in mathematics. The class moves at a slower pace and includes small group instruction.</p>
<p><b>GERM 6 Intermediate German (Third Quarter) 5 Units</b>  <i>(See general education pages for the requirement this course meets.)</i>  <i>Prerequisite: Demonstrated proficiency in the language competency descriptions for level five, or equivalent of level five.</i>  <i>Five hours lecture.</i>            Development of reading, writing, speaking and listening skills at the third intermediate level. Reading and discussion of texts dealing with the literature, arts, geography, history and culture of the German-speaking world. Review and expansion of the linguistic functions and grammar structures of first-year German.            (GERM 4+5+6 = CAN GERM SEQ B)</p>	<p><b>GUID 111 Algebra Skills 4 Units</b>  <i>(Formerly Guidance 101G.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            This is a transitional class for students with special learning needs. The class is designed to improve skills in mathematics by addressing areas of difficulty common to students with disabilities in mathematics. The class moves at a slower pace with small group instruction. The class also includes alternative learning strategies for mastering algebraic concepts.</p>
<b>Guidance</b>	
<p><b>GUID 100 Educational Diagnostic Center (EDC) Learning Skills Assessment 1/2 Unit</b>  <i>(Formerly Guidance 101A.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>One-half hour lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            Individualized psycho-educational assessment provides an analysis of learning strengths and weaknesses, cognitive/perceptual abilities and academic achievement levels. Assessment results may be utilized to determine a student's eligibility for community college learning disability services. College and community resources to enhance access and success will be introduced.</p>	<p><b>GUID 112 Algebra Skills II 4 Units</b>  <i>(Formerly Guidance 101H.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Advisory: Mathematics 200 or 210, or equivalent and/or placement by an advisor.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            A multi-sensory approach to the acquisition of the fundamental algebra skills, including the study of equations, polynomials, factoring, algebraic fractions, graphs, linear functions, inequalities and their applications for students with specialized learning needs who commonly exhibit math avoidance and anxiety.</p>
<p><b>GUID 101 Introduction to Learning Disabilities and Attention Deficit/Hyperactive Disorders 4 Units</b>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            Basic aspects of learning disabilities and attention deficit/hyperactive disorders and their impact on various life functions including learning. Emphasis is on awareness, acceptance, and advocacy of learning disabilities for college students with specialized learning differences. Guidance 100 and/or placement by EDC or DSS advisors is desirable.</p>	<p><b>GUID 118 Educational Diagnostic Center (EDC) Group Instructional Assistance 1 1/2 Units</b>  <i>(Formerly Guidance 118A and 118B.)</i>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Three hours lecture-laboratory.</i>  <i>(May be repeated for credit as required by the Student Educational Contract.)</i>  <i>Pass-No Pass (P-NP) course.</i>            Small group collaborative instructional support and study strategies to improve academic performance. Focus on reducing learning impairments caused by disabilities.</p>
<p><b>GUID 102 Student Success Strategies 4 Units</b>  <i>Credit course - Does not apply to De Anza Associate degree.</i>  <i>Four hours lecture.</i>  <i>(May be taken twice for credit.)</i>  <i>Pass-No Pass (P-NP) course.</i>            Optimal learning strategies and accommodative techniques for students with special learning needs. Evaluate and reinforce successful learning tools in areas such as time management, memory, processing information, and learning styles. Guidance 100 or placement by EDC or DSS advisor is desirable.</p>	

**G** **GUID 119** **Educational Diagnostic Center (EDC)**  
**Instructional Assistance Laboratory**

**1/2 Unit**  
**1 Unit**

**GUID 119X**

(Formerly Guidance 119A and 119B.)

Credit course - Does not apply to De Anza Associate degree.

Three hours laboratory for each unit of credit.

(May be repeated for credit as required by Student Educational Contract - CCR T5 56029 (c).)

Pass-No Pass (P-NP) course.

Instructional support laboratory and strategies for effective studying to improve academic performance for students with disabilities.

## Health

**HLTH 21** **Contemporary Health Concerns** **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, one additional hour to be arranged in the Science Center Resource Center.

Development of understanding and attitudes relative to personal, family, community, and global health needs. Attention given to mental health, drug abuse, infectious and degenerative diseases, family health, nutrition, exercise, the life cycle, and ecological conditions of health significance. Study of common lifestyle behaviors will emphasize self-help and preventable aspects of medical care.

**HLTH 51** **Health and Fitness** **4 Units**

(See general education pages for the requirement this course meets.)

Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.

(Also listed as Physical Education 51. Student may enroll in either department, but not both, for credit.)

Four hours lecture.

Introduction to the disciplines of Physical Education and Health through fitness, wellness and lifestyle management. Concepts of wellness from an interdisciplinary and global perspective. Practices and beliefs that contribute to fitness and healthful living. Students will be exposed to past and current theories of health and fitness with emphasis on how lifestyle, wellness, and personal fitness are affected by genetics, gender, and age. Each student will assess their own cardiovascular capacity, muscular strength and endurance, flexibility, body composition, and diet during the class.

**HLTH 57A** **First Aid in the Workplace, Community and Wilderness** **1/2 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-laboratory.

(May be taken once every three years for credit.)

Designed for certification in American Red Cross First Aid. Students will gain the knowledge and skills necessary to recognize and provide basic care for injuries and sudden illness until advanced medical personnel take over. Adaptations for a wilderness environment, including altitude, lightning, heat and cold emergencies, sudden illness, injuries, leadership, decision making, resource management, victim protection and transport. Upon successful completion of the course, each participant will receive an American Red Cross certification in First Aid (valid for three years).

**HLTH 57C** **Adult Cardiopulmonary Resuscitation and Automated External Defibrillation** **1/2 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-laboratory.

(May be taken once per year for credit.)

Designed for certification in American Red Cross Adult Cardiopulmonary Resuscitation and Automated External Defibrillation. Students will gain the knowledge and skills necessary to recognize and provide basic care for breathing emergencies, perform Adult Cardiopulmonary Resuscitation (CPR) and use an Automated External Defibrillator (AED) for victims of sudden cardiac arrest. Upon successful completion of the course, each participant will receive an American Red Cross certification in Adult CPR/AED.

**HLTH 57D** **CPR for the Professional Rescuer (Recertification)** **1/2 Unit**

Prerequisite: Must have current certificate from the American Red Cross for cardiopulmonary resuscitation (CPR) for the professional rescuer or from the American Heart Association. Certificates will be considered valid only if the date of issue is within one year of the date of course completion.

One and one-half hours laboratory.

(May be taken once per year for credit.)

Pass-No Pass (P-NP) course.

Designed to recertify the trained candidate in CPR for the professional rescuer. The course meets Cal-OSHA standards for basic requirements.

**HLTH 57E** **Cardiopulmonary Resuscitation and Automated External Defibrillation for the Professional Rescuer**

**1/2 Unit**

Advisory: English Writing 100 and Reading 100 (or Language Arts 100), or English as a Second Language 172 and 173.

One and one-half hours laboratory.

(May be taken once per year for credit.)

Pass-No Pass (P-NP) course.

Designed for certification in American Red Cross cardiopulmonary resuscitation and automated external defibrillation for the professional rescuer. Students will gain the knowledge and skills necessary to apply the blood borne pathogens regulations issued by the Occupational Health and Safety Administration with the intent to prevent disease transmission, recognize and provide basic care for breathing emergencies, perform adult, child and infant cardiopulmonary resuscitation (CPR) and use an automated external defibrillator (AED) for victims of sudden cardiac arrest. Upon successful completion of the course, each participant will receive an American Red Cross certification in CPR/AED for the Professional Rescuer.

## Health Technologies

**HTEC 50** **Introduction to Health Technologies** **1 Unit**

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, one additional hour to be arranged.

Pass-No Pass (P-NP) course.

Survey of health technology programs with emphasis on the professions; designed to assist in identifying personal strengths and weaknesses related to health technology professions; assist students in health technology professions to learn basic principles of human behavior.

**HTEC 56** **Special Projects in Health Technology** **1 Unit**  
**HTEC 56X** **2 Units**  
**HTEC 56Y** **3 Units**

(Formerly Medical Assisting 56, 56x, 56Y.)

Three hours laboratory per week for each unit of credit.

(Any combination of Health Technology 56, 56X, and 56Y may be taken up to six times, not to exceed 18 units, as long as the topics/projects are different each time.)

Pass-No Pass (P-NP) course.

Individual advanced projects in Health Technology.

**HTEC 60A** **Basic Medical Terminology** **3 Units**

Prerequisite: Health Technologies 50 (may also be taken concurrently). (Those enrolled in De Anza College's Health Technology Programs must complete pre/Corequisite; those not enrolled in Health Technology Programs do not need to complete pre/Corequisite.)

Three hours lecture, one additional hour to be arranged.

Orientation to medical terminology; basic structure of medical terms and their components-prefixes, suffixes and roots with emphasis on analysis, definition, spelling and pronunciation.

**HTEC 60G** **Advanced Medical Terminology** **2 Units**

Advisory: Health Technology 60A.

Two hours lecture, one additional hour to be arranged.

Application of medical terminology to the following body systems: digestive, urinary, reproductive, nervous, integumentary, sensory organs, and radiology.

**HTEC 60H** **Advanced Medical Terminology** **2 Units**

Advisory: Health Technology 60A.

Two hours lecture, one additional hour to be arranged in the Allied Health or Science Center Resource Center.

Application of medical terminology to the following body systems: cardiovascular, respiratory, blood and lymphatic, musculoskeletal, endocrine, oncology, pharmacology and psychiatry.

**HTEC 61** **Medical Communications** **1 1/2 Units**

(Formerly Medical Assisting 61.)

Corequisite: Health Technology 61 students must also enroll in Health Technology 101C.

Advisory: Computer Applications and Office Systems 70AA and 91AL; Health Technology 60A.

Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.

Application of medical terminology, abbreviations, symbols, numbers, keyboarding appropriate formats in medical communications; medical chart notes, history and physicals, consultations and operative reports.

**HTEC 64A** **Basic Clinical Laboratory Procedures** **1 1/2 Units**

(Formerly Health Technology 64G.)

Advisory: Health Technology 60A.

Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.

Introduction to clinical laboratory; microbiology and infectious diseases; urine collection; microscopic and macroscopic examination of urine.

<b>HTEC 64B</b>	<b>Advanced Clinical Laboratory Procedures (Hematology)</b>	<b>1 1/2 Units</b>	Health Technology 80A, and Health Technology 80 is required to enroll in Clinical Hematology/Urinalysis/Coagulation Practicum, Health Technology 180.
	(Formerly Health Technology 64H.) Prerequisite: Health Technology 64A. Corequisite: Health Technology 64B students must also enroll in Health Technology 101A. Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. Introduction to hematology and blood chemistry techniques: blood collection, hematocrit, white blood cell count and differential; preparation of blood smears, preservation, storage and mailing of blood samples.		
<b>HTEC 68</b>	<b>Medical Reception Externship</b>	<b>2 Units</b>	
	(Formerly Medical Assisting 68.) Prerequisite: Health Technology 60A, 71, and 73; Computer Applications and Office Systems 70AA. Six hours laboratory. Practical medical reception experience in medical clinics.		
<b>HTEC 71</b>	<b>Medical Office Reception</b>	<b>1 Unit</b>	
	(Formerly Medical Assisting 71.) Advisory: Health Technology 60A. Two hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. Duties of the medical receptionist with emphasis on oral communications and appointment scheduling.		
<b>HTEC 72</b>	<b>Medical Office Financial Procedures</b>	<b>1 1/2 Units</b>	
	(Formerly Medical Assisting 72.) Corequisite: Health Technology 72 students must also enroll in Health Technology 101D. Advisory: Health Technology 60A. Three hours lecture-laboratory; one additional hour to be arranged. Fee determination, credit and collections, billing, diagnostic and procedural coding, private and government health insurance programs.		
<b>HTEC 73</b>	<b>Medical Law and Ethics</b>	<b>1 1/2 Units</b>	
	(Formerly Medical Assisting 73.) Advisory: Health Technology 60A. Three hours lecture-laboratory, one additional hour to be arranged. Medical ethics, medical practice acts, legal relationship of patient and physician, legal responsibilities of the health technology team member, professional liability, physician's civic duties and arbitration.		
<b>HTEC 74</b>	<b>Medical Transcription with Advanced Terminology</b>	<b>1 1/2 Units</b>	
	(Formerly Medical Assisting 74.) Corequisite: Health Technology 74 students must also enroll in Health Technology 101C. Advisory: Health Technology 60A and 61. Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. (May be taken four times for credit.) Development of transcription skills necessary for a medical office using actual dictation from various medical specialties; advanced medical terminology.		
<b>HTEC 75</b>	<b>Medical Office Management</b>	<b>1 1/2 Units</b>	
	(Formerly Medical Assisting 75.) Corequisite: Health Technology 75 students must also enroll in Health Technology 101G. Advisory: Health Technology 60A and 72. Three hours lecture-laboratory; one additional hour to be arranged. Advanced administrative skills including computerized accounts management duties of the medical office manager, personnel recruitment and training, financial management, office policy and procedure manuals, editorial and research duties and meeting arrangements.		
<b>HTEC 80</b>	<b>Clinical Hematology Laboratory</b>	<b>1 1/2 Units</b>	
	Corequisite: Health Technology 80 students must also enroll in Health Technology 80A. Four and one-half hours laboratory. (May be taken two times for credit.) Introduces the various techniques and safety procedures used in the clinical hematology Laboratory. Emphasizes the morphology and identification of common human blood cells. Successful completion of this course and Health Technology 80A, 81 and 81A, and Health Technology 82 and 82A are required to enroll in Clinical Hematology/Urinalysis/Coagulation Practicum, Health Technology 180.		
<b>HTEC 80A</b>	<b>Clinical Hematology Lecture</b>	<b>4 1/2 Units</b>	
	Corequisite: Health Technology 80A students must also enroll in Health Technology 80. Four and one-half hours lecture. Presents the origin of the various types of blood cells with emphasis on the red and white blood cells. The student will learn about human hematological disorders and classify these based on clinical laboratory findings. Admission to the MLT Program is necessary prior to registration. Successful completion of this course,		
<b>HTEC 81</b>	<b>Clinical Urinalysis Laboratory</b>	<b>3/4 Unit</b>	
	Corequisite: Health Technology 81 students must also enroll in Health Technology 81A. Two and one-quarter hours laboratory. (May be taken two times for credit.) Teaches the student the various properties and constituents of urine via "on hands" learning. Emphasis is placed on the interpretation and handling of urine specimens and their accompanying requisitions. The students will be taught to examine urine physically, chemically, and microscopically and compare clinical values as related to the physiology of the urinary system in health and disease. Successful completion of this course and Health Technology 80, 80A, 81A, 82 and 82A are required to enroll in Clinical Hematology/Urinalysis/Coagulation Practicum, Health Technology 180.		
<b>HTEC 81A</b>	<b>Clinical Urinalysis Lecture</b>	<b>1 1/2 Units</b>	
	Corequisite: Health Technology 81A students must also enroll in Health Technology 81. One and one-half hours lecture, one additional hour to be arranged in the Allied Health or Science Center Resource Center. Teaches the student the various properties and constituents of urine via "on hands" learning. Emphasis is placed on the interpretation of theory and methodology of qualitative and quantitative clinical analysis of urine. The students will be taught to accurately compare results of analysis to normal and abnormal function of the kidney. Admission to the MLT Program is necessary prior to registration. Successful completion of this course and Health Technology 81 is required to enroll in Clinical Hematology/Urinalysis/Coagulation Practicum, Health Technology 180.		
<b>HTEC 82</b>	<b>Clinical Coagulation Laboratory</b>	<b>3/4 Unit</b>	
	Corequisite: Health Technology 82 students must also enroll in Health Technology 82A. Two and one-quarter hours laboratory. (May be taken two times for credit.) Introduces the various techniques and safety procedures used in the clinical coagulation laboratory. Emphasis on platelet function tests and intrinsic and extrinsic clotting pathway testing. Normal and abnormal cases will be studied. Successful completion of this course and Health Technology 80, 80A, 81, 81A, and 82A are required to enroll in Clinical Hematology/Urinalysis/Coagulation Practicum, Health Technology 180.		
<b>HTEC 82A</b>	<b>Clinical Coagulation Lecture</b>	<b>1 1/2 Units</b>	
	Corequisite: Health Technology 82A students must also enroll in Health Technology 82. One and one-half hours lecture, one additional hour to be arranged in the Allied Health or Science Center Resource Center. Presents an overview of the homeostatic process, diseases, and laboratory evaluations. Normal and abnormal cases will be studied. Admission to the MLT Program is necessary prior to registration. Successful completion of this course and Health Technology 82 is required to enroll in Clinical Hematology/Urinalysis/Coagulation Practicum, Health Technology 180.		
<b>HTEC 83</b>	<b>Clinical Microbiology Laboratory</b>	<b>1 1/2 Units</b>	
	Corequisite: Health Technology 83 students must also enroll in Health Technology 83A. Four and one-half hours laboratory. (May be taken two times for credit.) Introduces the various techniques and safety procedures in clinical microbiology. Emphasizes the morphology and identification of common pathogenic organisms. Successful completion of this course and Health Technology 83A is required to enroll in Clinical Microbiology Practicum, Health Technology 183.		
<b>HTEC 83A</b>	<b>Clinical Microbiology Lecture</b>	<b>4 1/2 Units</b>	
	Corequisite: Health Technology 83A students must also enroll in Health Technology 83. Four and one-half hours lecture. Addresses microorganisms of medical microbiology with emphasis on the characteristics of clinically significant microorganisms and their biochemical profile, media for isolation, and identification methods for selected pathogens. The student will be introduced to identification methods, theories, and techniques used in basic bacteriology, parasitology and mycology. Emphasizes routine organism identification. Admission to the MLT Program is necessary prior to registration. Successful completion of this course and Health Technology 83 is required to enroll in Clinical Microbiology Practicum, Health Technology 183.		
<b>HTEC 84</b>	<b>Clinical Immunology/Immuno-hematology Laboratory</b>	<b>1 1/2 Units</b>	
	Corequisite: Health Technology 84 students must also enroll in Health Technology 84A. Four and one-half hours laboratory. (May be taken two times for credit.) Introduces the student to the basic principles of antigen and antibody reactions included in blood grouping and typing, compatibility testing and serological procedures by performances in a student lab environment. Introduces serological and immuno-hematology procedures and techniques to measure analytes qualitatively and quantitatively. Successful completion of this course and Health Technology 84A is required prior to enrollment in Clinical Immunology/Immuno-hematology Practicum, Health Technology 184.		

<p><b>HTEC 84A Clinical Immunology/ Immunohematology Lecture</b> <b>4 1/2 Units</b>  <i>Corequisite: Health Technology 84A students must also enroll in Health Technology 84.</i>  <i>Four and one-half hours lecture, one additional hour to be arranged in the Allied Health or Science Center Resource Center.</i>            Introduces the student to the basic principles of antigen and antibody reactions included in blood grouping and typing, compatibility testing and serological procedures. Introduces serological and immunohematology procedures and techniques to measure analytes qualitatively and quantitatively. Admission to the MLT Program is necessary prior to registration. Successful completion of this course and Health Technology 84 is required prior to enrollment in Clinical Immunology/ Immunohematology Practicum, Health Technology 184.</p>	<p><b>HTEC 90H Medical Office Sterile Technique</b> <b>1 1/2 Units</b>  <i>Corequisite: Health Technology 90H students must also enroll in Health Technology 101E.</i>  <i>Advisory: Health Technology 60A and 90G.</i>            Three hours lecture-laboratory; one additional hour to be arranged.            Local application of heat and cold, medical office instruments, sterilization and disinfection of equipment and instruments, application of sterile gloves, assisting with minor office surgery, and bandaging.</p>
<p><b>HTEC 85A Clinical Chemistry I Laboratory</b> <b>1 1/2 Units</b>  <i>Corequisite: Health Technology 85A students must also enroll in Health Technology 85C.</i>  <i>Four and one-half hours laboratory.</i>  <i>(May be taken two times for credit.)</i>            Teaches the general laboratory principles and specific basic instrumentation methodologies used in basic clinical chemistry analysis. After review of laboratory math, and a reintroduction to quality control and quality assurance, the student will be introduced to variables of the pre analytical phase, characteristics important to quality lab technique and safety. Correlating test results with disease states will be accomplished. Successful completion of this course, Health Technology 85B, 85C and 85D are required to enroll in Clinical Chemistry Practicum, Health Technology 185.</p>	<p><b>HTEC 91 Medical Office Diagnostic Tests</b> <b>1 1/2 Units</b>  <i>(Formerly Medical Assisting 91.)</i>  <i>Corequisite: Health Technology 91 students must also enroll in Health Technology 101F.</i>  <i>Advisory: Health Technology 60A.</i>            Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.            Electrocardiography, theory of assisting with physical therapy and x-ray examinations, theory of diagnostic procedures and instructions.</p>
<p><b>HTEC 85B Clinical Chemistry II Laboratory</b> <b>1 1/2 Units</b>  <i>Prerequisite: Health Technology 85C.</i>  <i>Corequisite: Health Technology 85B students must also enroll in Health Technology 85D.</i>  <i>Four and one-half hours laboratory.</i>  <i>(May be taken two times for credit.)</i>            Intermediate to advanced laboratory principles and techniques used in clinical chemistry analysis. The student will perform and study tests of the endocrine system, therapeutic drug assays and compounds, and other clinical chemistry tests specific to special chemistry department test menus. Highly automated instrumentation will be studied and used to demonstrate correct quality control, maintenance, and clinical operation. This course is taken the following quarter after successful completion of Health Technology 85A and Health Technology 85C. Successful completion of this course, and Health Technology 85A, 85C and 85D, is required to enroll in Clinical Chemistry Practicum, Health Technology 185.</p>	<p><b>HTEC 92 Medical Office First Aid</b> <b>1 1/2 Units</b>  <i>(Formerly Medical Assisting 92.)</i>  <i>Advisory: Health Technology 60A.</i>            Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.            Fundamentals of emergency care in the medical office with emphasis on potential life-threatening health problems.</p>
<p><b>HTEC 85C Clinical Chemistry I Lecture</b> <b>4 1/2 Units</b>  <i>Corequisite: Health Technology 85C students must also enroll in Health Technology 85A.</i>  <i>Four and one-half hours lecture.</i>            The lecture series presents theoretical and practical concepts associated with testing procedures used in the clinical chemistry laboratory including fundamentals of general laboratory principles and specific basic instrumentation methodologies. The important characteristics and relevance of electrolytes and trace metals including their relationship to acid base balance will also be addressed. Correlating test results with disease states will be accomplished. Admission to the MLT Program is necessary prior to course registration. Successful completion of this course and Health Technology 85A is required before enrolling in Health Technology 85B and Health Technology 85D.</p>	<p><b>HTEC 93 Pharmacology for Medical Assistants</b> <b>1 1/2 Units</b>  <i>(Formerly Medical Assisting 93.)</i>  <i>Advisory: Health Technology 60A.</i>            Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.            Dosage calculation, drug legislation and standards, drug preparations and information regarding antibiotics, sulfonamides, antihistamines, and drugs that affect various systems of the body.</p>
<p><b>HTEC 85D Clinical Chemistry II Lecture</b> <b>4 1/2 Units</b>  <i>Corequisite: Health Technology 85D students must also enroll in Health Technology 85B.</i>  <i>Four and one-half hours lecture.</i>            Teaches relationships between the endocrine system and analytes assayed in the clinical laboratory, including tumor markers, therapeutic drugs, and compounds studied in toxicology. The student will be introduced to vitamins assayed and correlate their clinical significance. The student will correlate liver, kidney, and pancreatic function with test results and compare with states of health and disease. The function and laboratory analysis of various body fluids including effusions, spinal fluid, and synovial fluid will be included. Admission to the MLT Program is necessary prior to course registration. Successful completion of this course and Health Technology 85B is required before enrolling in Health Technology 185.</p>	<p><b>HTEC 94 Administration of Medications</b> <b>1 Unit</b>  <i>(Formerly Medical Assisting 94.)</i>  <i>Prerequisite: Health Technology 93 (may be taken concurrently).</i>            Two hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.  <i>(May be taken three times for credit.)</i>            Pertinent anatomy and physiology, choice of equipment, proper technique, hazards and complications, post-treatment and test patient care and satisfactory performance of a minimum of ten intramuscular, subcutaneous, and intradermal injections; preparation and administration of oral medication.</p>
<p><b>HTEC 90G Basic Patient Care</b> <b>1 1/2 Units</b>  <i>Corequisite: Health Technology 90G students must also enroll in Health Technology 101B.</i>  <i>Advisory: Health Technology 60A.</i>            Three hours lecture-laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.            Medical asepsis, nutrition and diet therapy, vital signs, preparation of examining room and patient, various procedures in the medical office.</p>	<p><b>HTEC 95 Health Technology Externship</b> <b>3 Units</b>  <i>(Formerly Medical Assisting 95.)</i>  <i>Prerequisite: Completion of all other courses in Health Technology curriculum.</i>            Nine hours laboratory.  <i>(Repeatable up to six times.)</i>            Appropriate practical experience in medical facilities.</p>
<p><b>HTEC 101A Skill Building in Clinical Laboratory Procedures</b> <b>1 Unit</b>  <i>(Formerly Medical Assisting 101A.)</i>  <i>Corequisite: Health Technology 101A students must also enroll in Health Technology 64B.</i>            Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.  <i>(Repeatable up to six times.)</i>            Pass-No Pass (P-NP) course.            Collection and handling of blood specimens while developing speed and accuracy; performance of some tests on these specimens as required for medical facilities.</p>	<p><b>HTEC 96 Health Technology Externship</b> <b>4 Units</b>  <i>(Formerly Medical Assisting 96.)</i>  <i>Prerequisite: Completion of appropriate Health Technology Program's curriculum.</i>            Twelve hours laboratory.  <i>(Repeatable up to six times.)</i>            Appropriate practical experience in medical facilities.</p>
<p><b>HTEC 101B Skill Building in Basic Patient Care</b> <b>1 Unit</b>  <i>(Formerly Medical Assisting 101B.)</i>  <i>Corequisite: Health Technology 101B students must also enroll in Health Technology 90G.</i>            Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.  <i>(Repeatable up to six times.)</i>            Pass-No Pass (P-NP) course.            Development of speed and accuracy in skills learned in the basic patient care course; skills include proper hand washing, vital signs, preparation of examination room and patient and various procedures in the medical office.</p>	<p><b>HTEC 101B Skill Building in Basic Patient Care</b> <b>1 Unit</b>  <i>(Formerly Medical Assisting 101B.)</i>  <i>Corequisite: Health Technology 101B students must also enroll in Health Technology 90G.</i>            Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center.  <i>(Repeatable up to six times.)</i>            Pass-No Pass (P-NP) course.            Development of speed and accuracy in skills learned in the basic patient care course; skills include proper hand washing, vital signs, preparation of examination room and patient and various procedures in the medical office.</p>

<p><b>HTEC 101C Skill Building in Medical Communications and Medical Transcription</b> 1 Unit (Formerly Medical Assisting 101C.) Corequisite: Health Technology 101C students must also enroll in Health Technology 61 and/or 74. Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. (Repeatable up to six times.) Pass-No Pass (P-NP) course. Development of speed and accuracy in skills learned in medical communications and medical transcription and advanced medical terminology.</p>	<p><b>HTEC 183 Clinical Microbiology Practicum</b> 6 Units (Formerly Health Technology 283.) Prerequisite: Health Technology 83A. Eighteen hours laboratory. (May be taken two times for credit.) Provides entry-level clinical laboratory practice/experience in the department of microbiology. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations. This practicum will take place at a clinical affiliate site that will be assigned by the MLT (Medical Laboratory Technician) Program Coordinator.</p>
<p><b>HTEC 101D Skill Building in Medical Office Financial Procedures</b> 1 Unit (Formerly Medical Assisting 101D.) Corequisite: Health Technology 101D students must also enroll in Health Technology 72. Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. (Repeatable up to six times.) Pass-No Pass (P-NP) course. Development of speed and accuracy in skills learned in medical office financial procedures course; skills include determining ICD-9CM and CPT codes, completing various types of insurance forms.</p>	<p><b>HTEC 184 Clinical Immunology/Immunohematology Practicum</b> 4 1/2 Units (Formerly Health Technology 284.) Prerequisite: Health Technology 84A. Thirteen and one-half hours laboratory. (May be taken two times for credit.) Provides entry-level clinical laboratory practice/experience in the department of serology and blood banking. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations. This practicum will take place at a clinical affiliate site that will be assigned by the MLT (Medical Laboratory Technician) Program Coordinator.</p>
<p><b>HTEC 101E Skill Building in Medical Office Sterile Technique</b> 1 Unit Corequisite: Health Technology 101E students must also enroll in Health Technology 90H. Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. (Repeatable up to six times.) Pass-No Pass (P-NP) course. Development of speed and accuracy in skills learned in the medical office sterile technique course; skills include local application of heat and cold, application of sterile gloves, assisting with minor surgery, and bandaging.</p>	<p><b>HTEC 185 Clinical Chemistry Practicum</b> 6 Units (Formerly Health Technology 285.) Prerequisite: Health Technology 85C and 85D. Eighteen hours laboratory. (May be taken two times for credit.) Provides entry-level clinical laboratory practice/experience in the department of general and special chemistry. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations. This practicum will be conducted at a clinical affiliate site that will be assigned by the MLT (Medical Laboratory Technician) Program Coordinator.</p>
<p><b>HTEC 101F Skill Building in Medical Office Diagnostic Tests</b> 1 Unit Corequisite: Health Technology 101F students must also enroll in Health Technology 91. Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. (Repeatable up to six times.) Pass-No Pass (P-NP) course. Development of speed and accuracy in skills learned in the medical office diagnostic tests course; skills include performing and assessing electrocardiograms.</p>	<p><b>Hebrew</b></p>
<p><b>HTEC 101G Skill Building in Medical Office Management</b> 1 Unit Corequisite: Health Technology 101G students must also enroll in Health Technology 75. Three hours laboratory, one additional hour to be arranged in the Allied Health or Science Center Resource Center. (Repeatable up to six times.) Pass-No Pass (P-NP) course. Development of speed and accuracy in skills learned in medical office management course; skills include computerized account management duties and medical office administrative simulations.</p>	<p><b>HEBR 1 Elementary Hebrew (First Quarter)</b> 5 Units (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. Five hours lecture, one-hour laboratory. Introduction to the Hebrew language and the culture of Hebrew-speaking Israel. Basic speaking, listening, reading and writing of Hebrew will be introduced and practiced within a cultural framework. Hebrew will be the primary language of instruction. Readings and written practice will be used to further the understandings of the underlying grammatical and syntactical structures. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.</p>
<p><b>HTEC 110 Health Technologies Employment Preparation</b> 1 1/2 Units (Formerly Medical Assisting 110.) Advisory: To be taken the quarter before final externship. Three hours lecture-laboratory, one additional hour to be arranged. (May be taken three times for credit.) Steps involved in seeking employment in medical facilities; preparation of resume and interviewing; preparation for certification examinations.</p>	<p><b>HEBR 2 Elementary Hebrew (Second Quarter)</b> 5 Units (See general education pages for the requirement this course meets.) Prerequisite: Hebrew 1. Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263. Five hours lecture, one-hour laboratory. Continuation and further development of material presented in the introductory course - Hebrew 1. Intensive oral and written practice broadening the functions presented in Hebrew 91. Evaluating additional aspects of the Hebrew language and the culture of Israel, with emphasis on more advanced communicative activities. Hebrew will be the primary language of instruction and class discourse. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.</p>
<p><b>HTEC 180 Clinical Hematology/Urinalysis/Coagulation Practicum</b> 6 Units (Formerly Health Technology 280.) Prerequisite: Health Technology 80A, 81A, and 82A. Eighteen hours laboratory. (May be taken two times for credit.) Provides entry-level clinical laboratory practice/experience in the department of hematology, urinalysis and coagulation. Emphasis is placed on technique, accuracy, and precision. Different instrumentation will be introduced as well as bench/manual methods. Competence will be evaluated based on final clinical evaluations. This practicum will be conducted at a clinical affiliate site that will be assigned by the MLT (Medical Laboratory Technician) Program Coordinator.</p>	<p><b>HEBR 3 Elementary Hebrew (Third Quarter)</b> 5 Units (See general education pages for the requirement this course meets.) Prerequisite: Hebrew 2. Advisory: English Writing 200 and Reading 200 (or Language Arts 200), or English as a Second Language 261, 262 and 263. Five hours lecture, one-hour laboratory. Continuation and further development of material presented in the introductory and intermediary courses - Hebrew 1 and Hebrew 2. Focus on intensive oral class interactions in Hebrew and increased scope of written works will further the competency acquired in Hebrew 92. Evaluating additional aspects of the Hebrew language and the culture of Israel, with emphasis on contemporary discourse. Classes will be conducted in Hebrew. Language laboratory practice will be part of the regular instruction to reinforce pronunciation, grammar, syntax, and conversation.</p>