Courses

This chapter is a compendium of the courses of instruction offered by the University of California, San Francisco. Additional courses are offered by the schools (see Addresses section) under their programs of Continuing Education. Courses are arranged in numerical order under alphabetically listed subject headings. As these headings do not in every case correspond to a department, the responsible department or other instructional unit is indicated at the end of the course description. Abbreviations used for these departments or instructional units are spelled out in the list below. Inquiries about individual courses should be addressed to the indicated department or instructional unit for information that is not included here, nor in the separately published bulletins of the four schools or of the Graduate Division. These bulletins, available from the respective schools or the Graduate Division, indicate, for example, the place of various courses in the different established curricula.

Course Description. Course information is arranged in three paragraphs. The first paragraph includes course number, title, units (in parentheses), session offered, prerequisite, format and breakdown of hours per week. The second paragraph names the instructor(s) in charge. The third describes the course content, followed by department or other instructional unit.

Course Numbers. All courses are numbered according to the following system: 100 series = upper division professional course, 200 and 300 series = graduate academic course, and 400 series = postdoctoral professional course. The meaning of the second (tens) and third (units) digits varies among the schools. A detailed explanation of course numbering is available from the office of the dean of each school. The symbol § following the units designates a course approved for credit toward a graduate academic degree. Sessions: Su = summer term, SS = summer session, F = fall quarter, W = winter quarter, Sp = spring quarter.
Departments and Other Instructional Units

ANATOMY
Department of Anatomy, School of Medicine

ANESTHESIA
Department of Anesthesiology, School of Medicine

BIOCHEM
Department of Biochemistry and Biophysics, School of Medicine

CL PHARM
Division of Clinical Pharmacy, School of Pharmacy

DENT PUB HLTH
Department of Dental Public Health and Hygiene, School of Dentistry

DERMATOL
Department of Dermatology, School of Medicine

EPID & BIOSTAT
Department of Epidemiology and Biostatistics, School of Medicine

FAM CM MED
Division of Family and Community Medicine, School of Medicine

FAM HLTH
Department of Family Health Care Nursing, School of Nursing

GR DEVEL
Department of Growth and Development, School of Dentistry

HIST HL SC
Department of History of Health Sciences, School of Medicine

LAB MED
Department of Laboratory Medicine, School of Medicine

MEDICINE
Department of Medicine, School of Medicine

MENT HLTH COMADM
Department of Mental Health, Community, and Administrative Nursing, School of Nursing

MICROBIOL
Department of Microbiology and Immunology, School of Medicine

NEURO SURG
Department of Neurological Surgery, School of Medicine

NEUROLOGY
Department of Neurology, School of Medicine

OB GYN R S
Department of Obstetrics, Gynecology and Reproductive Sciences, School of Medicine

OPHTHMOL
Department of Ophthalmology, School of Medicine

ORAL & MAX SURG
Department of Oral and Maxillofacial Surgery, School of Dentistry

ORTHO SURG
Department of Orthopedic Surgery, School of Medicine

OTO LARYN
Department of Otolaryngology, School of Medicine

PATHOLOGY
Department of Pathology, School of Medicine

PEDIATRICS
Department of Pediatrics, School of Medicine

PHARM CHEM
Department of Pharmaceutical Chemistry, School of Pharmacy

PHARMACOL
Department of Pharmacology, School of Medicine

PHARMACY
Department of Pharmacy, School of Pharmacy

PHYSiol NURS
Department of Physiological Nursing, School of Nursing

PHYSIOLOGY
Department of Physiology, School of Medicine

PSYCHIATRY
Department of Psychiatry, School of Medicine

RADIOLOGY
Department of Radiology, School of Medicine

RESTOR DENT
Department of Restorative Dentistry, School of Medicine

SOC BEH SC
Department of Social and Behavioral Sciences, School of Nursing

STOMATOLO
Department of Stomatology, School of Dentistry

SURGERY
Department of Surgery, School of Medicine

UROLOGY
Department of Urology, School of Medicine

Hospitals

AB
Alta Bates-Herrick Hospital, Berkeley

AS
Atascadero State Hospital, Atascadero

BDC
Buchanan Dental Clinic

C
California Pacific Medical Center-California campus, San Francisco (formerly Children's Hospital)

CHMC
Children's Hospital Medical Center of Northern California, Oakland

CHS
Community Hospital, Santa Rosa

CM
Ernest C. Cowell Memorial Hospital, Berkeley

CSP
Center for Special Problems, San Francisco

DCH
Sutter Davis Hospital, Davis

DMC
Dimes Medical Center, San Francisco

FCH
Fresno Community Hospital and Medical Center, Fresno

FRA
Kaiser Foundation Hospital-Fresno campus, San Francisco

GS
Good Samaritan Hospital of Santa Clara Valley, San Jose

H
Highland General Hospital, Oakland

K
Kaiser Foundation Hospital, San Francisco

KH
Kaiser Foundation Hospital, Honolulu

KHDV
Kaiser Delta District Hospital, Visalia

K
Kaiser Foundation Hospital, Oakland

KSSF
Kaiser Foundation Hospital, South San Francisco

KWC
Kaiser Foundation Hospital, Walnut Creek

KS
Kaiser Foundation Hospital, Sacramento

L
Letterman Army Medical Center, San Francisco

LJB
Lawrence Berkeley Laboratory, Berkeley

LH
Laguna Honda Hospital and Rehabilitation Center, San Francisco

LPPI
Langley Porter Psychiatric Hospitals and Clinics, San Francisco

MC
Maricopa Medical Center, Phoenix

MG
Marin General Hospital, Greenbrae

MHLB
Memorial Medical Center, Long Beach

MZ
Mount Zion Medical Center of UCSF, San Francisco

NAT
Natividad Medical Center, Salinas

NRMC
Naval Hospital, Oakland

NS
Napa State Hospital, Napa

OC
O'Conner Hospital, San Jose

PH
Milken-Peninsula Hospitals, Burlingame

PMC
California Pacific Medical Center-Pacific campus, San Francisco

Q
Queen's Medical Center, Honolulu

RLA
LAC-Rancho Los Amigos Hospital, Downey

S
Stanford University Hospital, Stanford

SCC
Santa Clara Valley Medical Center, San Jose

SDH
Selma District Hospital, Selma

SGH
San Francisco General Hospital Medical Center, San Francisco

SGH
Scenic General Hospital, Modesto
Anatomy

100A. Systemic Regional & Devel Anat. (5) S Lecture 3 hours. Lab 6 hours.
Sutherland and Staff.
The gross structure of the human body is studied by means of dissection, demonstration, X-ray, surface, developmental, and cross-sectional anatomy with special reference to the functional aspects of the structures examined. ANATOMY

100B. Systemic Regional and Devel Anat. (4) S Lecture 2 hours. Lab 6 hours.
Sutherland and Staff.
The gross structure of the human body is studied by means of dissection, demonstration, X-ray, surface, developmental, and cross-sectional anatomy with special reference to the functional aspects of the structures examined. ANATOMY

100C. Systemic Regional & Devel Anat. (5) SS Lecture 3 hours. Lab 6 hours.
Sutherland and Staff.
The gross structure of the human body is studied by means of dissection, demonstration, X-ray, surface, developmental, and cross-sectional anatomy with special reference to the functional aspects of the structures examined. ANATOMY

103. Nervous System: Form & Function. (4-6) Sp. Prerequisite: Consent of instructor required for graduate students. Lecture 5 hours. Lab 3 hours.
R. Ralston, Strayer and Staff.
The structure and function of the mammalian nervous system studied in lectures, conferences, demonstrations, and laboratories, with emphasis on the human nervous system and its organization. Intended for students in the School of Medicine and as an introductory course for graduate students. ANATOMY

103.01. Neuroanatomy. (2) S. Prerequisite: Completion of course prerequisite for admission to the University and the Curriculum in Physical Therapy. Open only to students enrolled in the Curriculum, or by consent of program director. Lecture 1 hour. Lab 3 hours.

115. Histology. (3) S Lecture 2 hours. Lab 3 hours. Martin and Staff.
A study of the microscopic structures of the tissues and organs of the human body by means of lectures, demonstrations, and microscope slides. Functional aspects of the structures are stressed. Intended for students in the School of Pharmacy. ANATOMY

Sutherland.
A study of the macroscopic structure of the human body by means of lectures and dissection. Functional aspects of the structures are stressed. Intended for students in the School of Pharmacy. ANATOMY

117.01. Gross Anatomy & Embryology. (4) S Prerequisite: First-year dental standing. Lecture 5 hours. Lab 15 hours.
S. Fisher.
The gross structure and developmental anatomy of the thorax and abdominal regions are studied by means of lectures, laboratory exercises, and demonstrations. The functional significance of the structures is emphasized. STOMATOL

117.02. Head & Neck Anatomy. (4) S Prerequisite: First-year Dentistry standing. Lecture 2 hours. Lab 6 hours.
S. Fisher.
The gross anatomy of the head and neck is studied by lectures and dissection. Clinical applications and functions of importance to the dentist are emphasized. STOMATOL

118. General Histology. (4-5) S Lecture 4 hours. Lab 2 hours.
R.H. Kranner.
The microscopic structure of tissues and organs of the body are studied with histophysiological considerations. STOMATOL

150.01. Gross & Regional Anatomy. (1.5) S Lecture 4 hours. Lab 2 hours. W. F. Sp. Prerequisite: Program must be approved by department and adviser during quarter previous to enrollment.
H. Patterson.
Individual/group discussions. Advanced review of gross anatomy intended as a block elective course for advanced medical or graduate students. ANATOMY

156.01. Gross Anatomy & Embryology. (2-5) S Prerequisite: Dental Hygiene standing. Lecture 5 hours. Lab 4 hours.
S. Fisher.
The gross structure and developmental anatomy of the thorax and abdominal regions are studied by means of lectures, laboratory exercises, and demonstrations. The functional significance of the structures is emphasized. STOMATOL

156.02. Head & Neck Anatomy. (3) S Prerequisite: Dental Hygiene standing. Lecture 2 hours. Lab 3 hours.
S. Fisher.
The gross anatomy of the head and neck is studied by lectures and demonstrations. Clinical applications and functions of importance to the dental hygienist are emphasized. STOMATOL

170.01. Medical Scholars Program Workshops. (1) W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. Lab 1 hour.
Sutherland, Ralston.
Workshops in anatomy and neuroanatomy, offered concurrent to the first-year course, will present challenging material in the form of problem sets which students will solve in groups. Material, geared toward high-achieving students, will augment basic coursework with clinical and basic science information. ANATOMY

170.02. Survey of Congenital Defects. (2) S or Sp. Prerequisite: Gross anatomy and consent of instructor. Restrictions: Open only to students enrolled in Physical Therapy program. Lecture 2 hours. Offered in summer or spring of even-numbered years. McKenzie.
This course is designed to provide physical therapists with information on the more common human congenital defects. Environmental and genetic factors that produce malformations are considered and possible mechanisms discussed. ANATOMY

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. ANATOMY

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. ANATOMY

201. Radiation Effects on Genes & Chromosomes. (2) S W. Prerequisite: Consent of instructor. Lecture 2 hours.
S. Wolf.
Concepts and mathematics of target theory relating to damage of genetic apparatus. Biophysical and biochemical studies on induction of intragenic and intergenic mutations that give insight into the structure of chromosomes and the interaction of radiation with biological material. ANATOMY
Anesthesia

Caullwel
The course consists of instruction and experience in operating room anesthesia including preoperative and postoperative evaluation and care. Cardiopulmonary resuscitation and care of the unconscious patient are stressed.

Anesthesiology

111. Advanced Cardiac Life Support (1.5 week) Su, F, Sp. Prerequisite: Basic cardiac life support (BLS or CPR) and Anesthesia 110. Restriction: 4th year medical students; UCSC Lecture 8 hours; Workshops 12 hours.
Carlisle, Cassora
American Heart Association-certified training in advanced cardiac life support. Includes recertification in BLS if needed, airway management, invasive monitoring and techniques, arrhythmia detection and management, cardiovascular pharmacology, acid-base balance, neonatal and pediatric resuscitation, and defibrillation.

140.01. Advanced Clinical Clerkship - UC, (1.5 per week) Su, F, Sp. Prerequisite: Anesthesia 110. Caullwel, Boegert, Way
Clinical clerkship in operating room anesthesia. Two weeks in UCSF Surgery Center, focusing on basic anesthesia skills and anesthesiology for surgical operations of all age groups. Two weeks in Moffitt-Long Operating Rooms, emphasizing anesthesia for subspecialty surgery. Scheduled through Anesthesia, ext. 63234.

140.02. Off-Campus Clerkship - UC, (1.5 per week) Su, F, Sp. Prerequisite: Anesthesia 110. Caullwel
Off-campus clinical clerkships in approved hospitals by special arrangement and approval of the Director of Medical Student Education, Department of Anesthesiology, University of California, San Francisco.

140.03A. Intensive Care Clerkship - SFPGH, (1.5 per week) Su, F, Sp. Prerequisite: Anesthesia 110, Medicine 110, and Surgery 110.
Schlobohm, Lace, Horn, Schapera
Clinical clerkship on techniques of intensive care with primary emphasis on respiratory, cardiovascular, and renal pathophysiology. Patient population includes adults and pediatric patients with medical and surgical illnesses, a significant percentage of whom have been severely traumatized.

140.03B. Advanced Clerkship in Intensive Care - UC, (1.5 per week) Su, F, Sp. Prerequisite: Anesthesia 110, Medicine 110, Surgery 110 and consent of instructor.
Cohen
Diagnose and therapeutic mechanisms of caring for critically ill patients in adult medical-surgical ICU with an emphasis on understanding respiratory, cardiovascular, cerebral and renal pathophysiology in patients with multi-system failure. Students will learn indications for and invasive and noninvasive monitoring.

140.06. Pain Management, (1.5 per week) Su, F, Sp. Prerequisite: Anesthesia 110.
Draper, Mason
The student will learn diagnosis and treatment of acute and chronic pain. Rotation includes the Perioperative Pain Service (managing epidural infusions and PCA) and the Multidisciplinary Pain Center (managing all aspects of chronic pain, including diagnostic and therapeutic nerve blocks).

150.01. Research in Anesthesia, (1.5 per week) Su, F, Sp. Prerequisite: Anesthesia 110. Consent of the Dean and Department of Anesthesia.
Staff
Students conduct research projects under guidance of faculty member. Projects must be approved by instructor involved in supervising student. Students may initiate or become involved in established research programs under faculty guidance.

160.01. Basic Life Support, (0.5) F, Sp. Restrictions: 1st year medical students only. Lecture 1 hour. Lab 3 hour.
Cohen, Cahalan, Strong
Course trains students in professional rescue life support skills: cardiopulmonary resuscitation and ventilation, management of airway obstruction, and assessment of need to initiate or terminate CPR. Successful completion of this course results in AHA or ARC certification in CPR, ANESTHESIA.

179. General Anesthesiology, (6) Sp. Prerequisite: Interns and residents. Class. Miller and Staff
Course covers the systemic effects of the various muscle relaxants, anaesthetics, and stimulants and the administration of general anaesthetic agents.
ANESTHESIA

199. Laboratory Project, (1-5) Su, F, Sp. Eger
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. ANESTHESIA

400. Anesthesia Staff Conference, (2) F, Sp. R. D. Miller
Course includes didactic lectures in sciences basic to the specialty of anesthesia, as well as case reviews, clinical discussions, and seminars on current medical literature in anesthesiology. ANESTHESIA

450. Anesthesia Clinical Work, (1-5 per week) Su, F, Sp. Required during last year of residency, and during either second or third year.
R. D. Miller
Residents are responsible for anesthetic care and management of patients in the operating rooms and out-patient departments, under immediate and remote supervision of the staff. Preoperative and postoperative evaluation of patients, oxygen therapy, and resuscitation are covered.

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Anatomy

204. Cytogenetic Techniques, (3) Sp. Prerequisite: Consent of instructor. Lab 6 hours.
Wolff
Course covers instruction in various methods of chromosome banding as well as cell cycle analysis by autoradiography. ANATOMY

207. Neuroanatomical Physiology, (3) W. Prerequisite: Basic Human Neuroanatomy or consent of instructor. Lecture 3 hours.
Melnick
A study of the physiology of striated muscle and peripheral nerve in relationship to controlling mechanisms within the nervous system. ANATOMY

215. Laboratory Rotation, (4) J, E, W. Sp. Prerequisite: Consent of instructor. Lab 12 hours.
Werbl and Staff
A laboratory rotation course to familiarize new departmental graduate students with various approaches in research. ANATOMY

Staff
Students, staff, or guest present selected topics concerned with current research in anatomy for criticism and discussion. ANATOMY

225. Experimental Neuroanatomy, (4) J, SS, SS. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 6 hours. Lectures and labs full time for 2 weeks. Offered in alternate years. Offered 1993-94.
M. LaVail, Raisman, J. LaVail, Basbaum
Lectures and laboratory projects on the principles and experimental methods of analyzing the neural organization of the central and peripheral nervous systems. Topics include neurobiology, axon transport, neural degeneration, immunocytochemistry, autoradiography, electron microscopy, quantitative data acquisition methods, and photomicrography. ANATOMY

230. Developmental Biology, (5) F. Prerequisite: Biochemistry 245 and 246 or consent of instructor. Lecture 3 hours.
Calarco, Pedersen
Principles of development presented with an emphasis on cell and molecular research approaches. Topics to be included are early development, cell-cell interactions, and terminal differentiation. Lectures and student discussions of current and classical research approaches. ANATOMY

231. Devel of Cellular & Molec Biol, (3) W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1993-94.
Calarco
Molecular and cellular events relating to differentiation and development. A variety of developmental phenomena will be surveyed and related, where possible, to genetic and epigenetic control mechanisms. ANATOMY

233. Mammalian Chromosomes & Mosasites, (2) Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Offered in alternate years. Not offered 1993-94.
Pedersen
Course focuses on procedures for producing mammalian chromosomes and the use of chromatin in analysis of development. Topics to be covered include analysis of pathogenesis, cell commitment, differentiation, growth control, neoplasia, germ cells, and reproduction. ANATOMY

235. Developmental Neurobiology, (1-3) W. Prerequisite: Consent of instructor. Lecture 1-2 hours. Offered every third year. Not offered 1993-94.
J. LaVail, M. LaVail, L. Reichardt
Principles involved in the structural and functional development of the nervous systems as well as detailed consideration of the development of several specific regions of the mammalian central nervous system. Lectures, student presentations, and discussions of classical and current literature. ANATOMY

250. Research, (1-8) F, Sp. Staff
A laboratory rotation course to familiarize new departmental graduate students with various approaches in research. ANATOMY

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Anesthesia/Animal Science/Anthropology

460. Special Assignment, (1.5 per week) Su, F.W. Consent for residents during either second or third year.
UC Gregory, Calahan
Assignments include instruction in anesthesia for children, problems related to open heart surgery, cardiology, and opportunity for research in related fields. ANESTHESIA

470. Molecular Biological Techniques for Anesthesiology Research, (8) Sp: Restriction: For staff, fellows, and research assistants in Department of Anesthesiology only. Lab: 16 hours.
UC Yost, Forsey
Practical beginning laboratory course in molecular biological techniques. Participants will be instructed in current techniques employing plasmid, restriction endonuclease, and microbiological methods for the amplification and manipulation of cloned DNA.

Animal Science

166. Introduction to Laboratory Animal Science, (3) Sp: Prerequisite: Course in general biology or consent of instructor. Lecture 2 hours, Lab 3 hours.
Hoener
This course will consist of lectures and laboratories on the use of laboratory animals in research. Topics will include the ethical/human use of laboratory animals, selection of biomedical model, zoonotic diseases, general principles of anesthetics, analgesics, anesthetic, and humane methods of euthanasia.

Pharmacy

Fundamentals of anthropolological research design, methods, and analysis through lectures, readings and field assignments. EPID & BIOSTAT

212A.-B. Research Apprenticeship, (2.5-2.5, 2.5-2.5) E.W. Sp: Prerequisite: Consent of instructor. Lab: 15 hours.
Staff
Students work with individual faculty members in ongoing research projects. Each student will work on supervised data collection and analytical tasks, and a broader range of research activities, such as problem formulation, grant proposal writing, and research design and execution. EPID & BIOSTAT

215. Life History Methods, (2-3) F.W. Sp: Seminar 2.5 hours.
Abban
Review of theoretical and methodological literature on anthropological life histories and the uses of life history materials. Classic life histories and newer works will be read and examined for the methodological and analyses utilized.

Lab 3 hours.
Nyegeger
Workshop format, utilizing student research interests. Topics include model building; problem formulation; design of research strategies; evaluation of sampling methods; operationalization of concepts; special problems for qualitative data. Course is preparatory for anthropological statistics. EPID & BIOSTAT

217. Statistics, (2) F.W. Sp: Lecture 2 hours. Lab 3 hours.
Mitteness
Introduction to statistical methods for the social sciences: measurement, selected data characteristics, probability theory, statistical models, descriptive statistics, the general linear model, analysis of qualitative data. Emphasis is on understanding fundamental assumptions and procedures of statistical methods relevant to anthropology. EPID & BIOSTAT

218. Computer Methods, (3-4) Sp: Lecture 3 hours. Lab 0.5 hours.
Staff
An introduction to data processing methods most commonly used by medical anthropologists. Topics covered in lectures and laboratory demonstrations include: how a computer works, data form design, keypunching, use of SPSS and HMD program packages and interpretation of computer output. EPID & BIOSTAT

220. Departmental Seminar, (0) F.W. Sp: Prerequisite: Consent of instructor. Lecture 1 hour.
Mitteness
Students, staff, or guest lecturers present selected topics based on their current work. EPID & BIOSTAT

221A.-B. History & Theory of Anthropology, (3-3) F.W. Prerequisite: Consent of instructor. Generally limited to students in anthropology. Lecture 3 hours.
Staff
A review of the history and development of anthropology and in major theoretical approaches. Lectures, discussion, and readings focus on major issues, trends, personalities, and present concerns in the field. EPID & BIOSTAT

225. Contemporary Issues, (2-4) F.W. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 to 6 hours independent study for 3 or 4 units.
Lane
Introduction to selected controversies and current issues in medical anthropology, including: sociocultural impact of high technology medicine; abortion, euthanasia and the right to life; status of research on the etiology of mental disorders; advocacy, praxis and the social sciences. EPID & BIOSTAT

Abbon
Examination of social attributes of stigma to such conditions as drug use, alcoholism, obesity, dwarfism, mental and physical disabilities. Self-help groups organized around such conditions will be examined. Guest speakers who have experienced these conditions will contribute to the course. EPID & BIOSTAT

227. Community Resources for Health & Mental Health, (3-4) F. W. Sp: Seminar 2-3 hours Variable field observations.
Abbon
This course will survey the range and categories of indigenous community resources for health and mental health. Informal and formal community organizations, therapeutic self-help groups, voluntary associations, and alternative healing modalities will be assessed for their functions at health and mental health resources. EPID & BIOSTAT

230. Culture & Personality, (2-5) F. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study for 3 units.
Kiefer
Exploration of the relationship between culturally conditioned ways of perceiving, thinking, and communicating, and individual behavior and personality development. Application of cultural and personality findings in medical and nursing settings. EPID & BIOSTAT

231. Ethnoepidemiology, (2-3) F.W. or Sp. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study for 3 units.
Staff
Course examines principles of health systems in the treatment of mental disorders including folk healing, cross-cultural comparisons, research methods, and implications for community psychiatry. Students study local examples of folk healers or folk healing institutions. EPID & BIOSTAT

233. Anthropology of Aging, (2-3) F.W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, plus research project for 3 units.
Kiefer
Cross-cultural approaches to roles, statuses, and problems of aged populations. Cultural factors affecting the condition and adaptation of the aged in American society. Topics to be covered include cultural attitudes and values, social relationships, and health problems. EPID & BIOSTAT

234. Culture & Symbolic Systems, (2-3) F.W. Prerequisite: Anthropology 230A or equivalent, or consent of instructor. Lecture 2 hours, plus 3 hours independent study for 3 units.
Staff
Symbolic expressive behavior is considered from psychocultural life-cycle and psychoanalytic perspectives. Various projection systems are analyzed: psychological test, dreams, folklore, myths, religious rituals, altered states of consciousness, and healing procedures. EPID & BIOSTAT

235. Cross-Cultural Aspects of Childhood, (3) F. Prerequisite: Consent of instructor. Open to students in medicine, nursing, and graduate departments. Lecture 2 hours, plus research paper.
Mitteness, Barker
Review of child development, child rearing and family dynamics in various social units. Western cultures and selected ethnic subcultures of the United States, from historical, psychological, and anthropological perspectives. EPID & BIOSTAT

239. Comparative Family Systems, (3) F.W or Sp. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study.
Abbon
Anthropological approaches to family study. Structure and dynamics of varying family systems examined, emphasizing changing family form and ways families life style and values contribute to modes of coping with stress, illness, and crisis. EPID & BIOSTAT
245. Development in Late Adulthood. (3) F, Lec. 2 hrs, Lab 3 hrs.
Kayser-Jones
Course covers developmental theory and research in aging. Emphasis is on anthropological, sociological, and psychological studies. Current issues in aging with emphasis on implications for health care are discussed. EPID & BIOSTAT

246. Comparative Medical Systems. (2-3) S. Prerequisite: Consent of instructor. Lecture 2-3 hrs. Beyene
Popular medicinal in the Third World with emphasis on how people use indigenous and biomedical health care resources. Theories of health and disease, social and symbolic dimensions of healing, and relevance of traditional medicine for health maintenance and primary health care. EPID & BIOSTAT

247. Contemporary American Society. (3) S, F, W, or Sp. Prerequisite: Consent of instructor. Lecture 2 hrs, plus 3 hrs in-depth study. Albous
A review of anthropologically oriented research on basic American values, social organization, and ethnicity. Emphasis is on socio-economic diversity and changing institutions, values, and life styles. EPID & BIOSTAT

248. Group Study. (1-5) S, F, W, Sp. Prerequisite: Consent of instructor. Staff
Groups of five or more collaborate on social problems in anthropology under the direction of a faculty student may select areas related to their long-term interest and future research. EPID & BIOSTAT

249. Directed Reading. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Staff
Independent study. EPID & BIOSTAT

250. Research. (1-8) F, W, Sp. Prerequisite: Consent of instructor. Staff
Independent study. EPID & BIOSTAT

251. Social Gerontology. (2-4) S, W, or Sp. Prerequisite: Consent of instructor. Lecture 2 hrs, plus 3 or 6 hrs independent study for 3 or 4 units. Staff
An overview of the theoretical, empirical, and applied literature on the social processes of aging in this country. Special emphasis on health-related problems and the delivery of services to the elderly. EPID & BIOSTAT

Justice
Combining the perspectives of anthropology and health policy the course will examine the effect of culturally shared beliefs and values on utilization of health services and the impact of health policies on medical care in the United States and other countries. EPID & BIOSTAT

253. Late Life Family. (3) S, F, W, Sp. Prerequisite: Consent of instructor. Seminar 3 hrs. C. Johnson, L. Troll
A review of research on the late-life family with a critical analysis of the conceptual and methodological insights guiding research. Interpretations of the care-giving and social support literature will be associated with social, cultural, and psychological theories on the family. EPID & BIOSTAT

260. Epidemiology & Med Anthro. (2-4) S, Prerequisite: Training in epidemiology and consent of instructor. Lecture 2 hrs plus 3 or 6 hrs independent study for 3 or 4 units. Lane and Staff
Individual or small group directed reading and discussion of epidemiological and medical ecological perspectives, methods, and findings relevant to the field of medical anthropology. EPID & BIOSTAT

297. Special Study. (1-5) S, F, W, Sp. Prerequisite: Consent of instructor. Staff
Independent study. EPID & BIOSTAT

299. Dissertation. (0) F, W, Sp. Prerequisite: Advanced to candidacy and permission of the graduate adviser. Staff
For graduate students engaged in writing the dissertation for the Ph.D. degree. EPID & BIOSTAT

Biochemistry

100. Human Metabolism. (5) W. Prerequisite: Interdepartmental Studies 100: Cell and Tissue Biology or consent of instructor. Lecture 4 hrs. Conference 2 hrs.
Colby, Musci
Lectures and conferences in the metabolism of carbohydrates, lipids, amino acids, and nucleotides, with emphasis on physiological regulation. Primarily for medical students. BIOCHEM

Lectures in biochemistry include aspects of cell physiology and cellular ultrastructure, with emphasis in the area of connective and mineralizing tissues. Fundamental knowledge is presented in the context of its applicability to clinical health sciences. Primarily for dental students. BIOCHEM

Lectures in biochemistry, including aspects of cell and molecular biology, cell physiology, and human metabolism. BIOCHEM

150. Research in Biochemistry. (1.5 per week) F, W, Sp. Prerequisite: Consent of instructor. Staff
Research in biochemistry. BIOCHEM

170.01. Molecular Biology of Cancer. (2) W. Seminar 2 hrs. Project 2 hours. Library research 1 hour. Colby
Seminar on molecular and cellular biological approaches to disease processes. BIOCHEM

170.02. Medical Scholars Program Workshops. (1) F. Prerequisite: First-year standing. Seminar 2 hours. Colby
Workshops in cell and tissue biology (P) and human metabolism (W) will present challenging material in the form of weekly problem sets which students will solve in groups. The material presented augments required coursework with basic science and clinical information. BIOCHEM

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. BIOCHEM

199. Laboratory Project. (1-5) S, F, W, Sp. Prerequisite: Consent of instructor. Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. BIOCHEM

200A. Structure of Macromolecules. (3) W. Prerequisite: Calculus, physical chemistry, organic chemistry, and an advanced course in biology. Lecture 3 hours. Flasterick and Staff
Fundamental principles governing the behavior of, and modern techniques for study of biological macromolecules. Topics covered: stereochemistry (enzymes, cooperativity, chemical interactions); kinetics and catalysis; structure and function of macromolecules (DNA, proteins, enzymes) by X-ray and electron optics; kinetics and cooperative enzymes and systems of biological control. BIOCHEM

200C. Chromosome Structure & Function. (1.5) S. Prerequisite: Calculus, physical chemistry, organic chemistry, and an advanced course in biology are recommended. Lecture 3 hours for one-half quarter. Sedlar
Structure and function of chromosomes in eukaryotes will be discussed in depth, beginning with basic underlying experiments and leading to the most recent proposals for structure. Emphasis both theoretical and experimental approaches to this area of cell and molecular biology. BIOCHEM

200E. Enzymology. (3) S. Prerequisite: Calculus, physical chemistry, organic chemistry, introductory biochemistry, and an advanced course in biology or consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1993-94. Santini, Kenyon
Biochemically important chemical transformations from the physical organic point of view, emphasizing catalytic mechanisms pertinent to enzyme reactions, and to the development of enzyme model systems. Intermediary molecules and enzyme substrate interactions. Techniques of investigating enzyme mechanisms and kinetics. BIOCHEM

210A-B. Biological Regulatory Mechanisms. (3, 1.5) S, W. Prerequisite: Calculus, physical chemistry, organic chemistry, introductory biochemistry and an advanced course in biology. Lecture 3 hours. Yamamoto
The discovery of principles forming the foundation of molecular biology and recent advances in rapidly developing areas of the field. Topics covered: RNA transcription, protein translation, DNA replication, control mechanisms, and genome structure and organization. BIOCHEM

210. Special Topics. (0-5) S, F, W. Prerequisite: Consent of instructor. Lecture 1.5 hours. Staff
Discussion of selected areas in biochemistry, biophysics, and biometrics. BIOCHEM

215. Laboratory Rotation. (3) F, W, Sp. Prerequisite: Consent of instructor. Lab 9 hours. C. Gutierrez
A laboratory rotation course to familiarize new departmental graduate students with various approaches to biochemical and biophysical research. BIOCHEM

220. Selected Topics. (0-5) S, W. Lecture 1 hour. Staff
Lectures and discussion on topics of current interest in biochemistry and bio-physics. BIOCHEM

221. Selected Topics. (0-5) F, W, Sp. Lecture 1 hour. Staff
Presentation of selected topics in biochemistry by graduate students in the Department of Biochemistry. BIOCHEM

242. Protein Crystallography. (3) S. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Offered in alternate years. Not offered 1993-94. Strauss
Principles of X-ray crystallography applicable to protein structure analysis will be presented in a course oriented toward research level understanding of the field. Course will involve group participation and some experimental work. BIOCHEM

246. Cell & Developmental Biology. (3) S. Prerequisite: Calculus, physical chemistry, organic chemistry, and an advanced course in biology are recommended. Lecture 3 hours. T. Kornberg, G. Martin
Modern aspects of cell biology and development with emphasis on structure-function relationships and multicellular organisms. BIOCHEM

256. Research. (1-8) S, W. Staff
BIOCHEM

297. Special Study. (1-3) S, F, W, Sp. Staff
Reading and conferences for properly qualified students under the direction of a member of the staff. BIOCHEM
Biochemistry/Biophysics

299. Dissertation. (0) F, W, Sp. Prerequisite: Approval from the committee; candidacy and permission of the graduate adviser.

Staff
For graduate students engaged in writing the dissertation for the Ph. D. degree. BioCHEM

Bioengineering

198. Supervised Study. (1-5) F, W, Sp. Prerequisite: Consent of instructor and academic adviser.

Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department.

200. Off-Campus Study. (0) F, W, Sp. Langridge
Full-time study in bioengineering at another location through the UCSC/UCB Graduate Group in Bioengineering.


Perez-Mendez
Basic physics of radioactivity and alpha, beta, gamma, and fission processes. Interactions of radiation with matter, basic radiation detectors for counting and determining energies of charged particles, neutrons, and gamma rays. Counting statistics and radiation protection. Applications in biology, chemistry, engineering.

220. Bioengineering Seminar. (1) F Seminar 2 hours.

Baumrind, Bhattacharya
Presentation and discussion of student and faculty research in progress.

221. Orthopaedic Mechanics & Materials. (2) W Lecture 2 hours.

Skinner
This course is intended to introduce the student to the mechanics of several joints in the human body, to acquaint the student with common biomaterials (and their properties) used in orthopaedics, and to discuss these uses with respect to joint mechanics and joint displacement.

230A. Physics of Medical X-ray Imaging. (3) F Prerequisite: Baccalaureate degree in engineering or a physical science, differential equations, Fourier analysis, or consent of instructor. Lecture 3 hours.

Hasagawa, Cahn, Gould
Basic interactions of photons and particles with matter; detectors and detector electronics; radiation quantity and quality, contrast, spatial resolution, noise, and image perception; radiation protection.

230B. Physics of Medical X-ray Imaging. (3) W Prerequisite: First quarter course in Physics of Medical X-ray Imaging or equivalent, or consent of instructor.

Hasagawa, Cahn, Gould
X-ray production, x-ray scatter and scatter production, video imaging, image intensifiers, linear tomography, computed tomography, radiography, digital subtraction angiography, photostimulable phosphor technology, dual-energy imaging techniques, bone-mineral densitometry, and quantification of vascular flow.

240. Principles of Nuclear Magnetic Resonance Imaging. (3) F, Sp. Prerequisite: Baccalaureate degree in engineering or a physical science; knowledge of Fourier analysis, electromagnetic waves and radiation, or permission of instructor. Lecture 3 hours.

Hylton, Carlson, Coovs, Orendahl, Kaufman
Fundamentals of nuclear magnetic resonance and magnetic resonance imaging; parameterization of image acquisition, image optimization, and display. Emphasis on Fourier imaging methods and instrumentation.


Staff
Advanced study in a variety of subjects through seminars on topics to be selected each year, informal group studies of special problems, group participation in comprehensive design problems, or group research on complete problems for analysis and experimentation.


Staff
280. Clim Aspects of Bioengineering. (2) F, Sp. Prerequisite: Consent of instructor. Lecture 1.5 hours. Lab 1.5 hours.

Litt
Imtportant clinical issues relevant to bioengineering will be reviewed to help students appreciate the potentials and pitfalls of contemporary technologies. Students will contact scientists, physicians, nurses, technicians, and patients to identify important medical issues that require advanced bioengineering support.


Staff
Reading and conference for properly qualified students under the direction of a member of the staff.

298. Thesis. (0) F, W, Sp. Prerequisite: Approval from the committee; candidacy and permission of the graduate adviser.

Staff
For graduate students engaged in writing the thesis for the master's degree.

299. Dissertation. (0) F, W, Sp. Prerequisite: Approval from the committee; candidacy and permission of the graduate adviser.

Staff
For graduate students engaged in writing the dissertation for the Ph. D. degree.

Biomechanics

180. Algebra & Calculus for Biomech. (3) S, Sp. Prerequisite: Consent of instructor. Licko
Mathematical concepts and processes for planning, representation, and analysis in biomedical research. Review of algebraic operations, equations, matrices, and graphs. Introduction to functions, sequences, convergence, derivatives, integrals, and infinite series. Applications to growth, binding, enzyme kinetics, tracer studies, population dynamics.

190. Biolog Modeling through Diff Eqs. (3) F, S Prerequisite: Biomechanics 180 or equivalent. Lecture 2 hours. Lab 2 hours.

Licko
Development of intuitive notions regarding differential equations: Quantitative and qualitative aspects of differential equations are explored by analog, digital, and analytic techniques. Applications to selected problems in compartmental analysis, enzyme and drug kinetics, and metabolic and biological control dynamics.

214. Endocrine Dynamics. (3) W, Sp. Prerequisite: Biomechanics 193A-B-C or equivalents, or consent of instructor.

Licko
Review of relevant parts of compartmental and tracer analysis and control theory. Analysis of dynamics of secretory process, distribution, binding and metabolism of hormones, and hormonal control. Differential equations and both analog and digital computers are utilized throughout the course.

Biophysics

The Graduate Group in Biophysics is an interdisciplinary group offering a Ph.D. in Biophysics. For details, refer to the Graduate Studies bulletin.

200. Off-Campus Study. (0) W Prerequisite: Approval of the graduate adviser. Restrictions: Open only to students enrolled in the graduate program in Biophysics.

Staff
Full-time study of the graduate student in the biophysics program through the intercampus exchange or consortium program.

201. Cellular Biophysics. (3) F, Sp. Prerequisite: Biochemistry 204A. Lecture 3 hours.

Cooke, Papadopoulos, Rothman
Topics covered: membrane structure and dynamics; transport and permeability; cellular motion and muscle contraction; cell energetics; DNA replication and information transfer; cell cycles.

203. Mendling Human Genes. (2) W Prerequisite: Consent of instructor. Lecture 2 hours.

Mendelson
Introduction to eukaryotic DNA repair mechanisms. Emphasis on cells damaged by UV light, ionizing radiation, and chemical carcinogens. The genes involved in regulating repair in various inherited diseases involving mutations, carcinogenesis, and aging will be described.

205. Mammalian Genomic Rearrangement. (1.5-3) Sp. Lecture 1.5 hours.

Morgan, Murnane
This course will focus on the mechanisms of recombination, specific DNA rearrangements and how they are manifested cytogenetically, factors influencing the rate of DNA rearrangements, and the consequences of DNA rearrangements in mammalian cells.

207A. Image Cytometry: Theory, Methods & Applications. (2) F, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Mayall, Chaw
Introduction to quantitative microscopy; electronic imaging; digital image processing; feature extraction; measurement of individual objects; statistical analysis and validation of data; research and clinical applications of image cytometry.


Mayall, Chaw
One-week practical to introduce image cytometric systems of Laboratory for Cell Analysis (CAS 100, TAS Plus, QuIPS). Students will complete a small project in which they apply image cytometry to a problem of biological or clinical relevance.

210. Radiation Biophysics. (3) F Prerequisite: Consent of instructor. Lecture 3 hours.

Fike, Morgan
Interaction of electromagnetic radiation with matter; radiometry; molecular lesions induced by radiation; damage and repair in mammalian cells; interaction of radiation and other agents in mammalian cells and tissue.

212. Advanced Topics in Radiation Biophysics. (3) W Prerequisite: Biophysics 210 or consent of instructor. Lecture 3 hours.

Daw
Current topics in radiation physics, radiation chemistry, and radiation biology. Lecturers will be mainly scientists from the Bay Area with ongoing research programs. Lecturers will assume student familiarity with information covered in Biophysics 210.

215. Laboratory Rotation. (0) F, W, Sp. Prerequisite: Consent of instructor. Lab 9 hours.

Daw
A laboratory rotation course to acquaint first-year Biophysics students with the various approaches to biophysical research. Students will rotate through 3–4 labs.


Mendelson
Guest lectures and reports of research by faculty and students of the Graduate Group in Biophysics.
Biostatistics

187. Intro Stat Theory & Practice. (3) S. Prerequisite: Previous course in introductory statistics. Lecture 4 hours. Lab 2 hours.
Paul Review of basic statistical theory, sampling, descriptive statistics, and probability. Presentation of confidence intervals, hypothesis testing, one- and two-factor analysis of variance, correlation, simple linear regression, and chi-square tests. A preparation for more advanced work. EPID & BIOSTAT

191. Clinical Trials & Life Tables. (3) S. Prerequisite: Biostatistics 183 or equivalent or permission of the instructor. Lecture 3 hours. Offered in alternate years: Not offered 1993-94. Hauck, Hilton Will cover the design, operation, and analysis of clinical trials. Specific topics will include basic trial design, methods for treatment assignment, sample size determination, methods for the analysis of life tables. EPID & BIOSTAT

192. Introduction to Linear Models. (3) S. Prerequisite: Biostatistics 183 or 185 A/B or 187 or equivalent or permission of instructor. Lecture 3 hours. Lab 2 hours.
Paul This course begins with bivariate correlation and simple linear regression and then moves on to a presentation of multiple regression techniques. The course will analyze variance under the general model. The topics will include: regression; analysis of variance; and categorical analysis. EPID & BIOSTAT

193. Categorical Data Analysis. (3) S. Prerequisite: Biostatistics 185 A or B. Biostatistics 187 or consent of instructor. Lecture 3 hours. Hilton This course will cover the analysis of data from experiments in which categorical data are the primary focus. Topics will include: analysis of variance; contingency tables; correlation; and regression. EPID & BIOSTAT

196A, 196B. Intro Probability & Statistics. (4) S. Prerequisite: Working knowledge of algebra. Lecture 3 hours. Lab 2 hours. Offered in alternate years: Not offered 1993-94. Chambers Biostatistics 185A and 185B are conceptually oriented introductory courses that prepare the students for 200-level course work. Topics included are: descriptive statistics; probability; random variables; sampling, estimation, confidence intervals, and hypothesis testing; primarily concerning population means. EPID & BIOSTAT

185B. Intro Probability & Statistics. (4) S. Prerequisite: Biostatistics 185A. Lecture 3 hours. Lab 2 hours. Offered in alternate years: Not offered 1993-94. Chambers Biostatistics 185A and 185B are conceptually oriented introductory courses that prepare the students for 200-level course work. Topics included are: descriptive statistics; probability; random variables; sampling, estimation, confidence intervals, and hypothesis testing; primarily concerning population means. EPID & BIOSTAT

189. Special Study. (1-5) S. F.W. Sp.
Staff Research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. EPID & BIOSTAT

205. Multiple Regression Analysis. (3) S. Prerequisite: Biostatistics 185A-B or Biostatistics 187 or permission of instructor. Familiarity with chi-square tests and linear regression. Lecture 2 hours. Lab 3 hours. Offered in alternate years: Offered 1993-94. Neuman, Hauck Course covers multiple regression and analysis of variance and correlation. The major topics will be logistic regression and ordinal regression. Other topics such as models for ordinal data will be covered given sufficient time and interest. Emphasis will be on appropriate use of methods and interpretation of results. EPID & BIOSTAT

211. Experimental Design. (3) S. Prerequisite: Biostatistics 192 or 210A or equivalent. Lecture 2 hours. Lab 3 hours. Offered in alternate years: Not offered 1993-94.
Hauck This course will cover one of the most important tools in medical and biological research. The emphasis will be on the design and analysis of experiments. EPID & BIOSTAT

213. Multivariate Analysis. (4) S. Prerequisite: Biostatistics 210A or 210B or equivalent. Lecture 3 hours. Lab 3 hours. Offered in alternate years: Offered 1993-94.
Segal This course will cover the analysis of data from experiments in which categorical data are the primary focus. Topics will include: analysis of variance; contingency tables; correlation; and regression. EPID & BIOSTAT

214. Analysis of Repeated Measures. (4) S. Prerequisite: Biostatistics 192 or 210A or 210B or equivalent. Lecture 3 hours. Lab 3 hours. Neuman, Hauck Course will cover methods for analyzing data from experiments in which categorical data are the primary focus. Topics will include: analysis of variance; contingency tables; correlation; and regression. EPID & BIOSTAT

215. Laboratory Rotations. (3) S. F.W. Sp. Prerequisite: Consent of instructor. Lab 9 hours.
Staff A laboratory rotation course to familiarize new departmental graduate students with various approaches to cell biology research. BIOCHEM

245. Cell and Developmental Biology. (3) S. Prerequisite: Calculus, physical chemistry, organic chemistry, and an advanced course in biology. Offered 1993-94. Muller, Morgan

247. Specialized Topics in Cell Biology. (3) S. F.W. Prerequisite: Cell Biology 245. Lecture 2 hours.
Staff Topics in cell biology will be discussed in a tutorial format, with student presentation of papers. The goal is to have an in-depth study of a specific area of cell biology and critical reading of the scientific literature. BIOCHEM

250. Research. (1-8) S. F.W. Sp. Prerequisite: Consent of instructor. Lab 9 hours.
Staff Research projects in cell biology will be discussed in a tutorial format, with student presentation of papers. The goal is to have an in-depth study of a specific area of cell biology and critical reading of the scientific literature. BIOCHEM

299. Dissertation. (0-8) S. F.W. Prerequisite: Advanced to candidacy and permission of the graduate adviser.
Staff Graduate students engaged in writing the dissertation for the Ph.D. degree.

Biosciences/Cell Biology

210. Selected Topics in Cell Biology. (2) S. F.W. Prerequisite: Cell Biology 245. Lecture 2 hours.
Staff Selected topics in cell biology will be discussed in a tutorial format, with student presentation of papers. The goal is an in-depth study of one area of cell biology and critical reading of the scientific literature. BIOCHEM

212. Selected Readings in Cell Biology. (2) S. Prerequisite: Previous or concurrent enrollment in Cell Biology 245, and consent of instructor.
Staff Tutorials with a maximum of eight students per class. Each week all students will read one paper and be responsible for another paper or group of papers. The papers will address current issues in cell biology. CELL BIOLOGY

213. Laboratory Rotations. (3) S. F.W. Prerequisite: Consent of instructor. Lab 9 hours.
Staff A laboratory rotation course to familiarize new departmental graduate students with various approaches to cell biology research. BIOCHEM

245. Cell and Developmental Biology. (3) S. Prerequisite: Calculus, physical chemistry, organic chemistry, and an advanced course in biology. Offered 1993-94. Muller, Morgan

247. Specialized Topics in Cell Biology. (3) S. F.W. Prerequisite: Cell Biology 245. Lecture 2 hours.
Staff Topics in cell biology will be discussed in a tutorial format, with student presentation of papers. The goal is to have an in-depth study of a specific area of cell biology and critical reading of the scientific literature. BIOCHEM

250. Research. (1-8) S. F.W. Prerequisite: Consent of instructor. Lab 9 hours.
Staff Research projects in cell biology will be discussed in a tutorial format, with student presentation of papers. The goal is to have an in-depth study of a specific area of cell biology and critical reading of the scientific literature. BIOCHEM

299. Dissertation. (0-8) S. F.W. Prerequisite: Advanced to candidacy and permission of the graduate adviser.
Staff Graduate students engaged in writing the dissertation for the Ph.D. degree.

CELL BIOLOGY
Chemistry

115. Physical Chemistry. (5) F. Prerequisite: Chemistry 5 or equivalent laboratory course in quantitative analysis and differential and integral calculus. Lecture 4 hours. Conference and demonstration 3 hours.

Shelar, Shafter
Elementary physical chemistry with emphasis on thermodynamics. PHARM CHEM

116. Physical Chemistry. (2) W. Prerequisite: Chemistry 115 or equivalent. Lecture 1.5 hours. Conference and demonstration 1.5 hours.

T. James
Elementary physical chemistry with emphasis on chemical kinetics. PHARM CHEM

117. Organic Chemistry Laboratory. (2) Sp. Prerequisite: Chemistry 112 or passing score in Chemistry 112 equivalency examination. Chemistry 113 or concurrent enrollment in Chemistry 113, or consent of instructor. Lecture 1 hour. Lab 4 hours.

Kahl
Laboratory experiments in identification and quantification of organic substances. PHARM CHEM

151. Physical Chemistry. (1-3) Sp. Prerequisite: Consent of instructor. Lecture 1-3 hours.

Kuntz
Selected topics at an introductory level, which vary from year to year. Par topics included structure of molecules, acid and base, quantum chemistry, and spectroscopy. PHARM CHEM

158. Physical Chemistry Laboratory. (1) Sp. Prerequisite: Chemistry 115 and 116. Lab 3 hours.

Kuntz
Laboratory exercises in spectroscopy. PHARM CHEM

165. Organic Chem-Analytical Meth. (4) F. Prerequisite: Chemistry 115. Lecture 1 hour. Lab 9 hours.

Kahl
A study of the reactions of organic compounds by applying a system of qualitative analyses to the determination of characteristic groups. PHARM CHEM

170. Group Studies Course. (1-4) F/W. Sp. Prerequisite: Consent of instructor. Lecture 1-4 hours.

Staff
Group studies in selected topics in chemistry. PHARM CHEM


Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PHARM CHEM

199. Laboratory Project. (1-5) F/W. Sp.

Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. PHARM CHEM

Clinical Pharmacy

110. Orientation. (2) F. Conference and field observation 3-4 hours.

R. Levin
An introduction to the scope of pharmaceutical practice including field trips and participation in various settings where the pharmacist and patient interact. CL PHARM

120. Introduction to Therapeutics. (3) Sp. Prerequisite: Successful completion of all required first- and fall and winter second-year courses or consent of instructor. Lecture 3 hours.

Flachary
Introduction to clinical pharmacy and therapeutics, focusing on the interpretation of laboratory and other clinical data regarding hematology, fluid and electrolyte balance, renal and hepatic function. An emphasis is placed on problem solving and integration of previous course work. CL PHARM

130. Therapeutics. (6) F. Prerequisite: Successful completion of all required first- and second-year courses or consent of instructor. Lecture 5 hours. Conference 2 hours.

Koo, Wong
Orientation to selected areas of medical practice; the clinical evaluation and comparison of drugs used in these areas, and the bio-pharmacokinetics of drug combinations and products. CL PHARM

131. Therapeutics. (6) W. Prerequisite: Clinical Pharmacy 130 or consent of instructor. Lecture 5 hours. Conference 2 hours.

Alldredge, Salas
Continuation of Clinical Pharmacy 130. CL PHARM

132. Therapeutics. (7) Sp. Prerequisite: Clinical Pharmacy 131 or consent of instructor. Lecture 6 hours. Conference 2 hours.

Dong, Bolinger
Continuation of Clinical Pharmacy 131. CL PHARM

133. Nutrition. (3) Sp. Prerequisite: Third-year standing. Lecture 3 hours.

Rodemund
Clinical aspects of nutrition in ambulatory and institutional practice, with emphasis on special needs of different populations. Nutritional supplements, parental and parenteral products will be discussed as they apply to these populations. CL PHARM

134. Topics in Pharmacy Administration. (2) Sp. Prerequisite: Third- or fourth-year standing. Lecture 2 hours.

Kishi, Heard
Survey of major world health problems, and programs and agencies concerned with their control. Relationships of pharmacy to topics such as emergency medical services, communicable diseases, nutrition, sanitation, occupational health, maternal and child hygiene, mental health, and public health administration. CL PHARM

135A. Drug Information Orientation. (1.5) F/W. Sp. Prerequisite: Third-year standing. Concurrent or subsequent enrollment in Clinical Pharmacy 130, 131 or 132.

Schoeder
Orientation to clinical services including patient interview techniques and monitoring; training and actual experience in literature retrieval, analysis and dissemination of drug information. CL PHARM

135B. Drug Information Orientation. (0.5) F/W. Sp. Prerequisite: Clinical Pharmacy 135A.

Schoeder
Continuation of Clinical Pharmacy 135A. CL PHARM

148A. Inpatient Clinical Clerkship. (9) F/W. Sp. Prerequisite: Successful completion of all first-, second- and third-year courses and Clinical Pharmacy 130 series comprehensive examination. Clinic 40 hours per week for 6 weeks.

Kaye and Staff
Supervised clinical pharmacy experience in an inpatient setting. Students develop and explore their roles in an interdisciplinary health care team, take medication histories, monitor drug therapy, provide patient education, and research patients' specific drug information questions. CL PHARM

148B. Inpatient Clinical Clerkship. (9) F/W. Sp. Prerequisite: Clinical Pharmacy 148A. Clinic 40 hours per week for 6 weeks.

Kaye and Staff
Continuation of Clinical Pharmacy 148A. CL PHARM

148.01A. Inpatient Clerkship-UCSD. (9) F/W. Sp. Prerequisite: Successful completion of all first-, second- and third-year courses and Clinical Pharmacy 130 series comprehensive examination. Clinic 40 hours per week for 6 weeks.

Adler and Staff
Supervised clinical pharmacy experience in an inpatient setting. Students develop and explore their roles in an interdisciplinary health care team, take medication histories, monitor drug therapy, provide patient education, and research patients' specific drug information questions. CL PHARM

148.01B. Inpatient Clerkship-UCSD. (9) F/W. Sp. Prerequisite: Clinical Pharmacy 148A.01A or 148A. Clinic 40 hours per week for 6 weeks.

Adler and Staff
Continuation of Clinical Pharmacy 148.01A or Clinical Pharmacy 148A. CL PHARM

148.02A. Inpatient Clerkship-UCI & MHLB. (9) F/W. Sp. Prerequisite: Successful completion of all first-, second- and third-year courses and Clinical Pharmacy 130 series comprehensive examination.

Shimomura and Staff
Supervised clinical pharmacy experience in an inpatient setting. Students develop and explore their roles in an interdisciplinary health care team, take medication histories, monitor drug therapy, provide patient education, and research patients' specific drug information questions. CL PHARM

148.02B. Inpatient Clerkship-UCI & MHLB. (9) F/W. Sp. Prerequisite: Clinical Pharmacy 148.02A.

Shimomura and Staff
Continuation of Clinical Pharmacy 148.02A. CL PHARM

148.03A. Inpatient Clinical Clerkship-LAC. (9) F/W. Sp. Prerequisite: Successful completion of all
first-, second- and third-year course work and the comprehensive examination. Clinic 40 hours per week for 6 weeks.

Sauer and Staff
Supervised clinical pharmacy experience in an inpatient setting. Students will develop and explore their roles in an interdisciplinary health care team, take medication histories, monitor drug therapy, provide patient education, and research patient-specific information. Question CL PHARM 148.03B. Inpatient Clinical Clerkship—UCD (9) F,W,S. Prerequisite: Clinical Pharmacy 148.03A. Clinic 40 hours per week for 6 weeks.

Sauer and Staff
A continuation of Clinical Pharmacy 148.03A, CL PHARM 149.03A. Ambulatory Externship/Clerkship—UCD (6,5) F,W,S. Prerequisite: Successful completion of all first-, second- and third-year courses and Clinical Pharmacy 130 series comprehensive examination. A. Leeds and Staff
Supervised clinical experience in an outpatient setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education. Experience in community pharmacies. CL PHARM 149.03B. Ambulatory Externship/Clerkship—UCD (13) F,W,S. Prerequisite: Successful completion of all first-, second-, and third-year courses and Clinical Pharmacy 130 series comprehensive examination. Weibert and Staff
Supervised clinical experience in an outpatient setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education. Experience in community pharmacies. CL PHARM 149.03A. Ambulatory Externship/Clerkship—UCD (6,5) F,W,S. Prerequisite: Successful completion of all first-, second- and third-year required courses and the comprehensive examination. Clinic 39 hours per week for 6 weeks.

Sauer and Staff
Supervised clinical experience in an ambulatory care setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education. Experience in community pharmacies. CL PHARM 149.03B. Ambulatory Externship/Clerkship—UCD (6,5) F,W,S. Prerequisite: Clinical Pharmacy 149.03A, Clinic 39 hours per week for 6 weeks.

Sauer and Staff
A continuation of Clinical Pharmacy 149.03A. CL PHARM 155.40. Seminar in Intraprofessional Communications. (1) F Prerequisite: Second-, third-, or fourth-year standing and consent of instructor. Lab 2-3 hours. Seminar 1 hour. Conference 1 hour. Levin
Preceptorship for Clinical Pharmacy 130 conferences. One sophomore and one junior preceptor per conference will be responsible for conducting oral presentations. One senior per conference will be responsible for taking students on tours of clerkship sites. CL PHARM 155.50. Oncology Seminar. (2) F Prerequisite: Fourth-year pharmacy students in good standing; graduate nursing students in the oncology program. Seminar 2 hours. Igloffo
Discussion in detail of topics in oncology that focus upon the pharmacologic management of various neoplastic disorders and cancer-induced problems. CL PHARM 157.10. Pharmacy Services Admin—MIHLD (1-8) F,W,S. Prerequisite: Fourth-year standing and consent of instructor. Shinsmura and Staff
Supervised clinical experience in an outpatient setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education. Experience in community pharmacies. CL PHARM 157.10A. Pharmacy Services Admin—MIHLD (6,5) F,W,S. Prerequisite: Successful completion of all first-, second- and third-year courses and Clinical Pharmacy 130 series comprehensive examination. Shinsmura and Staff
Supervised clinical experience in an outpatient setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education. Experience in community pharmacies. CL PHARM 157.01. Geriatric Pharmacy. (2) F,W,S. Lecture 2 hours. Lipton
The medical and social problems associated with the geriatric population will be reviewed, with emphasis on the use of medications and the role of the pharmacist in providing care for this patient population. CL PHARM 157.02. Transplant Immunotherapeutics. (2) Sp Lecture 2 hours. Hebert, Salazar, Aweoka
This course will introduce students to the specialty area of transplant immunotherapeutics. Students will be able to understand the rejection process and graft vs. host reactions. This course will also review the pharmacological and toxicological effects of immunosuppressant drugs. CL PHARM 157.04. Advanced Compounding Techniques—Watson Creek. (1-2) F,W,S. Lab 3-6 hours. Prerequisite: Pharmacy 116. Consent of instructor. Reservations limited to two students. Day, Horwitz
Advanced Compounding Techniques in a community pharmacy (including formulation and packaging) in Watson Creek. CL PHARM 157.05. Issues Facing Women in Pharmacy. (1) Sp Lecture/seminar (one Saturday and one weekday evening) 10 hours total. Kimmel, Sauer
Through lectures and discussion, issues facing women in pharmacy will be explored. Specific topics to be addressed include career planning and management; balancing career and personal life; job vs. career commitment; alternative work-time options; mentorship; and issues related to increasing numbers of women entering the profession. Successful female role models will be invited to share experiences and perspectives, providing additional discussion topics. CL PHARM 157.07. Addictionology & Substance Abuse Prevention. (1-2) F,W,S. Lecture 1 hour. Three community presentations (optional). Kimmel, Kopp, Ihaba
A survey course that addresses the physical and mental effects of drug abuse; intervention and treatment strategies; legal and ethical issues surrounding drug abuse; and substance abuse among health care professionals. CL PHARM 157.08. Current Topics in Cancer. (2) Sp Lecture 2 hours. Igloffo
This interdisciplinary course is designed to provide a framework of oncology and skills about preventive medicine, focusing on cancer prevention. CL PHARM 157.09. Pharmacist & Critical Care. (1.5) Sp Prerequisite: Fourth-year standing and basic life support certification. Lecture 1 hour plus project. Kaynor
This course provides an introduction to the basic principles of critical care pharmacology and therapeutics. CL PHARM 157.10. Inpatient Pediatrics—UC (1-8) F,W,S. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor. Sauer
Students participate in the activities of the Inpatient Pediatric Service. Activities include routine review of patients' charts, monitoring patients' response to drug therapy; attendance at conferences, seminars and rounds; and participation in selected therapeutic consultations. CL PHARM 157.10A. Renal Medicine—UC (1-8) F,W,S. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor. Aweoka
Students participate in the activities of the Renal Medicine Service, including patient monitoring, attendance at conferences, seminars and rounds, and application of pharmacokinetics to drug therapy. Where appropriate, students prepare detailed consultations regarding individual patient therapy. CL PHARM 157.10B. Infectious Diseases—UC (1-8) F,W,S. Prerequisite: grade of C or better in both Clinical Pharmacy 132A and Pharmacology 154 and consent of instructor.

Winter
Students participate in the clinical service of the Clinical Pharmacokinetics Laboratory. Course includes receiving drug levels, selecting patients to be monitored, preparation and presentation of reports, attendance at seminars, and experience in leading case conferences. CL PHARM 157.07. Neonatal ICU—UC (1-8) F,W,S. Prerequisite: Successful completion of all first-, second- and third-year required coursework. Consent of instructor. A. Wong
Participate in activities of Neonatal ICU, including patient monitoring, rounds, drug consultation, and utilization. Patients are primarily premature and newborn infants with congenital heart defects. Work under supervision of clinical pharmacist in management of these patients. CL PHARM 157.21. Pediatrics—SFCH. (1-8) F,W,S. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor. R. Levin
Students participate with pediatric staff dealing with problems frequently encountered in general pediatric medicine; in addition to those which afflict children from low income, overcrowded and substandard conditions. Activities include rounds, conferences and participation in special projects. CL PHARM 157.22. Infectious Disease—UC. (1-8) F,W,S. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor. W.
Students gain experience on the Infectious Disease Consult Service. Activities include rounds, medication consultations and provision of pharmacokinetic monitoring. CL PHARM.


Winter, Buffalo

Students observe, interview, evaluate drug therapy, interact with patients in acute phases of psychiatric disorders, accompany unit physicians to court, attend interdisciplinary team conferences, and make specific contributions to drug therapy. CL PHARM.


Winter, Korman and Staff

Experience in various medical services at VA. Activities include interviewing patients, monitoring drug therapy, consultation with housestaff, and participation in conferences, seminars and rounds. Special projects assigned. CL PHARM.


Kapuscinski

Students round with SFCHC Infectious Diseases Consultation Service; evaluate antibiotic selection and monitor patients’ therapy for efficacy and toxicity; serve as drug consultants to the medical staff on the service. (A special project relating to some aspect of infectious disease and its therapy will be completed.) CL PHARM.


Winter, Olson, Kasey

In an interdisciplinary setting, students assess clinical problems in human pharmacology, pharmacodynamics and therapeutic merits of drugs and drug products. Activities include participation in rounds and conferences, collaboration on selected cases, consultation and retrieval and evaluation of drug literature. CL PHARM.


Winter, Kondo

Students participate in the activities of the Division of Clinical Pharmacology. Activities include utilization of computerized patient drug profiles to assess adverse drug reactions, and participation in conferences and seminars. Special projects assigned. CL PHARM.


Dong

Students participate in the activities of the Family Practice Inpatient Service. Students will be responsible for drug surveillance, drug monitoring, management consultations, and patient education. A minimum of two patient-specific drug consultations is required.

175.34. Psychopharmacology—AS. (1–8) F.W. Sp. Prequisite: Clinical Pharmacy 148A or 149 and consent of instructor.

Winter, Raleigh

Provides student opportunity to follow patients from admission until housed on treatment unit. Initial reasons for prescribing medication, acute illness, and in some cases, resolution of psychiatric symptoms will be observed by student. CL PHARM.


Winter, Buffalo and Staff

Students participate on the inpatient acute psychiatric ward. Activities include monitoring and interviewing patient, participation in team meetings, conferences, and pharmacy medication classes, presenting in-service programs to psychiatric staff. CL PHARM.


Winter, Jacobs

Work on oncology unit monitoring patients on chemotherapy, nutrition support, pain control, and ambulatory therapy. Gain in-depth knowledge of role of clinical pharmacist in a private hospital oncology unit. CL PHARM.


Winter, Loehlman

Students interview patients, maintain medication records, explain medication usage to patients, and answer drug therapy questions generated by physicians, pharmacists and patients in a pharmacy located within a group medical practice. CL PHARM.

175.64. Heighten Heroin Detox Unit Clerkship. (1–8) F.W. Sp. Prequisite: Consent of instructor.

Winter, Isma, Hayner

Students work as co-therapists under the supervision of the clinical pharmacist and physicians to develop individual therapy plans for drug detoxification. Where needed, students develop detailed drug information reports appropriate to specific patient care. CL PHARM.


Winter

Practical experience in a hospital-owned community pharmacy offering progressive patient-oriented services, including drug monitoring, establishment and maintenance of medical profiles, patient counseling, drug information and in-service education. CL PHARM.


Winter, Katcher, Zola

Students provide patient education and consultation to seniors and senior providers. Students will be able to utilize their skills, knowledge, and on-site training to prevent and intervene in geriatric drug misuse problems. CL PHARM.

175.78. Skilled Nursing Facility Clerkship. (1–8) F.W. Sp. Prequisite: Clinical Pharmacy 148A or 149. Consent of instructor.

Winter, Nicos, Feldman

Students gain experience in both the skilled nursing facility and Pharmaceutical Services Pharmacy. Activities include evaluating drug therapy and other consultant roles in skilled nursing facility service, participation in unit dose medication system, and researching drug information. Special project required. CL PHARM.


McSweeney

Students participate in IV fluid therapy selection and preparation, and monitor patients receiving intravenous medications. Conferences are held on topics related to problems in the use of intravenous fluid therapy in various disease states. CL PHARM.

175.82. IV Additives Clerkship—VA. (1–8) F.W. Sp. Prequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor.

Winter, Korman, Wong and Staff

An introduction to the administrative, professional and technical aspects of establishing and maintaining IV additive service. Students will participate in workshops and conferences. CL PHARM.


Winter, Labas, Loper, J. Lee

Students participate in centralized IV admixture and unit dose systems of distribution, with involvement in the decentralized clinical aspects of establishing and maintaining IV additive service. CL PHARM.


Winter, Erb, Jee, Gee

Students participate in establishing and presenting the protocol for a drug utilization review. Students will complete the study during the rotation, and present results to the physicians and other disciplines involved. CL PHARM.


McCarr

Students design a drug utilization review. After receiving introductory material about purpose and value of such studies, students gather, evaluate, and interpret data for a written final report suitable for publication. CL PHARM.


Schnieder

Advanced experience in drug information retrieval and analysis. Activities include participation in conferences, seminars and selective teaching assignments in Clinical Pharmacy 135. Special projects assigned. CL PHARM.


Winter, Hillerich, Padelford

Students observe and participate in a business-professional environment to understand the role of such an organization in delivery of optimal, cost-effective health care. Special emphasis on delivery of pharmaceutical services. CL PHARM.


Winter, Tatro

Participate in activities of drug information service, including answering drug-related questions, writing a newsletter and drug review. Work under supervision of the director for drug information. CL PHARM.

175.99. Clinical Pharmacy Practice. (0) F.W. Sp. Prequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.

Winter

Supervised clinical pharmacy experience. Students develop and explore their roles in an interdisciplinary health care team, take medication histories, monitor drug therapy, provide patient drug therapy education and research patients’ specific drug information questions. CL PHARM.

176.01. Nephrology—UCSD. (1–8) F.W. Sp. Prequisite: Clinical Pharmacy 148A or 149A or 149B. Consent of instructor.

D. Adler and Staff

Students participate in the Renal Consult Service, Hemodialysis Unit and in the Renal Clinic with the medical and nursing staff. A special project selected by the student will be required. CL PHARM.


D. Adler and Staff

Students participate in the activities of the Pulmonary Medicine Consult Service, Chest Clinic and Asthma
Clinical Pharmacy

Clinic associated with the Pulmonary Division at University Hospital. CL PHARM

176.03. Neonatal Care—UCSD (1-8) F.W. Sp. Pre-
requisite: Clinical Pharmacy 148.01A or 149.01.
D. Adler and Staff

Students participate in the nursery's morning work rounds, attending high risk infant transportation and delivery. Students will read and evaluate current neonatal literature, and provide drug-related information to medical staff and parents. CL PHARM

176.04. Pediatric—UCSD (1-8) F.W. Sp. Pre-
requisite: Clinical Pharmacy 148.01A or 149.01.
D. Adler and Staff

Students participate in the activities of the Inpatient Pediatric Service. Activities include routine review of patients' charts, monitoring patients' response to drug therapy, attendance at conferences, seminars and rounds, and participation in selected therapeutic consults. CL PHARM

176.05. Psychiactry—UCSD (1-8) F.W. Sp. Pre-
requisite: Clinical Pharmacy 148.01A or 149.01.
D. Adler and Staff

Students participate in the Inpatient Psychiatric Service. A special project will be required, the subject of which shall be chosen by the student, with the consent of the preceptor. CL PHARM

Prerequisite: Clinical Pharmacy 148.01A or 149.01.
Weibert and Staff

Students participate in the anticoagulation clinics held at the University Hospital under the guidance of a clinical pharmacist. CL PHARM

176.41. Hematology/Oncology—UCSD (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 148.01A or 149.01.
D. Adler, P. Lee

Students participate in the activities of the Hematol-
ology/Oncology Consultation Service. Activities include review of patients' charts, monitoring patients' response to drug therapy, attendance at conferences, seminars, rounds and clinics, participation in therapeu-
tic consultations and a special project. CL PHARM

176.42. Hypertension—UCSD (1-8) F.W. Sp. Pre-
requisite: Clinical Pharmacy 148.01A or 149.01.
Weibert and Staff

The Hypertension Outpatient clinic is an outpatient, six-week elective requiring students to become actively involved in one clinic day per week, as well as in one student-preceptor conference per week. CL PHARM

176.80. IV Additives & Fluid Therapy—UCSD (1-8)
F.W. Sp. Prerequisite: Clinical Pharmacy 148.01A or 149.01.
D. Adler and Staff

Students participate in the activities of the Intravenous Additive Service at University Hospital. A special project will be required, the subject of which shall be chosen by the student, with the consent of the pre-
ceptor. CL PHARM

176.81. Poison Information—UCSD (1-8) F.W. Sp. Pre-
requisite: Clinical Pharmacy 148.01A or 149.01.
Manoguerra and Staff

Students participate in the services provided by the Poison Information Center for San Diego County, including receiving calls concerning ingestions and treatments, and seminars for the public and various school groups. CL PHARM

176.82. Anticoagulation—VARI (1-4) F.W. Sp.
Prerequisite: Clinical Pharmacy 148.01A or 149.01.
D. Adler and Staff

Students participate in the services of the Anticoagu-
tation Clinic under the guidance of a clinical phar-
macist. CL PHARM

Prerequisite: Clinical Pharmacy 148.01A or 149.01.
P. Anderson

Students participate in the services provided by the Drug Information Service including receiving drug information requests, researching and writing formal responses. CL PHARM

176.79. Skilled Nurse Facility Consulting—Sacra-
mento (1-8) Su, F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.
Sasser, Maen

The student will participate in the activities of a clinical pharmacist practicing as a consultant to skilled nursing facilities. Student will learn applicable federal and state regulations in the long-term care setting. Activities include performing drug regimen reviews. CL PHARM

185.05. Oncology—UC (1-8) SS1, SS2, F.W. Sp.
Prerequisite: Clinical Pharmacy 130, 131 and 132.
Content of instructor. Ignoffo

Students attend work rounds, housestaff management rounds and teaching conferences; learns techniques utilized in caring for patients with hematologic or solid tumors. Emphasis on acute care of cancer pa-
tients: anti-emic and pain control, hyperalimentation treat-
tment of hypercalcemia and infection. Project. CL PHARM

185.06. Cardiothoracic Surgery—UC (1-8) SS1, SS2, F.W. Sp. Prerequisite: Fourth-year standing and consent of instructor. Sallaser

Students are responsible for patient interviews, monitoring, rounds, and drug consultation. Patients are primarily pediatric with congenital heart defects and adults undergoing aorta-coronary bypass surgery and cardiac valve replacement. CL PHARM

185.08. Psychiatric Pharmacy—LPFR (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Clinic: 20-40 hours/week. Clerk-
ship: 20-40 hours/week. Winter, Ajari

The clerkship will expose students to pharmacy prac-
tice in a psychiatric setting. The students will attend team meetings and seminars and counsel patients about their medications. A written project and a pre-
sentation in the field of psychopharmacology are required. CL PHARM

185.09. Cardiology—UC (1-8) SS1, SS2, F.W. Sp. Prerequisite: Successful completion of all first-, sec-
ond-, and third-year coursework and consent of in-
tstructor. Kayser

Inpatient rotation in adult cardiology. Patient activities include rounding with the cardiology team and elec-
ctrophysiology team, monitoring patients on cardio-
vascular medications, interviewing appropriate pa-
tients, and attending conferences and seminars dealing with cardiology. Patients will be presented to the pharmacy preceptor during regularly scheduled rounds. CL PHARM

185.10. Infectious Diseases—MZ (1-8) F.W. Sp.
Prerequisite: Completion of all required first-, sec-
ond-, and third-year coursework and consent of instruc-
tor. Flaherty

Students participate in the activities of the Infectious Diseases service, including patient monitoring and attendance at conferences and seminars. Students work under the supervision of the clinical pharmacist and physicians in providing care to all patients who require consultation. CL PHARM

Prerequisite: Completion of all required first-, sec-
ond-, and third-year coursework and consent of in-
tstructor. Winter, Cashman

Students learn the basic principles of therapeutics related to the disease states encountered in medicine patients in an inpatient setting. Participation in ward and attending rounds with the Department of Medi-
cine Housestaff. Preceptorship by a clinical phar-
macist. CL PHARM

185.20. Mental Health—Santa Clara (1-8) SS1, SS2, F.W. Sp. Prerequisite: Fourth-year standing and con-
sent of instructor. Winter, Viale, Uyeda

Students will be involved in both inpatient and out-
patient pharmacy settings. They will participate in physician—nurse interviews, medication monitoring, quality assurance studies, drug therapy consultation, and will also consult at a skilled nursing facility. CL PHARM

185.21. Clinical Pharmacokinetics—VAM (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, Carr-Lopez

The Clinical Pharmacokinetics elective will expose pharmacy students to the application of pharmacoki-
netics principles in the clinical setting. The students will provide pharmacokinetics consultations to phar-
mary, medical, surgical, and nursing staff. CL PHARM

185.23. Infectious Disease—VA (1-8) SS1, SS2, F. W. Sp. Prerequisite: Fourth-year standing and consent of instructor.
Winter, Maddox

Activities include monitoring the drug therapy of Infectious Diseases consult patients and serving as a drug information resource for the I.D. Service. Students attend and participate in I.D. rounds and attend rele-
vant I.D. and microbiology conferences. CL PHARM

Winter, Wards

This rotation will enable students to participate in the acute management of patients on an oncology/bone marrow transplant unit in a community hospital. This includes involvement with daily team rounds, chem-
otherapy preparation, TPN ordering, antibiotic man-
age, and hospice interdisciplinary conferences. CL PHARM

185.25. Infectious Disease—Brookside Hospital. (1-8) SS1, SS2, F.W. Sp. Prerequisite: Fourth-year standing and consent of instructor.
Winter, Closson

The fourth-year student will participate in clinical services of the Department of Pharmacy relative to Infectious Disease. The service includes a computer program that links microbiology reports with current antibiotic therapy. CL PHARM

185.26. Critical Care Medicine—SFGH (1-8) SS1, SS2, SS, F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.
Winter, Woods, Liu

Students will be active participants in Medical/Surgi-
cal (trauma) ICU patient care. Activities include pa-
tient monitoring, rounds, seminars and conferences and provision of patient-specific drug information and analysis. CL PHARM

185.27. AIDS/Medicine Consult Service—SFGH. (1-8) SS1, SS2, SS, F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, Lor, Woods

Students will participate in the AIDS Consult Service including patient monitoring, providing consultations on drug therapy complications in treatment of AIDS patients. CL PHARM

185.30. Geriatrics—VA Noyoville (4-8) SS1, SS2, Su, F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. M. Winter, Carr-Lopez

Students participate in screening of patients over 70 years of age, biweekly multidisciplinary geriatric team

70

71
Clinical Pharmacy

conferences, attending rounds, and weekly geriatric outpatient clinic. Most common problems relate to polypharmacy, poor nutrition, chronic diseases, de- leterious drug use, symptoms, dementia, and pneumonia. CL PHARM

185.31. Critical Care Medicine—PMC (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required course-work and the Comprehensive Exam, and consent of instructor. M. Winter, Lee, Louie

Students will participate in patient monitoring, teaching rounds, conferences, provision of drug information, intravenous education, and the clinical management of selected critical care patients. CL PHARM

185.32. Nutritional Support—PMC (1-8) F.W. Sp. Prerequisite: Completion of all first-, second- and third-year required coursework and consent of instructor. M. Winter, Lee, White

Student participation in the activities of the nutritional support team includes daily patient monitoring, weekly nutritional support work rounds and daily teaching conferences. Two weeks will be devoted to pediatric TPN as well as some exposure to TPN complications. CL PHARM

185.33. Drug Information Service—VAM (1-8) F. W. Sp. Prerequisite: Fourth-year standing. Winter, Lopea, Geo

Students participate in the activities of the drug information center including providing consultation on drug therapy questions, evaluation of the medical literature, and preparation of written projects suitable for publication. CL PHARM

185.34. Inpatient Clinical Pharmacy (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and the comprehensive examination. Winter, Garich, Kudo

The student will work with the clinical pharmacist and will be involved in the care of critically ill patients with multiple drug problems (i.e., sepsis, multiple organ failure) to optimize drug therapy by proper drug selection, avoiding drug interactions, and optimizing therapeutic outcomes. CL PHARM

185.35. Psychiatry (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and the comprehensive examination. Winter, Garich, Kudo

The student will be involved in the treatment and care of inpatient psychiatric patients with acute psychiatric illness. Under the supervision of the psychiatric pharmacist, the student will be involved with drug therapy monitoring and will attend daily rounds, meetings and conferences as scheduled. CL PHARM

185.36. Nutrition Support—Q (1-8) F.W. Sp. Prerequisite: Completion of all first-, second- and third-year required coursework and successful completion of the comprehensive examination. Winter, Garich, Schmenzebch

The student will work with the nutrition support pharmacist and will be involved in the care of patients receiving parenteral nutrition to provide optimal therapy by maximizing nutritional supplementation with regard to the patient's specific disease state. CL PHARM


Students will participate in the clinical management of pain for ambulatory, hospitalized, and homecare patients. Activities include interviews and drug therapy evaluation, providing drug information to patients and health care professionals, participating in patient care conferences and homecare services. CL PHARM


Students will participate in clinical programs in the oncology, AIDS, and Hospice services in the Acute and Homecare and Hospice settings. Activities include participation in I.V. admixture of chemotherapy, patient profile reviews, patient teaching, interventions for pain control, and drug information. CL PHARM

185.60. Adult Day Health Centers—STM (1-8) S.S., S.S., F.W. Sp. Prerequisite: Fourth-year standing and consent of instructor CP 148.8 or 149 preferred. Clinic: 20-40 hours Winter, Bookswalter

Students will learn the interdisciplinary approach to providing health care by participating in and contributing to intake and assessment meetings at adult day health centers. Knowledge of special pharmacy services, legal requirements, drug formulary maintenance and drug utilization with agencies. CL PHARM

185.66. Women's Health Center—Q (1-8) F.W. Sp. Prerequisite: Clinical Pharmacy 130, 131, 132 and consent of instructor. Winter, Garich

Students participate in functions of family planning-gynecological clinic, including management and handling of pharmaceuticals, monitoring BCP users under NP supervision, and participating in special projects. CL PHARM

185.70. Consultant Practice in Extended Care (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and the comprehensive exam. Consent of the instructor. Winter, Pratt, Henrietta

Students will participate in drug regimen and internal nutrition reviews, nursing in-services and medication distribution reviews, and conduct medication administration error audits and special projects. Students may also be involved with the development of laptop computer consulting and nutritional and pharmacokinetic consults. CL PHARM

185.72. Outpatient Psychiatric Service—CSR (1-8) F.W. Sp. Prerequisite: Completion of Clinical Pharmacy 130, 131, 132 and consent of instructor. Winter, Leong

Students participate in the activities of an outpatient forensic mental health clinic including drug therapy monitoring, patient education and counseling, drug utilization reviews, medication clinics, medication groups, and in-service conferences. They will work under the supervision of the faculty in the on-going management of selected mentally disturbed criminal-justice patients. CL PHARM

185.73. Integrated Care Systems (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, Gross

Students participate in home health care services, including fluid compensation, patient monitoring, multidisciplinary meetings, interactions with nurses in the home setting, patients both pre- and post-discharge, and with physicians in their office setting to become familiar with all aspects of home specialty care. CL PHARM

185.74. Lifesource (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, Alexander

Under the supervision of a pharmacist, students participate in the compounding, monitoring, and management of parental nutrition and medications for bone-marrow patients. Students also become familiar with the administrative structure and marketing of home health services. CL PHARM

185.76. Home Care Mgmt of High-Risk Ob Patient (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, Epstein

Students participate in the activities of Tokico Medical Corporation, including patient monitoring and attendance at medical rounds. They will work under the supervision of the clinical pharmacist in the provision of home care to the high-risk obstetrics patient. CL PHARM

185.77. Drug Utilization Eval and Target Drug Programs (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, Bertram

Students will design and implement a target drug program which will include the following components: Drug utilization evaluation, written proposal, implementation, follow-up, and publication. Students will participate in didactic conferences which will discuss formulary management, DUEs, cost containment strategies, and target drug implementation. CL PHARM

185.78. Drug Usage Eval and Target Drug Programs (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, L. Davis

Students will design and implement a drug usage evaluation and target drug program which will include the following: Development of a written proposal, presentation to the P&T Committee, and implementation, data collection and follow-up activities. Students will participate in didactic conferences which will discuss formulary management, Drug Usage Evaluation process, cost containment strategies, and target drug implementation activities. CL PHARM

185.79. IV Admixture, Automated Unit Dose (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor. Winter, K. Lee, Chriss

Students will participate in a centralized IV admixture, Automated Unit Dose system of distribution and outpatient pharmacy operation. Activities will include patient profile reviews, drug usage evaluations, drug information research and presentations. Optional computer and management training is available. CL PHARM


This rotation teaches students the process of how to set up for conducting drug utilization evaluation. Students will have hands-on experience in the interpretation of data and applicability of data generated from DUEs. Additional experience will be obtained in other quality assurance projects. CL PHARM


Students will participate in drug usage evaluations, focusing on concurrent monitoring and interventions designed to improve patient outcome. They will also investigate reported adverse drug reactions and assist in the development of educational programs for other health care professionals. CL PHARM

186.06. Clinical Pharmacokinetics—UCSD (1-8) F.W. Sp. Prerequisite: Clinical Pharmacy 148A or 149 and consent of instructor. D. Adler, J. Lane

Distribution and review of pharmacokinetic principles in drug therapy relating to clinical cases at UCSD, including computer modeling, specific case, and lectures to medical and nursing staffs. A special project is assigned. CL PHARM

186.07. Burn and Trauma Center—UCSD (1-8) F. S. Sp. Prerequisite: Clinical Pharmacy 148A or 149 and consent of instructor. D. Adler, P. Anderson

Participation in activities of Burn Unit including patient drug therapy monitoring, developing antibi-
Clinical Pharmacy

Students will become members of Neonatal Intensive Care Teams, attend rounds, conferences, monitor and evaluate drug therapy, and provide drug therapy-related consultation. CL PHARM

188.05. Medical Intensive Care—UCD. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year coursework. Clinical Pharmacy 148 and consent of instructor.

Sauer and Staff

The student will work with pharmacists in the Medical Intensive Care Unit (MICU) and satellite pharmacy providing both clinical and distributive pharmacy services. Students will be exposed to drug therapy as it relates to different disease states seen in the unit. CL PHARM

188.06. Surgical Intensive Care—UCD. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year coursework and consent of instructor.

Sauer and Staff

The student will work with pharmacists providing clinical and distributive services to critically ill patients in the surgical Intensive Care Unit. Activities will include patient rounds, monitoring drug therapy, and providing drug information and pharmacokinetic consultation. CL PHARM


Sauer, Nishikawa, Siepelar

This clerkship offers the student an experience in clinical nutrition. Students will assist pharmacists in the management of patients requiring parenteral nutrition and will become an integral member of the Clinical Nutrition Service. CL PHARM

188.09. Drug Use Evaluation—UCD. (1-8) F.W. Sp. Prerequisite: Fourth-year standing and completion of Clinical Pharmacy 148 or 149.

Sauer, Mowers, Dunlap

The student will participate in the activities of the Drug Use Evaluation Drug Information Service. Activities include conducting DUEs, preparing formulary evaluations for the Pharmacy and Therapeutics Committee and providing drug information consultation to hospital staff. CL PHARM

188.10. Infectious Diseases—UCD. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and comprehensive examination.

Sauer, Kirya

Students will be active participants in the UCD Medical Center Infectious Disease Consult Service. They will work closely with the Infectious Disease Pharmacists, evaluating antibiotic selection, monitoring therapy and providing drug information. A project will be completed during the rotation. CL PHARM

188.11. Pharmacokinetic Consult Service—UCD. (1-8) Su., F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.

B. Sauer, Dager

Students will participate in the activities of the pharmacokinetics consult service. Activities will include monitoring patients on selected drugs and providing pharmacokinetic consultation to the medical staff. CL PHARM

188.12. Pediatrics—UCD. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.

Sauer and Staff

Under supervision of the clinical pharmacists, students will become members of the pediatric ward team. They will attend rounds and conferences, monitor patients, evaluate drug therapy, and when appropriate, recommend therapy. Patients can be age 2 weeks to 16 years. CL PHARM

188.20. Oncology—Sutter Memorial Hospital. (4-8) F.W. Sp. Prerequisite: Fourth-year standing and consent of instructor.

Sauer, Brown and Staff

A supervised clinical pharmacy experience in inpatient and outpatient settings which allows students to develop clinical skills involved with oncology, nutritional support, and hospice. Through observation and performance, students will develop and explore their roles as clinical pharmacists. CL PHARM

188.21. Cardiology—DCH. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.

Sauer, Brown and Staff

A supervised clinical pharmacy experience in an inpatient setting which allows students to develop skills in clinical pharmacy involved with cardiology. Through observation and performance, students will develop and explore their roles as clinical pharmacists. CL PHARM

188.25. Managed Care, County of Sacramento. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework, and consent of instructor.

Sauer, Minsky

Students will become familiar with principles and operation of a managed health care organization. The student will then identify an area of potential cost containment and develop a written policy and procedure to effect a positive clinical and economic solution. CL PHARM

188.26. Acute Care—CHS. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework, and consent of instructor.

Sauer, Dallas, Beeman

Students will concentrate on developing skills in the clinical arena utilizing state-of-the-art technology, while dealing with a variety of patients in the community hospital setting. Consultation with other healthcare disciplines is stressed. CL PHARM

188.27. State Food & Drug Branch. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework, and consent of instructor.

Sauer, Snider

The Food & Drug Branch (FDB) is the regulatory agency in the State of California responsible for processed food, cosmetics, drugs, and medical devices. Students, based upon interests and goals, will participate in investigational drug reviews, analysis of proposed legislation, and/or special projects. The number of hours spent in each area and total units will depend on the student project and will be agreed upon by the student and preceptor prior to starting the clerkship. CL PHARM

188.30. OPTION Care. (1-8) F.W. Sp. Prerequisite: Completion of all first-, second- and third-year required coursework.

Sauer, Fox

Students will participate in selected areas of a home health care pharmacy. Students will develop skills in areas of parenteral and enteral nutrition, diabetics, training, ostomy appliance applications, and durable medical equipment services in a home setting and a skilled nursing facility (convalescent hospital) setting. CL PHARM

188.31. Skilled Nursing Facility Consultation—Sutter Oaks. (1-8) Su., F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year coursework and consent of instructor.

Sauer, DiGiam Battista

The student will participate in the activities of a pharmacokinetics consult in the long-term care setting. The student will learn federal and state SNF regulations and will conduct a project. CL PHARM

188.32. Microinfusion Pharmacy—NMC Inc. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year coursework and consent of instructor.

Sauer, Dager

Clinical Pharmacy/Comprehensive Dental Care

188.40. Veterinary Medicine—UCD. (1-8) F.W. Sp. Prerequisite: Successful completion of all first-, second- and third-year required coursework and consent of instructor.

Sauer, Enos

The student will participate in the clinical and dispensing activities of a pharmacy that services the veterinary medicine. Through observation and performance, students will explore the role of the clinical pharmacist in the care of large and small animals. CL PHARM


Sauer, Lance

Students participate in the clinical and dispensing activities of the hematology/oncology clinic. Activities include counseling with physicians, participation on the hospice multidisciplinary team, attending required conferences, and preparation and delivery of sterile chemotherapy agents. A project is required. CL PHARM


Sauer, LaLao, Ingram

The student will gain practical and didactic experience in all aspects of operation and management of a outpatient community pharmacy. Emphasis will be placed on business and management aspects of practicing in a prescription-only pharmacy, one of three in a small independent group. CL PHARM


Staff

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. CL PHARM

Comprehensive Dental Care

118.01. Introduction to Comprehensive Dental Care. (1) Lecture, 1 hour.

Hume, Bird, Perry

Lecture topics include basic concepts of dental health and disease, examinations of the oral and facial structures, and working in the dental clinic environment. RESTOR DENT & DENT PUB HETH

118.02. Introduction to Comprehensive Dental Care. (1) W Lecture 1 hour.

Hume, Bird, Perry

Lecture topics include basic concepts of dental health and disease, examination of the oral and facial structures, and working in the dental clinic environment. RESTOR DENT & DENT PUB HETH

118.16. Introduction to Comprehensive Dental Care. (0-6) F.W. Sp.

Bird, Hume, Otis

First-year students will be introduced to comprehensive care through seminars, laboratory and clinical experiences in epidemiology, preventive dentistry,
Dental Health Education
150. Human Development & Oral Health Education. (2) W. Lecture 2 hours.
Rowe
Introduces the student to basic concepts of preventive oral hygiene, learning and motivation theories, and an overview of human development, including physical/ dental, cognitive, emotional, and psychosocial aspects across the lifespan. DENT PUB HETH, RESTOR, DENT.
Walsh
Analysis of theories and research in education emphasizing teaching strategies, evaluation methods, and principles of curriculum development for use in planning educational programs in schools of dental hygiene. Includes field study for application and evaluation of selected teaching interactions. DENT PUB HUTH.
168. Community Health Methods. (2) W. Lecture 1 hour. Lab. 3 hours.
Silverstein
Dental hygiene student work in the North Oakland community with the Children and Youth Project staff. Students are assigned to area schools where oral screening is done. Students also make home visits. DENT PUB HETH.
Walsh
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. DENT PUB HUTH.
199. Laboratory Project. (1-5) F, W. Prerequisite: Dental Health Education 150A-B and 160A-B. Lab. 1 hour. Lab. 6-12 hours.
Walsh
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. DENT PUB HUTH.
Dental Hygiene
101.01. Leadership & Management in Dental Hygiene. (2) W. Lecture 2 hours.
M. Walsh
Analysis of leadership and management theories, and primary leadership skills related to personal behavior, communication, organization, and self-examination. Graduate programs and leadership roles in dental hygiene education, accreditation, public health, and industry are discussed. Course provides opportunity to develop leadership roles appropriate to the student's area of interest. DENT PUB HUTH.
101.02. Leadership & Management in Dental Hygiene. (2) Sp. Lecture 2 hours.
M. Hannebrink
Consideration of dental hygiene leadership roles in the areas of practice management and career planning including goal analysis and motivational tools for dental hygiene. Course provides opportunity to implement leadership role in student's area of interest.
109. Clinical Dental Hygiene. (1-2) SS. Prerequisite: Dental Hygiene 155A-B, 159, and approval of the chairperson of the division. Clinic 3-6 hours.
Staff
Course provides additional clinical dental hygiene experience before entry into the second-year clinical. DENT PUB HUTH.
150.01. Theoretical Foundations for Dental Hygiene. (1) F. Prerequisite: Dental hygiene standing. Lecture 2 hours. M. Walsh, Heckman, Poupart
Course introduces a conceptual framework and theoretical approach as the basis for providing dental hygiene care. Basic concepts of health and illness, human need theory, the scientific method, and leadership theories are considered with emphasis on health promotion and disease prevention for the individual, family, and community. DENT PUB HETH.
150.02. Assessment in the Dental Hygiene Process. (1) F. Prerequisite: DH 150.01. Lecture 1 hour.
Walsh
This course focuses on assessment, planning, goal setting, implementation, and evaluation of the dental hygiene process. The rationale for data collection, clinical techniques, and documentation procedures are presented. DENT PUB HUTH.
150.03. Dental Hygiene Planning, Implementation, & Evaluation. (2) W. Lecture 2 hours. Fannon
The planning, implementation, and evaluation phases of the dental hygiene care process will be emphasized as a culmination of DH 150.02. The use of assessment data to plan care and set goals for the patient will be presented as well as the implementation of highly technical skills of dental hygiene practice. Evaluation of dental hygiene care is emphasized as an essential component of the dental hygiene process. DENT PUB HUTH.
150.04. Dental Hygiene Care for Patients with Special Needs. (2) Sp. Prerequisite: DH 150.01, 150.02 & 150.03. Lecture 2 hours.
Walsh
Course addresses the role of the dental hygienist in preventive dentistry and non-surgical periodontal therapy as well as emphasis on the objective and principles of comprehensive dental hygiene care for special needs patients. Modification of dental hygiene care for special needs patients will include the areas of communication, approaches, environmental considerations, home care, and safety precautions in treatment. DENT PUB HUTH.
152. Introduction to Research. (1) Sp. Prerequisite: To be taken concurrently with Dental Public Health and Hygiene 121. Lecture 1 hour.
Poupart
Concurrent with Dental Public Health and Hygiene 121, each student will prepare an annotated bibliography on a research topic of interest. DENT PUB HUTH.
153A-B. Clinical Dental Hygiene Seminar. (1-3) F, W. Prerequisite: DH 153A is prerequisite to DH 153B. Seminar 1 hour.
Yamamoto
Seminar to discuss the dental hygiene process as applied to dental hygiene care. Each seminar will provide an orientation to each of the techniques/skills taught as part of dental hygiene practice in DH 154A+B (Clinical/Lab application). Arrangements, sequential steps for technique performance as well as specific criteria for performance evaluation are included. DENT PUB HUTH.
153C. Clinical Dental Hygiene Care Seminar. (1) Sp. Seminar 1 hour.
Yamamoto
Seminar discussions will focus on code of conduct, patient care responsibilities, patient records, financial policies, emergency procedures, infection control protocols, clinical administrative policies/procedures and patient care, and issues related to clinical dental hygiene care. DENT PUB HUTH.
155A. Introduction to Clinical Dental Hygiene Care. (1) Lab. 3 hours.
Yamamoto
Laboratory and clinical experiences to introduce the student to interpersonal skills, technical skills, and procedures used in the clinical practice of dental hygiene. They include professional communication, case history review, and introduction to examination, probing, scaling, and scaling techniques. DENT PUB HETH.
155B. Intro to Clinic Dental Hygiene Care. (2) W. Prerequisite: DH 155A. Lab. 6 hours.
Yamamoto
Continuation of lab and clinical experiences in patient assessment with greater emphasis on dental hygiene care, planning, goal setting, case presentation, and implementation of instrumentation techniques for providing prevention-oriented dental hygiene care and non-surgical periodontal therapy. Dental hygiene care evaluation it emphasized as an essential component of the dental hygiene process. DENT PUB HUTH.
159. Clinical Dental Hygiene Care. (2) Sp. Prerequisite: DH 155A-B. Clinic 6 hours.
Yamamoto
Clinical application of the dental hygiene process for delivering patient-centered dental hygiene care incor-
150.1, 150.02, 150.03, 150.04, 155A, 154.01, 154.02, 154.03, 159. Concurrent enrollment in Dental Hygiene 169. Clinical 12 hours F 15 hours W. Sp. Perry Assessment of patient histories and signs of disease from normal in the oral-facial complex, and planning, identifying and evaluating comprehensive dental hygiene care within a human needs framework. Includes advanced techniques of periodontal nonsurgical and maintenance therapy, pain control, gingival curetage, for the periodontosis-afflicted patient. DENT PUB HLTH

189. Independent Study. (0-4) F, W, Sp. Prerequisite: Second-year standing in dental hygiene and consent of instructor. Walsh Students select an area of interest for independent study or research. These may include clinical, community, educational, institutional, or other areas. DENT PUB HLTH

189.01. Mobile Clinic. (0-3) SS: Clinic variable. R. Miller Clinical experience in mobile dental clinics. DENT PUB HLTH

189.02. Community Health Clinic. (0-2) F, W, Sp. Prerequisite: Winter or spring quarter standing of first-year dental hygiene curriculum; or fall, winter or spring quarter standing of second-year dental hygiene curriculum. Walsh, Silverstein One-half unit of credit for every five three-hour visits made to off-campus clinics or institutions. Objective is to secure community experience and involvement. This elective is above the required eight visits to off-campus clinics and institutions. DENT PUB HLTH

199. Laboratory Project. (1-5) F, W, Sp. Lecture 1 hour. Lab 0-12 hours. Walsh A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. DENT PUB HLTH

19A-B-C. Current Topics I. (1-1) 1 F, W, Sp. Prerequisite: Second-year dental hygiene standing. Seminar 1 hour. Hannebrink Clinical seminar to discuss clinic policies and procedures, dental hygiene treatment planning, and related topics. DENT PUB HLTH

160. Expanded Clinical Functions (2) F. Lecture 1 hour. Lab 1 hour. Hannebrink Study of the anatomical, physiological, pharmacological, and periodontal aspects of the administration of local anesthetics, nitrous oxide-oxygen sedation, and performance of soft tissue curettage. Students obtain didactic and clinical experiences in these functions. DENT PUB HLTH

169A-B-C. Comp Clinical Dental Hygiene Care. (4-5-5) F, W, Sp. Prerequisite: Dental Hygiene

203A-B-C. Current Topics II. (1-1-1) F, W, Sp. Prerequisite: Concurrent enrollment in 201A-B-C. Seminar 1 hour. Walsh, Ishida A seminar series for dental hygiene students enrolled in the Master's Program in Oral Biology with a special track in Dental Hygiene. Included are issues and research related to dental hygiene in a systematic manner. Current literature will be critically reviewed by students under faculty supervision, by faculty, or guest lecturers. DENT PUB HLTH

31. Teaching Practicum in Dental Hygiene Education. (1) 2 F, W, Sp. Prerequisite: Dental Hygiene 202. Lab 3 hours. Walsh Practical teaching experiences in selected dental hygiene courses under the supervision of dental hygiene faculty members. DENT PUB HLTH

Dental Public Health and Hygiene

117. Professional Issues in Dentistry. (3) E Seminar 8 hours. Silverstein and Staff Lectures and seminars on professional issues in dentistry. Topics included are: Modes of practice, dental needs of special groups, drug use/abuse, ethics and history of dentistry. DENT PUB HLTH

118. Dental Personnel & Patient Management. (1) Sp. Lecture 1 hour. Bird Course is designed to further the development of the third-year student’s behavioral science and personnel management skills. Focus is on skills in managing office personnel and patient care. Elements of developing the OSHA-recommended Hazard Communication Program are included. DENT PUB HLTH

131. Behavioral Sciences in Dental Practice. (1) SS1, SS2. Lecture 1 hour. Gerbert This course will cover dentist-patient communication, special patients, psychosocial aspects of dental care, and issues of professionalism. DENT PUB HLTH

149A-B-C. Multidisciplinary Topics in Dentistry. (0-6) F, W, Sp. Prerequisite: Senior dental student. 20 hours per week for 3 weeks. Bird and Staff A comprehensive course designed for fourth-year students. It reinforces significant aspects of clinical and biomedical sciences, bioethics, and dental practice management, and updates students on new developments in dentistry. DENT PUB HLTH

149.01. Multidisciplinary Topics in Dentistry. (1) 35-15 hours per week for 1 week. Bird and Staff

This is a multidisciplinary course designed for the beginning fourth-year dental student. It is designed to prepare students for the advanced clinical skills needed in esthetics, materials, complex case and team efficiency management. In addition, it is intended to give the student direction to achieve immediate postgraduate goals. DENT PUB HLTH

149. Family Dental Care. (0-8) Su. 15 hours per week for 1 week. Bird and Staff This is a multidisciplinary course designed for the beginning fourth-year dental student. It is designed to prepare students for the advanced clinical skills needed in esthetics, materials, complex case and team efficiency management. In addition, it is intended to give the student direction to achieve immediate postgraduate goals. DENT PUB HLTH

150. Dental Morphology. (2) F Prerequisite: Concurrent enrollment in Dental Hygiene 150A. Lecture 2 hours. Wong The development and form of deciduous and permanent dentition and occlusion. Study of individual tooth and arch form to interrelate relationships as well as endodontic morphology. DENT PUB HLTH

175. Dental Public Health Practice & Clinic. (1-3) Su. F, W, Sp. Prerequisite: Postgraduate standing and permission of instructor. Silverstein and Staff To provide the dental public health resident with the opportunity to participate in the Family and Preventive Dental Service. They will learn about marketing strategies, computer billing services, office management, expanded function dental auxiliaries, and the delivery of preventive dental services. DENT PUB HLTH

180. Dental Jurisprudence. (1) W. Lecture 1 hour. F. Bradley The course broadens student insight into the legal problems and obligations of dental practice. DENT PUB HLTH

186. Multidisciplinary Geriatric Care. (1-5) F, W, Sp. Lecture 2 hours. Field work 2 hours. Conference 1.5 hours (optional). Bird, Rogers, Becker, Williams, Leed A seminar and clinical rotation in which the students function as members of a multidisciplinary health care team. Students evaluate geriatric patients and formulate comprehensive treatment plans. Seminar topics include functional assessment, home assessment, social resources, and dental management. DENT PUB HLTH

186.10. Issues in Professional Leadership. (1-3) Su. F, W, Sp. Prerequisite: Permission of instructor. Restrictions: Limited to 12 students. Conference 1 hour. Greene This course is designed to give structure and guidance to the experience of practicing dentists with an interest in leadership and governance. DENT PUB HLTH

Dental Hygiene / Dental Public Health & Hygiene
Dental Public Health & Hygiene

186.20. Communication Skills in Dentistry. (1) F
Seminar 1 hour.

Vo, Bird, and Staff
Practice management: communication skills in dental practice. Students will learn effective communication skills and the process through which the patient perceives the dentist and staff. They will become effective and efficient in case presentations, and in dealing with fearful, anxious, or uncooperative patients. DENT/PUB HLTH

186.30. Dental Private Practice: Career Guidance and Planning. (3) W Seminar 1 hour
Yee, Bird, and Staff
Practice management: career guidance and planning. Students will learn effective resume writing and interviewing skills for success in dental careers. Each student will have written career and life goals and action steps. DENT/PUB HLTH

186.40. Dental Private Practice: Financial Planning and Management. (3) F Seminar 1 hour
Yee, Bird, and Staff
Practice management: financial planning and management. Effective financial management principles to run a profitable, low-overhead private practice. Concepts on debt management, cash-flow, budgeting, and staff compensation, and break-even analysis will be covered. DENT/PUB HLTH

186.50. Advanced Dental Practice Management. (3) F/W Seminar 1 hour
Yee, Bird, and Staff
Advanced concepts of dental practice management utilizing dental practice case studies, computer simulations, and practice analysis techniques, and independent study. Orientation to dental management systems will be included. DENT/PUB HLTH

188. Research Methods and Design in the Behavioral Sciences. (1) F Seminar 1 hour
Gerber, Wynn
A seminar course designed to provide an overview of research designs, data collection strategies, methods of collecting and interpreting data, and assessment of threats to validity. Hypothesis development, proposal preparation, and grant writing will also be included. DENT/PUB HLTH

188.10. Dental Science and Health Education I. (1) F/W Prerequisite: DPHH 110 or consent of instructor. Restriction: Limited to 6-10 students. Seminar 1 hour. Research 1 hour. Field work 0.5 hours.

Poellit
Review of literature on dental science projects and dental health education for grades 6-8 in the San Francisco Unified School District. Students will evaluate the effect on the students' views of dental health care for grades 6-8 in the San Francisco Unified School District. Students will develop their own project to assess needs and plan, implement, and evaluate a program to address these needs. In conjunction with the Science and Health Education Partnership between UCSF and San Francisco Unified District middle school. DENT/PUB HLTH

188.20. Dental Science and Health Education II. (1) W Prerequisite: DPHH 110 or consent of instructor. Restriction: Limited to 6-10 students. Seminar 1 hour. Research 0.1 hour. Field work 0.5 hours.

Poellit
Review of literature on dental science projects and dental health education for grades 6-8 in the San Francisco Unified School District. Students will develop their own project to assess needs and plan, implement, and evaluate a program to address these needs. In conjunction with the Science and Health Education Partnership between UCSF and San Francisco Unified District middle school. DENT/PUB HLTH

188.30. Dental Science and Health Education III. (1) Sp Prerequisite: DPHH 120 or consent of instructor. Restriction: Limited to 6-10 students. Seminar 1 hour. Research 0.1 hour. Field work 0.3 hours.

Poellit
Review of literature on dental science projects and dental health education for grades 6-8 in the San Francisco Unified School District. Students will develop their own project to assess needs and plan, implement, and evaluate a program to address these needs. In conjunction with the Science and Health Education Partnership between UCSF and San Francisco Unified District middle school. DENT/PUB HLTH

189. Laboratory Project. (1.5) F/W Prerequisite: Consent of instructor.

Bird
A laboratory research project under the direction of a member of the faculty with the approval of the chairperson of the department. DENT/PUB HLTH

410. Practice Management for Advanced Education in General Dentistry. (1) W Seminar 1 hour
Bird
This seminar series is designed to provide the trainee with information on billing, training, and evaluating personnel; purchasing or assigning in a dental practice; role of business and professional advisers; and development of a business plan. DENT/PUB HLTH

429.10. Clinical Teaching Practicum. (0-4) F/W Prerequisite: Consent of instructor. Seminar 4 hours.

Bird
This seminar series will provide the trainee with the opportunity to gain experience in the management of a dental practice. The trainee will be assigned to a dental practice for a specified number of hours. DENT/PUB HLTH

489. Advanced Care for Special Patients. (0-6) Sp

Sp, W/F

Poellit
Child, Weisman
This seminar is designed to provide an overview of the diagnosis and treatment of special patients, including children and special needs patients. The seminar will focus on the management of special patients, and the development of a treatment plan. DENT/PUB HLTH

489.10. Advanced Dental Care for Special Patients. (0-6) Sp, W/F Prerequisite: DPHH 489.

Restriction: AEGD students enrolled in the second-year program.

Chin
This course will emphasize the preparation of comprehensive dental services for patients with special needs such as the frail, elderly, developmentally disabled, and medically compromised. Students will provide clinical instruction for first-year dentists. DENT/PUB HLTH

Dermatology

First-Year Coordinated Instruction—Medicine 113A-B-C. Lecture-demonstrations and written work devoted to the supervised examination of patients.

Core Clerkship—Family and Community Medicine 110 includes lectures and case presentations on the examination and diagnosis of dermatological diseases. This includes instruction in physical diagnosis, histology, and diagnostic and therapeutic procedures.

140.01. Advanced Dermatology Clerkship. (1.5 per week) Su, F/W, Sp. Prerequisite: Consent of instructor.

Odom
Activities of students are determined after an initial interview with the instructor. Emphasis is placed on routine outpatient and inpatient care and research methods, according to individual interest. DERMATOL

140.02. Off-Campus Clerkship. (1.5 per week) Su, F/W, Sp. Prerequisite: Consent of instructor.

Winzroth
Clinical clerkship in approved hospital by special arrangement and approval of the dean and chairperson of the department. DERMATOL

140.03. Advanced Dermatology Clerkship—Fresno. (1.5 per week) Su, F/W, Sp. Prerequisite: Medicine 110 and consent of instructor.

Hartman
Activities of students are determined after an initial interview with the instructor. Emphasis is placed on routine outpatient and inpatient care and research methods, according to individual interest. DERMATOL

140.04. Inpatient Clinical Dermatology. (1.5 per week) Su, F/W, Sp. Prerequisite: Dermatology 140.03.

Odom
Four-week block rotation. Students will work with inpatient Dermatology residents and share primary responsibility for inpatients, hospital consultations and inpatient care center patients. DERMATOL

150.01. Dermatology Research. (0.5 per week) Su, F/W, Sp. Prerequisite: Consent of instructor.

Winzroth
A research project under the direction of a member of the faculty. DERMATOL

490. Staff Conference. (2) F/W.

Winzroth and Staff

Residents prepare and present case histories of patients at conferences, making reference to appropriate literature, special studies and laboratory work. Conferences include discussions of new development and research investigation by staff members and faculty from other UC departments and other universities. DERMATOL


LeBoit
Lectures and demonstrations of the histopathology of skin diseases with special emphasis on correlation with clinical findings. Activities include the study of microscopic sections and discussion of material presented. DERMATOL

402. Dermatological Literature. (1) F/W Seminar 1 hour.

Maibach and Staff
Seminar covers recent literature in dermatology. Included is assigned reading with required reports which are evaluated by members of the faculty. DERMATOL

403. Specialty Seminar. (2) F/W Seminar 2 hours.

Winzroth and Staff
Seminar includes discussions, required reading, and reports on dermatology and related basic sciences such as embryology, myology, histopathology, and parasitology in relation to dermatologic conditions, and oncology as it relates to the skin. DERMATOL


Winzroth and Staff
Seminar involves the evaluation of recent clinical cases of special interest. Cases are presented by the faculty and resident staff. DERMATOL


Winzroth
Instruction in the conduct of research projects dealing with electron microscopy, biochemistry, and immunology of the skin under normal and pathological conditions. DERMATOL


Winzroth and Staff
In-depth discussion of the basic sciences and their relation to dermatology. Activities focus on the basic sciences relevant to dermatology. DERMATOL

407. Cutaneous Microbiology. (2) Su, F/W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Ahl
Course is designed to familiarize dermatology residents with the techniques of isolation and identification of dermatophytes, skin bacteria, and viruses. Occasional lectures on specialized topics are given. DERMATOL

Dental Public Health & Hygiene / Dermatology
Dermatology/Endocrinology/Epidemiology

Wintrobe and Staff.
Residents, under supervision, are responsible for patient care in the wards and outpatient clinic. Duties include history-taking, physical examinations, and consultation. In addition, the senior resident has certain administrative, teaching, and clinical responsibilities. DERMATOL.

Wintrobe.
Residents, under supervision, are responsible for patient care in the wards and outpatient clinic. Duties include history-taking, physical examinations, and consultation. In addition, the senior resident has certain administrative, teaching, and clinical responsibilities. DERMATOL.

452. Off-Campus Clerkship. (1.5 per week) Su, F, W, Sp.
Prerequisite: Consent of instructor.
Wintrobe.
Assistant residents work at off-campus hospitals, in the United States and other countries, approved by the dean and the chairperson of the department. Course includes training in clinical and investigative dermatology. DERMATOL.

Endocrinology

Courses in endocrinology are offered through various departments. For further information regarding any of them, contact the instructor in charge or Dr. Zach Hall, Chair, Department of Physiology, Interdisciplinary Program in Endocrinology. See also Biochemistry courses of offerings.

150.01. Research. (1.5 per week) F,W,Sp. Prerequisite: Consent of instructor.
Staff.
Individual research in endocrinology supervised by members of the faculty in the Interdisciplinary Group in Endocrinology. PHYSIOLOGY

Prerequisite: Consent of instructor.
Dallman.
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PHYSIOLOGY

150.03. Laboratory Project. (1-5) Su, F, W, Sp.
Prerequisite: Consent of instructor.
Gong.
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department.

Prerequisite: Consent of instructor.
Lennox, Bourne.
Seminars are conducted for the benefit of students in the department.

Epidemiology

Courses in biostatistics and anthropology, which are also offered through the Department of Epidemiology and Biostatistics, are listed separately under their respective headings.

100. Medical Parasitology. (2) Sp. Prerequisite: Microbiology 100 (without parasitology) or equivalent, or concurrent enrollment. Lecture 2 hours. Heyneman.
An introduction to protozoa and helminths and human diseases they produce. Parasite epidemiology and life cycles, diagnosis, clinical aspects, treatment, and control are considered in lectures, films, and Kodachrome slides. Laboratory demonstrations keyed to lectures are displayed throughout the week. EPIDEMIOLOGY

101. Epidemiology and Biostatistics. (3) Sp. Lectures 1.5 hours. Seminar 1.5 hours. Restriction: First-year medical student or consent of instructor.
Ernst, Croughan-Minielke. Black.
Introduction to epidemiologic and biostatistical methods: Research approaches to disease etiology, prevention and treatment; interpretation and critical evaluation of medical literature; measures of disease occurrence; screening and diagnostic test evaluation; major disease risk factors; and clinical importance of preventive medicine. EPIDEMIOLOGY

104.02B. Off-Campus Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of chairperson of department.
Petrakis and Staff.
Clerkships in clinical epidemiology in off-campus settings. EPIDEMIOLOGY

104.03. Leprosy. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor.
Gelber.
An introductory course in the diagnosis and care of leprosy patients. Selected readings will be discussed on the clinical presentation, therapy, and immunology of leprosy. Additional time on the service, with increasing clinical responsibility, may be arranged. EPIDEMIOLOGY

104.05. Clinical Clerkships Abroad. (1 per week) F,W,Sp. Prerequisite: Nine months of clinical work and completion of Medicine 150, 150.01, or consent of instructor.
Goldsmith, Brazzarin, S. Lane.
Clinical clerkship elective in a developing country. Students provide patient care at a medical school, provincial hospital, or rural health clinic for eight to twelve weeks. Arrangements may also be made to participate in a public health or research program abroad. EPIDEMIOLOGY

104.06. Preventive Cardiology. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110.
Siegel, Berson, Chodini.
Clinical experience in hypertension, lipid, cardiology, and smoking cessation clinics stressing behavioral interventions. Students also participate in a seminar covering major topics in preventive cardiology. Choose a topic for presentation and develop ability to evaluate literature critically. EPIDEMIOLOGY

150.01. Medicine in Developing Countries. (1.5 per week) W. Prerequisite: Epidemiology 100 or consent of instructor.
Goldsmith.
Two-week block elective on the recognition and treatment of diseases of tropical and developing countries. The course is designed to prepare students for clerkships abroad in developing countries. Presentation format includes lectures, seminars, films, laboratory sessions, and supervised independent study. EPIDEMIOLOGY

150.02. Research Abroad. (1.5 per week) Su,F,W, Sp. Prerequisite: Consent of instructor. Restriction: Limited to 2 students per block.
Dunn and Staff.
Research abroad, usually in a developing country, under supervision of a member of the Epidemiology faculty. Guidance is available principally for epidemiological studies and for research in tropical medicine, medical parasitology, medical anthropology, and topics in international health. EPIDEMIOLOGY

160.01. Cancer Epidemiology. (1-2) W. Prerequisite: Epidemiology 101 or consent of instructor. Lecture 1 hour. Optional term paper for 2 units.
Petrakis and Staff.
Survey of indexes and data on incidence and mortality, regional and social variations, and the study of risk factors. EPIDEMIOLOGY

170.05. Intro to International Health. (2) Sp. Lecture 2 hours.
Dunn and Staff.
Lectures and discussion to survey the history, organizational structure, major activities and topics that comprise the field of international health. EPIDEMIOLOGY

170.07. Leprosy Laboratory Project. (1.5-5) Su, F, W, Sp. Prerequisite: Consent of instructor.
Gelber.
A laboratory research problem of leprosy under the guidance of a member of the staff of the Leprosy Research Unit at Seton Medical Center. The unit's major research areas are the pharmacology, immunology, and chemotherapy of leprosy in animals and man. EPIDEMIOLOGY

170.08. International Health Policy. (2) Sp. Lecture 2 hour.
P. Lee, F. Dunn, J. Justice.
Lectures and discussions to examine topics and issues in international health at the level of policy. EPIDEMIOLOGY

170.10. Occupational Epidemiology. (1-2) W. Prerequisite: Epidemiology 103 or 190. Seminar 1 hour.
Optional term paper for 2 units.
Mustachi.
Seminars on selected topics in occupationally related diseases with specific emphasis on their epidemiologic, preventive, and compensation aspects. Discussion, with examples, of the concept of disability and of the physician's basic role and responsibilities in determining its level. EPIDEMIOLOGY

170.12. Epidemiology of Infectious Diseases. (1-2) W. Prerequisite: Previous or concurrent enrollment in an introductory epidemiology course, such as Epidemiology 101 or equivalent, and previous or concurrent enrollment in an introductory microbiology course, such as Microbiology 108B or equivalent. Lecture/ seminar 1 hour. Term paper for 2 units optional with consent of instructor.
Conte.
Course considers the public health consequences of different communicable diseases (including AIDS, sexually transmitted diseases, tuberculosis, malaria, and food-borne bacterial disease), and examines strategies for surveillance, outbreak investigation and presentation (including immunization) of infectious diseases in different settings. EPIDEMIOLOGY

170.13. Molecular Cancer Epidemiology. (1-2) W. Lecture/sem 1 hour. Term paper for 2 units optional with consent of instructor.
Wiencke and Guest Lecturers.
Course explores how biologic markers can be used to understand factors involved in human carcinogenesis and how to use lab methods and analytic epidemiology to identify, at the molecular and biochemical level, exogenous agents and host factors affecting human cancer causation. EPIDEMIOLOGY
180. 18th Intervention in Dev Areas. (1) S. Prerequisite: Consent of instructor. Seminar 1 hour. Project 1 hour. Kiefer
Explore practical and ethical problems of health workers from urban-industrial cultures intervening in developing areas. Provider/client differences in perceptions of values, needs. Problems of goal-setting, assessment, rapport, communication, consensus-building, evaluation. Practical experience in teaching health promotion to underserved groups. EPID & BIOStat

180.01. Tropical Medicine Clinics. (1-2) S. S. F. W. Prerequisite: Epidemiology 150 and 6 months of clinical experience. Clinic 4-6 hours. R. Goldsmith, Friseroon and Staff
Examination and treatment of patients in the Tropical Medicine Clinics under staff supervision. The clinics operate in conjunction with the Infectious Diseases Service; patients seen have both parasitic and other infectious diseases. EPID & BIOStat

180.04. Research Design. (3) S. S. F. Prerequisite: Consent of instructor. Lecture 1 hour. Workshop 6 hours. Hulley
A workshop for students to design their own protocols for carrying out a clinical research project. Specific topics are the research question, study design, study subjects, measurements, sample size, ethical considerations, power, data management, quality control, and proposal writing. EPID & BIOStat

180.05. Maternal & Child Hlth-Devel. Con. (1-2) S. Lecture and discussion 1 hour. Optional term paper for 2 units. Aronholt
Lectures and discussion to review major factors affecting maternal and child health in developing countries, including the impact of poverty, nutrition, infectious diseases, and the role of maternal and child health care, setting of priorities, and utilization of local people as health auxiliaries. EPID & BIOStat

180.07. Environmentally Induced Disease. (1) S. Lecture 1 hour. Tarcher
A lecture series on the causes, diagnosis, treatment and prevention of environmentally induced disease. Topics include pesticides, hazardous wastes, indoor and outdoor air pollution, water pollution, susceptible populations, and the relationship of nutrition to environmentally induced disease. EPID & BIOStat

180. Tropical Medicine Lectures. (1) S. Lecture 1 hour. R. Goldsmith
Lectures, case histories, and films emphasizing diagnosis and treatment of both tropical and non-tropical diseases including malaria, amebiasis, cholera, typhoid, schistosomiasis, leprosy and arbovirus infections, plus a review of opportunities for clinical clerkships abroad in developing countries. EPID & BIOStat

190. Introduction to Epidemiology. (3) S. F. W. Prerequisite: Lecture 3 hours. Lipcomb and Staff
Introduction to the principles and methods used in epidemiology. Elements of research study design, critical analysis of journal articles, and applications of epidemiological methods to common health risks in populations will be included. EPID & BIOStat

198. Supervised Study. (1-5) S. S. F. Prerequisite: Consent of instructor. Staff
Library research and directed reading under supervision of a member of the faculty. EPID & BIOStat

199. Laboratory Project. (1-5) S. S. F. Prerequisite: Consent of instructor. Staff
A laboratory research project under direction of a member of the faculty. EPID & BIOStat

201. Sociopopulation of Aging. (3) S. S. F. Prerequisite: Consent of instructor. Lecture/sem 2 hours. Library research 3 hours. Davis and Guest Lectures
Overview of the influences of sociodemographic structure, status, process and changes on morbidity, functioning, longevity and mortality across the adult life span, with special emphasis on changes in sociodemographic risk factors with age. EPID & BIOStat

Family and Community Medicine

110. FM Core Clerkship. (1.5 per week) S. F. W. S. Prerequisite Completion of 20 weeks of clinical clerkship including Medicine 110. Shore, Mitchell
Student function as family/primary physicians in ambulatory settings affiliated with residency programs. Family Practice at SFGH, CHS in Santa Rosa, NAT in Salinas, and VMIC in Fresno. Primary Care Internal Medicine at UC, SFGH, and MZ. FAM CM MED

140.01A-B.-C.-D. Advanced Family Practice. (1.5 per week) A, B, C, and D are offered in all of the following quarters: S. F. W. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. A. Shafer, B. Nikwoca, C. Slater, D. Rodnick, Mitchell
A-VMIC in Fresno; B-NAT in Salinas; C-CHS in Santa Rosa; D-others sites. Comprehensive inpatient and outpatient experience in family practice. Students assume sub-interim responsibility for patient care. Community assignments may be individually arranged. FAM CM MED

140.02. Community Health Programs. (1.5 per week) S. F. W. Prerequisite: Determined by student’s clinical experience. Consent of instructor. Barbacca and Staff
Elective clinical experience for four or more weeks in various community health projects in California and out of state. Projects include Indian Health Service, Diabetic Summer Camp, Asian Health Service, and varied neighborhood clinics. FAM CM MED

140.04. Family Practice Preceptorship. (1.5 per week) S. F. W. Prerequisite: Consent of instructor. Shore
Students work with a family physician, alternatively general intern or general pediatrics, in the office, observing the practice and performing duties as training permits. Experience will vary common health problems and primary care in a community. Rural preceptorships are encouraged. FAM CM MED

140.05A-B.-C.-D. Social Medicine. (1.5 per week) F. W. S. Prerequisite: Consent of instructor. Barbacca
Field work experience or research germane to social medicine individually arranged with consideration to student’s major area of interest. FAM CM MED

140.06A-B.-C. Rehabilitation Medicine. (1.5 per week) A, B, and C are offered in all of the following quarters: S. F. W. Prerequisite: Consent of instructor. L. Crain, N. Byl
A-San Francisco Bay Area; B-Fresno; C-others sites. Students are assigned to rehabilitation facilities for two to four weeks. Emphasis will be on the selection of patients who are suitable for rehabilitation and the interdisciplinary approach to rehabilitation. FAM CM MED

140.15. Longitudinal Clinic. (1) S. F. W. Prerequisite: Senior clerkship which would enable the student to pick up patients to be followed in clinic. Shore, Mitchell, Brody
Students will see primary care patients one-half day per week for six to nine months. They will continue to see patients who were initially seen during the student’s medicine or FMCC 110 clerkship. FAM CM MED

140.49. Adv Inpatient Fam Med Clerkship. (1.5 per week) S. F. W. Prerequisite: Senior medicine clerkship. R. Goldschmidt
The Family Practice Inpatient Service at SFGH employs the family practice approach to hospitalized adult patients with diverse medical problems. Students function as members of the multidisciplinary inpatient team at a junior intern level. Attending rounds are held daily. FAM CM MED

140.51. Emergency Medicine—VMIC. (1.5 per week) S. F. W. Prerequisite: Medicine 110, Obstetrics and Gynecology, Pediatrics 110 and Surgery 110. F. Walter
Students receive practical training in emergency medicine, in emergency prehospital care, and also in the care of the critically ill and injured patient in the emergency room. Daily emergency medicine care conferences and weekly conferences augment clinical experience. FAM CM MED

140.52. Rural Family Practice—Selma. (1.5 per week) S. F. W. Prerequisite: Medicine 110, Surgery 110, Pediatrics 110, Ob/Gyn 110. Shands, Davison
Primary care at Selma Community Health Center, in an agricultural community near Fresno. Ambulatory practice includes pediatrics, obstetrics, gynecology, and chronic diseases. Includes patient rounds, deliveries, and emergency room experience at modern rural hospital. Exposure to rural private family practice available. FAM CM MED

140.53. Inpatient Medicine/Family Practice. (1.5 per week) S. F. W. Prerequisite: Medicine 110, FCMM, 110, fourth-year standing. Holligmann, Nowlis, McCann
Students function as inpatients on general medicine ward staffed by Family Practice residents and faculty. Acute medical care is provided with special input from department psychologist and health educator. FAM CM MED

140.54. Primary Care in the Latino Community—Fresno. (1.5 per week) S. F. W. Prerequisite: Medicine 110 or Peds 110, or Ob/Gyn 110, or consent of instructor. Cruz
Outpatient clinical experience in a community health center in a predominantly Latino community, with emphasis on community-based primary care. Each student's program will be individually tailored to include exposure to epidemiology, pediatrics,Ob/Gyn, and adult medicine in a Latino community. FAM CM MED

140.60A-B.-C.-D. Clinical Geriatrics. (1.5 per week) F. W. Prerequisite: Medicine 110 and Neurology 110 and consent of instructor. Barbacca, Werdegger and Staff
A-San Francisco, B-Fresno, C-St. Mary's, D-Other. Students supervised by attending staff are assigned patients in clinical settings, outpatient departments, adult day centers, nursing homes, acute hospital, and home care. Students will attend multidisciplinary care conferences, didactic seminars, geriatrics consultation rounds. FAM CM MED

140.61. Geriatrics-Long-Term Care—LAH. (1.5 per week) S. F. W. Prerequisite: Third-year standing. Beck, Borgenicht and Johnson
Students will work with geriatricians and other health professionals to learn about the clinical management of geriatric patients. FAM CM MED

140.70. Community Medicine in International Perspective. (1.5 per week) S. F. W. Prerequisite: Conversational command of language of country of placement and consent of instructor. Coady, Goldsmith, Pedrotti
A 4-12 week elective involving placement at a supervised primary care training and/or service site abroad.
160.07. Family Health & Care. (2) F Seminar 2 hours.
Ramos, Braverman, Segal
Introductory principles of family medicine are discussed in class and discussion groups led by family physicians and family psychologists. Preceptorsship with family physicians in private offices and community clinics. Each student will interview a family and present a case report. FAM CM MED

160.70. Community Medicine in International Perspectives. (1.5 per week) F, W, Sp. Prerequisite: Consent of instructor. Coady, Lane, Goldsmith, Petini
An elective involving placement at a supervised primary care training and/or service site abroad. Placement will be made according to student interest and language capability as well as availability of appropriately supervised sites. FAM CM MED

170.01A-B-C. Special Issues in Health Care. (0-3) A, B, and C are offered in all of the following quarters: Su, F, W, Sp. Prerequisite: Consent of instructor. Lecture and reading 1–3 hours.
Rodnick and Staff
Explorers in systematic lectures/readings/discussion format new issues in health care or special content areas related to family and community health. Topics are developed and prepared according to faculty student interests. FAM CM MED

170.02. Elderly Community Programs. (2) W. Lecture 1 hour. Conference 2 hours. Enrollment limited.
Barbaccia, Robinson, Weiss
This course offers students a survey of the aged in San Francisco. Lecturers cover the socio-demographic, cultural, and health status factors of the city's aged. On-site conferences are held at representative programs and facilities serving the aged. FAM CM MED

170.03. Developmental Disabilities. (2-5) Su, F, W, Sp. Prerequisite: Consent of instructor. Field work 4–6 hours.
L. Crain
Resource overview with reading assignments correlated with field observations of the spectrum of community and institutional services, including comprehensive diagnostic, therapeutic, and counseling services for children and adults with developmental disabilities. FAM CM MED

170.04. Rehabilitation in Primary Care. (1) Su, F, W, Sp. Prerequisite: Consent of instructor. Seminar 2 hours for 6 weeks.
Byl, Bered
Course exposes medical and other health science students to the principles of rehabilitation and common therapeutic strategies. Emphasis will be on the development of a basic theoretical foundation on which the student can build clinical rehabilitation skills in practice. FAM CM MED

170.05. Rehabilitation Medicine. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Field work 4–8 hours.
L. Crain
Through individualized arrangements, course provides an introduction to the broad spectrum of rehabilitation services for children and/or adults with chronic or disabling diseases. FAM CM MED

170.07. Communication with Latino Patients. (2) F, W, Sp. Prerequisite: Medical student status. Lecture 2 hours; Lab 1 hour.
Braverman, Koreck, Vasquez-Vega
A practical course designed to develop basic skills in overcoming cultural and linguistic barriers to health care for Spanish-speaking persons. FAM CM MED

170.08. Complementary Forms of Healing. (1) F Medical students only. Lecture 1 hour. Hughes
This course explores the general theory and practice of several widely utilized non-allopathic healing modalities with the aim of demonstrating how these therapies can be complementary to modern technology-centered health care. FAM CM MED

Baron, Braverman, Perez-Stable
A lecture-discussion course on current issues in health care in Central America. Emphasis on relationship between health system in Central American nations and in relation to Central American patients seen in San Francisco. FAM CM MED

170.10A. Homeless Health Issues. (1) F Lecture 1 hour.
Desmond
A new course covering the broad spectrum of living issues (health care, drug addiction, HIV, shelter life, etc.) confronting the homeless population of San Francisco. The seminar will be given in lecture format during the lunch hour. One session will be devoted to discussion of issues presented. FAM CM MED

Lane
A two-quarter conference which enables first- and second-year medical students to research and present case studies encountered during work at the student-run clinic. Two to three cases will be presented and discussed each week. FAM CM MED

172A. Legal Medicine–Basic Concepts. (2) F Lecture 2 hours.
Fennemhouse
Fundamental legal principles and procedures affecting medical practice, with emphasis on medical negligence: the physician's role in the litigation process; the areas of medical practice which are most frequently involved in litigation; and practical measures to minimize the risk of lawsuit. FAM CM MED

173. Legal Medicine–Practical Aspects. (2) W Lecture 2 hours.

J. Cook
Exploration of various aspects of primary care as related to family medicine. Practicing family physicians lead discussion of topics developed by the student. Introduction to the practical aspects as well as the issues and demands of family practice. FAM CM MED

Rodnick
An exploration of the comprehensive role of the family physician in providing longitudinal health care. Students will learn to recognize priorities in patient care, with an emphasis on the patient as a whole person. FAM CM MED

180. Intro to Social & Preventive Med. (1-2) F. Lecture and seminar 1-2 hours.

Barbaccia
Lectures and seminars introduce entering students to social, political, economic and environmental factors influencing health of the community and provision of care. Topics include preventive health care, health behavior and formulation of policy. FAM CM MED

Braverman, Sanchez, Koreck
An introduction to demographic, political/economic, anthropologic and sociologic issues of importance for the health of diverse Latino subcultures in the US. FAM CM MED

Barbaccia
Lecture-seminar format is used to cover most aspects of the organization and function of the health care service systems and its subsystems, including manpower, hospitals, ambulatory care, planning and regulation and control, economic, governmental programs and health services research. FAM CM MED

198. Supervised Study. (1-5) Su, F, W, Sp. Prerequisite: Consent of instructor.
Rodnick and Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. FAM CM MED
Genetics

200A. Principles of Genetics. (3) § F Lecture 3 hours.

Herskovitz

In-depth exploration of genetic mechanisms in selected prokaryotes, eukaryotes. Topics include genetic exchange (conjugation, generalized and specialized transduction, transformation), recombination (general, site-specific, "ligation"), mapping, mutagenesis (induction and consequences), mobile genetic elements, gene expression, mitotic and meiotic segregation, allism, position effects. BIOCHEM

215. Laboratory Rotation. (3) § F, Sp. Lab 9 hours.

Guthrie

A laboratory rotation course to familiarize first-year students with various approaches to research. Students are required to rotate through three different laboratories in at least two subject areas, and give an open seminar at the end of each quarter. BIOCHEM

230. Current Topics. (1-5) § F, Sp. Prerequisite: Consent of graduate advisor in genetics. Seminar. Herskovitz and Staff

Students will lead a discussion on a topic of special interest to genetics. A different faculty member will act as advisor each week. This is required course each quarter for first- and second-year student in genetics. BIOCHEM

222. Topic in Medical Genetics. (1-5) § S, F, F.W. § Conference 1.5 hours. Clinical 1.5 hours.

Epstein, Packman, Cox

A course using participation in a working genetics clinic and directed reading and discussion to present the concept and approaches of medical genetics and the application of molecular, cellular, and developmental biology to the understanding of human genetic disease. BIOCHEM

224. Advanced Human Genetics. (1.5) § Sp. Lecture 1.5 hours. Offered in alternate years. Offered 1994-95.

Epstein, Kau, Cox, Glitschke, Packman, Wolf

Covers topics in current human genetics research, including molecular approaches to the mapping of human chromosomes, molecular analysis of mutant human genes, use of restriction fragment length polymorphisms for linkage analysis and diagnosis, effects of chromosome imbalance, gene therapy, and environmental mutagenesis. BIOCHEM


Epstein

A seminar course in which human genetic disorders affecting morphogenesis and development will be analyzed to elucidate the pathogenetic relationships between the underlying molecular defects and the resulting phenotypic abnormalities. BIOCHEM

250. Research. (1-8) § F, Sp. Staff

BIOCHEM

Growth and Development

110. Normal & Abnormal Craniofacial Dev. (1) § F Lecture 1 hour.

Kahan, S. Fischer, C. Cook, R. Coleman, Kapila

Developmental processes underlying normal and abnormal craniofacial morphogenesis are presented and the biologic basis for congenital malformations are discussed. GR. DEVEL

120. Orofacial Functions/Disfunctions. (1) W Lecture 1 hour.

Vargervik, Peterson-Valdez, Kapila

Clinical considerations of normal and abnormal pattern of orofacial function are discussed to provide a basis for diagnosis and prognosis of functional disorders involving the orofacial region. GR. DEVEL

122. Oral Physiology. (1-5) § F Lecture 3 hours.

A. Miller

The physiology of the craniofacial region will be taught emphasizing endocrine control of calcium and phosphorus, mineralization, salivation and taste, sensory control related to craniofacial musculature, mastication, swallowing, and characteristics of craniofacial musculature. GR. DEVEL

188. Relevance of Neurornuscular System to Craniofacial Dev. (2) F Prerequisite: Physiologist. Enrollment limited to senior dental students and postdoctoral graduate students in orthodontics, pediatric dentistry, removable prosthetics.

A. Miller

Course illustrates how the neuromuscular system of the craniofacial region affects and interacts with craniofacial development by modifying its function, diet, force development, impairment to development and function, and altering occlusion. GR. DEVEL

210. Developmental Biology of the Craniofacial Complex. (2) § SS1, SS2. Prerequisite: Available for credit to graduate students in Oral Biology, dental postgraduate specialty programs, and as an elective to upper class students in Dentistry and Medicine. Lecture 1 hour. Seminar 0.5 hour. Conference 0.5 hour.

Kahan, Derryck, Vargervik, Cherici, Damsky

Lectures, seminars, and classroom discussion on the fundamental mechanisms underlying craniofacial development and the etiology, pathogenesis, and treatment of craniofacial defects. GR. DEVEL

Health Sciences Education

200. Intro to Teaching Health Sciences. (1) § F Prerequisite: Consent of instructor. Lecture 2 hours.

Linn

The course focuses on instructional techniques and strategies useful for the beginning instructor. Emphasis is placed on teaching professional students in the School of Pharmacy. Open to graduate students, residents and new faculty. PHARMACY

200C. Introduction to Medical History. (2-4) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour (optional). Term paper (optional).

Presman

Continuation of the general survey from the nineteenth century to the present, examining in detail the emergence of scientific medicine, germ theory, medical technology and twentieth-century therapeutics. HIST HL SC

201A. Health and Plagues: Ecology and History. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour. Term paper (optional).

Rine

A general overview of health conditions across cultural and geographic boundaries from prehistory to the Renaissance, including leprosy and the Black Death. The focus will be on factors both biological and social responsible for the shifting ecology of disease. HIST HL SC

201B. Health and Plagues: Ecology and History. (2-4) § S. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour. Term paper (optional).

Rine, Presman

A continuation of the general overview of health conditions across cultural and geographic boundaries from prehistory to the Renaissance, including leprosy and the Black Death. The focus will be on factors both biological and social responsible for the shifting ecology of disease. HIST HL SC

201C. Introduction to Medical History. (2-4) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour (optional). Term paper (optional).

Presman

Continuation of the general survey from the nineteenth century to the present, examining in detail the emergence of scientific medicine, germ theory, medical technology and twentieth-century therapeutics. HIST HL SC

201D. Health and Plagues: Ecology and History. (2-4) § S. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour. Term paper (optional).

Rine, Presman

A continuation of the general overview of health conditions across cultural and geographic boundaries from prehistory to the Renaissance, including leprosy and the Black Death. The focus will be on factors both biological and social responsible for the shifting ecology of disease. HIST HL SC

204A. Historical Research I. (2-4) § S. Prerequisite: Consent of instructor. Seminar 2 hours. Optional term paper & reports.

Rine, Presman

Introduction to medical historiography. Discussion of the different approaches employed in writing and interpreting history. HIST HL SC

204B. Historical Research II. (2-4) § S. Prerequisite: Consent of instructor. Seminar 2 hours. Optional term paper & reports.

Rine, Presman

Introduction to research in medical history. Survey of bibliographic tools available to historians. Visits to archives and libraries in the Bay Area. Interviewing skills and preparatory research for oral history. HIST HL SC
models of development, life course, adult socialization, age stratification, intergenerational issues, cognition, historical and demographic perspectives, personality, stress, transitions, age-comparative coping, and psychopathology. PSYCHIATRY

202A-B-C. Res Meth in Adult Devel & Aging. (4) S.F.W. Sp. Prerequisite: Consent of instructor. Lab 5 hours.

Staff
The three-quarter course covers major methods and techniques of life course/life span research including surveys, field observations, analysis of quantitative and qualitative data, and longitudinal research. PSYCHIATRY

204. Personal Development. (2) S.F.W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Staff
Representative works from behavioral science literature and world poetry and prose are brought together in the study of personality development in adult life. Comparisons insights from the two fields on how the developing person copes with social, historical, and psychological challenges. PSYCHIATRY

205. Data Analysis. (5) S.F.W. Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Special

Staff
Students either provide their own or use accessible data from ongoing research projects. Emphasis is on training in data organization, analysis, and research report writing. PSYCHIATRY

207. Methods of Survey Research. (5) S.F.W. Sp. Prerequisite: Consent of instructor. Lecture 3 hours, plus field work.

Pearlin
Course covers the major tasks of survey research. Topics such as conceptual specification, the development of indicators and measures, the construction of questionnaires, sampling, field testing, interviewing, and analysis are covered. PSYCHIATRY

214. Adv Personal Development. (2-3) S.F.W. Sp. Prerequisite: Hum Dev 204, or consent of instructor. Seminar 2 hours, optional extra units.

Klieber
The prerequisite, Hum Dev 204, combines study of mainstream theories of adult personality development with literary works as case material. This course, Hum Dev 214, proceeds to the study of alternative models from lesser-known Western and Asian traditions. C.G. Jung, William James, Hindu, Buddha, Taoist, and Judeo-Christian spiritualist writings—and literary examples based on these. PSYCHIATRY

299. Dissertation. (0-8) S.F.W. Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser. Staff

Kline
For graduate students engaged in writing the dissertation for the Ph.D. degree. HIST HL SC

Human Development & Aging

200. Off-Campus Study. (0-3) S.F.W. Sp. Prerequisite: Approval of graduate adviser. Staff

Full-time graduate study in the Human Development and Aging program through the intercampus exchange or consortium program. PSYCHIATRY

201A-B-C. Fundamental Theories & Methods. (1-4) S.F.W. Sp. Prerequisite: Consent of instructor. Seminar 4 hours.

Staff
Psychological and sociological theories and methods in the study of the human life cycle. Topics include
Course covers the light and electron microscopic structure of organs with emphasis on the relationship of structure to organ function. The histology of endocrine and reproductive systems is presented in a separate course. Physiology 101. ANATOMY & BIOCHEMISTRY

140.01. Principles of Laboratory Medicine—SFCH. (1.5 per week) Su, F, W, Sp. Prerequisite: Two years of medical school.

Gottfried, Ng, Hadley, Hung, Khayam-Bashi Laboratory sessions, seminars and rounds at SFCH correlate laboratory tests with clinical case studies. This course covers general principles and specific topics in chemistry, hematology, microbiology, serology, immunology and transfusion medicine. The schedule can be modified to accommodate special interest. LAB MED

140.05. Clinical Pathology—VMC. (1.5 per week) § F, W. Sp. Prerequisite: Medicine 110 and consent of instructor.

Schens, Mosley Clerkship in laboratory medicine including indications for tests, problems of collection and performance, interpretation of data to assist clinicians in making diagnoses and following therapy. Topics include clinical chemistry, radiobiology, parasitology, hematology, immunology, and serology, blood banking, microbiology, mycology, parasitology. LAB MED

140.06. Laboratory Medicine in Fresno. (1.5 per week) Su, F, W. Sp. Prerequisite: Medicine 110.

Bauer, Beland, Mann Utilization of different laboratory settings, organizations, and approaches by pathologists in hospitals throughout the Fresno community. Includes coverage of traditional areas of clinical pathology in addition to such specialized areas as cytogenetics and therapeutic drug monitoring. LAB MED

140.07. Hematology—UC. (1.5 per week) F, W, Sp. Arwatz, Coward An in-depth study of the mechanisms involved in serious disease processes. Emphasis on acquisition of basic science information by physicians and on the logical development of nomenclature and planning of intervention based on principles drawn from basic science. MEDICINE

111. Mechanisms of Disease. (1.5 per week) § Sp. Prerequisite: Fourth-year standing in medical school.

Keashly, Coward Course covers the basic principles of medical biology with emphasis on their application to control of gene expression in humans. ANATOMY & BIOCHEMISTRY

193. Organ System Histology. (4) § Prerequisite: Laboratory Medicine 193. Lecture 3 hours, lab 4 hours, independent study 4 hours. 7-week course.

S. Wisisig Course covers the skeletal and connective tissue systems of the body with emphasis on the relationship of structure to function. Topics include the histology of the musculoskeletal system, nervous system, and endocrine system. LAB MED


Liu, Lim, Yen Basic laboratory course in nuclear medicine. Clinical participation in the diagnosis of patients receiving radionuclides in the outpatient clinics and in the wards. LAB MED

160.02. Sexually Transmitted Diseases. (2) § W. Lecture 2 hours.

Palefsky, Brooks Course covers biological and clinical aspects of the syndromes and agents of sexually transmitted diseases, including herpes, chlamydia, gonorrhea, syphilis, vaginitis, AIDS, and others. This is an elective course oriented toward medical students. LAB MED

452. Cytometry & Cell Analysis. (3) W. Lecture 3 hours.

Mayall Course introduces the theory and techniques of image cytometry, flow cytometry, and flow sorting, and surveys the research and clinical applications of these powerful techniques for the analysis of individual cells. LAB MED

131A-B-C. Introduction to Clinical Medicine. (1-2-3) F, W, Sp. Prerequisite: First-year standing or consent of instructor. Lecture 1 hour Sp Section week. 2 hours F, W, Sp. C. M. Cooke, P. Braverman Interdepartmental instruction in clinical problem-solving, interviewing, medical history, ethics, organization, and financing of care. On-going relationship with a patient focused on health promotion, education, understanding barriers to access and "compassion"; community resources; health team. Small groups, lectures, and preceptorships. MEDICINE

132A-B-C. Introduction to Clinical Medicine. (7-4-6) F, W, Sp. Prerequisite: Anatomy 100A-B, 103; Biochemistry 100; Interdepartmental Studies 106; Medicine 131A-B-C; Microbiology 100B-B (may be taken concurrently); Pathology 101, 102 (may be taken concurrently); Physiology 100, 101; or consent of instructor. M. Cooke Continuation of interdepartmental course on pathophysiology of disease and techniques of collecting and presenting clinical data, including history-taking, examination of the patient, and use of laboratory tests. Lectures, demonstrations, bedside work, laboratories, conferences, and independent study. MEDICINE

140.01. Acting Internship—UC-VAMZ-VAMC-SFCH. (1.5 per week) Su, F, W. Sp. Prerequisite: Completion of Medicine 110.

UC Papadakis, V. Tierney, M. Wooster, A/MC, VAMC, SFCH Students are assigned patients for study on the staff and private wards. They are supervised by attending and resident staff. They must be present on wards rounds, assist with procedures, and attend specialty conferences where their patients are discussed. MEDICINE

140.02. Off-Campus Clerkship. (1.5 per week) Su, F, W. Sp. Prerequisite: Medicine 110 and approval of third- and fourth-year coordinator.

Papadakis Clinical clerkship in off-campus hospitals approved by the departments of psychiatry, behavioral and fourth-year coordinator and the dean. MEDICINE

140.03. Hematology/Oncology—UC. (1.5 per week) Su, F, W. Sp. Prerequisite: Medicine 110. Henderson

Students function as interns supervised by a fellow and resident on the Clinical Cancer Service working up patients with hematologic and solid tumors and preclinical malignancies. In addition, students attend conferences, perform daily procedures, and write orders under supervision. MEDICINE

140.04. Infectious Diseases—VA. (1.5 per week) Su, F, W. Sp. Prerequisite: Completion of Medicine 110 and Surgery 110. Jensen, Tager Clinical elective with inpatient and outpatient infectious diseases at VAMC. Commonly encountered general ID problems of hospitalized patients, and
comprehensive outpatient management of HIV disease are stressed. Introduction to clinical microbiology and hospital epidemiology are included. MEDICINE

140.05. Clinical Cardiology—PNC. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110 or consent of instructor. Klibanski

Students manage one to two patients per week, giving them direct "hands-on" clinical experience. Students are expected to participate in all cardiology conferences, ward rounds, EKG reading sessions, Echocardiography and Nuclear Medicine rounds. MEDICINE

140.07. Oncology—SFCH. (1.5 per week) F.W.Sp. Prerequisite: Medicine 110. Luce

Students will evaluate patients with malignant disease under the supervision of oncology fellows and attending physicians. Students will see oncology patients in outpatient clinic and on the inpatient consultation service. In addition to a broad exposure to a wide range of malignant diseases, the students will be allowed to participate in the outpatient evaluation of patients with AIDS and Kaposi's sarcoma. MEDICINE

140.08. Gastroenterology—U.C.-. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Schmidt

Students, along with a second-year fellow, two first-year fellows, a medical resident and attending, serve as a member of the gastrointestinal clinical service. Attend all conferences, participate in all patient management in both clinic and ward. MEDICINE

140.09. Clinical Cardiology—MZ. (1.5 per week) SS1, SS2, SS3, Su, F.W.Sp. Prerequisite: Medicine 110 and fourth-year standing. Consent of instructor. Mailhot, E. Cohen, Polley

Students work up patients and follow patients through diagnostic and therapeutic procedures. There is considerable use of echocardiography, cardiac catheterization, coronary angiography, and interventional cardiology and post-operative cardiac care. Students participate in departmental conferences and hospital-wide conferences. MEDICINE

140.10. Pulmonary Medicine—MZ. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110 and 140.01 or equivalent senior ward medicine experience. Consent of instructor. Addition

Consultative service including diagnostic pulmonary problems, interstitial lung diseases, bronchogenic carcinoma, sarcoidosis and extrinsic allergic alveolitis. MEDICINE

140.11. Hematology/Oncology—C. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. R. Cohen

Students evaluate and manage patients with blood coagulation and its disorders, hematology and solid tumor malignancies. Learn the technique of bone marrow aspiration and biopsy, and the morphologic interpretation of these specimens. Attend board, rounds, and conferences. MEDICINE

140.12. Geriatrics—VA. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Lonergan

Serving on the Geriatric Evaluation and Management Team, students will have supervised patient contact covering biology of aging, changes in organ function and manifestations of disease in the elderly; pharmacokinetics of aged patients; psychosocial and rehabilitative aspects of care of the elderly. MEDICINE

140.13. Care of the Patient with AIDS at SFCH. (1.5 per week) Su, F.W.Sp. Prerequisite: Completion of core clinical clerkships. Fourth-year standing. Stassen, Clement, Kaplan

Supervised by the attending physician, students will participate in the management of both inpatients and outpatients with HIV-related disease on the AIDS consult service and 1-2 days per week in the AIDS clinic. Participation in educational conferences is encouraged. MEDICINE

140.14. Sexually Transmitted Diseases. (1.5 per week) Su, F.W.Sp. Prerequisite: Fourth-year standing. Lab 40 hours per week. Boden

Fourth-year medical students will be trained in the diagnosis, treatment, and management of sexually transmitted diseases in the clinical setting. MEDICINE

140.15. Hematology—SFCH. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110 or consent of instructor. Embury

Students, under supervision, evaluate hematologic patients in the outpatient/inpatient consultation service; review relevant clinical data; interpret bone marrow aspirates. Emphasis is on the diagnosis and management of patients with hemoglobinopathies, sickle cell disease, disorders of hemostasis, and abnormal coagulation. MEDICINE

140.16. Gastroenterology—VA. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110 and fourth-year standing. Greendel

Students share consultations with GI fellows; work up patients on wards; see patients in outpatient; attend endoscopies; attend rounds and conferences. MEDICINE

140.19. Cardiology—VA. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Kartliner

Students share consultations with cardiology fellows; work up patients on wards; interpret EKGs and other Holter monitor studies; attend rounds and conferences. MEDICINE

140.20. Infectious Disease—U.C. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Lockley

Students work up and present patients under the direct supervision of the infectious disease resident. Patients are presented at attending rounds and infectious disease conferences. MEDICINE

140.21. Private Practice. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Approval of third- and fourth-year coordinator. Student must make arrangements with private-practice physician. Papadakis

Working experience with an internist on clinical faculty at VA to better make rounds in various private hospitals and at UC, sees patients in private office and on house calls, does follow-up studies, and reads electrocardiograms. MEDICINE

140.22A. Pathophysiology—Cardiovascular. (6) F.W.Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110. Minimum class size 12; maximum class size 20. Sebastian, Doehrmann

Overall emphasis on the diseases of the cardiovascular system. Introduction to the basic cardiovascular and physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading list. MEDICINE

140.22C. Pathophysiology—Renal Disease. (6) F.W.Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110. Enrollment limited. Sebastian, Jee

Overall emphasis on the diseases of the glomerular diseases and renal vascular disease. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading list. MEDICINE

140.22F. Pathophysiology—Therapeutics. (6) W.Prerequisite: Medicine 110 or Pediatrics 110 or Surgery 110. Minimum class size 15; maximum class size 40. Sebastian, Bonowitz

Emphasis on applied pathophysiology and clinical therapeutics. Case-oriented workshops presenting the principles of therapeutics with applications to specific therapy of common cardiovascular, respiratory, gastrointestinal and infectious diseases as well as diabetes. MEDICINE

140.22H. Pathophysiology—Endocrine Metabolism. (6) W.Prerequisite: Medicine 110 or Pediatrics 110. Sebastian, Karpef

Overall emphasis on the endocrine system with an introduction of the basic metabolic control. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading list. MEDICINE

140.23. Endocrine Metabolism—UC. (5.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Tyrrell

Students based at Moffit Hospital, twelfth floor south, act as assistants to resident and to endocrine fellows for consultations as well as for hospitalized endocrine patients; attend endocrine and metabolic clinics and seminars, and teaching exercises of endocrinology and metabolism, including Medicine Grand Rounds. MEDICINE

140.24. Rheumatology—Immunology—UC. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Sack

Familiarization with clinical manifestations, rheumatic disease therapy, immunologic disorders. Participation in in/outpatient clinics. Basic immunologic principles as related to clinically apparent immunologic dysfunction. Assignment of pertinent literature, lectures, and introductions to principles and practice of various immunologic testing. MEDICINE

140.25. Renal Disease—SFCH. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110 and fourth-year standing. Humphreys

Students work up and follow up patients with a wide variety of renal and electrolyte disturbances, and see outpatients in a weekly Renal Clinic. Cases are discussed with attending physicians daily. Students also attend weekly Journal Club, Renal Grand Rounds, and Chief of Service Rounds. MEDICINE

140.26. Critical Care—MZ. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110 and fourth-year standing. Addison, Woebber

Primary emphasis is on the management of critically ill patients in Coronary Care Unit and Intensive Care Unit. Includes teaching in the use of monitoring equipment, and management of the selected aspects of critical care medicine. MEDICINE

140.27. Cardiopulmonary—C. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Pont

Students will attend rounds in the coronary care unit and receive instruction in cardiology, stressing echocardiography. Students will work in the pulmonary function laboratory and attend all teaching conferences and seminars. MEDICINE

140.28. Infectious Disease—SFCH. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Chambers

Course includes active consultation service averaging three new consults per day. Daily patient rounds; weekly correlated infectious diseases/pediatrics mini-rounds and infectious diseases intensity rounds. Two half-day infectious diseases clinics per week. Reading and library research. MEDICINE

140.29. Hematology—UC. (1.5 per week) Su, F.W.Sp. Prerequisite: Medicine 110. Shuman
Students evaluate patients on the wards and outpatient clinics; review peripheral blood smears; participate in conferences and seminars. Emphasis on patients with blood coagulation disorders, hematologic malignancies, and anemia.  

140.30. Endocrine Metabolism-SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and fourth-year standing.  

Schambelan  
The Endocrine-Metabolic Service provides daily housestaff and fellow-supervised consultation, four weekly clinics, bi-weekly rounds, and conferences on current research. Students participate in clinical investigations with endocrine disorders who are hospitalized in the General Clinical Research Center.  

140.33. Coronary Care at Moffitt/Long. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110, fourth-year standing or consent of instructor. A four-week cardiology elective or Medicine 140.01 is also recommended.  

Chatterjee  
Students are on call in the Coronary Care Unit and attend all regular teaching conferences and seminars.  

140.34. Renal Disease-UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110.  

Ives  
The student will join the renal team and participate under supervision in the evaluation and treatment of weekly patients with renal disease or disorders of fluid, acid-base, or electrolyte balance. Emphasis is placed on pathophysiology, history-taking, physical examination, and treatment.  

140.35. Cardiology-SFGH. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110.  

Chebil, Rappaport  
Students see patients in consultation on wards and clinics, read electrocardiograms, improve auscultatory skills, review cases with cardiac consultants, observe cardiac procedures such as electrophysiology and ablations, and attend all seminars and conferences.  

140.36. Advanced Clerkship in Emergency Medicine-UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Fourth-year standing.  

Wang  
Advanced clerkship in emergency medicine with extensive hands-on instruction in procedures, decision-making, and management of acute patients. Two shifts per week, one-half shift with paramedics, the central EMS base station/dispatch. An excellent elective for students considering a career in emergency medicine.  


Munoz, English  
Students evaluate medical, surgical, gynecologic, and non-critical trauma patients under attending supervision. Attends all teaching conferences held daily, with longer didactic clinical conferences once weekly. "Hands-on" training such as suturing, caring and splinting, and airway managing are provided.  

140.39. Pulmonary Disease-UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110.  

Stahlburg  
Students participate fully on the inpatient Pulmonary Consult Service, interviewing, examining, presenting, and doing follow-up of their own patients. Attend weekly conferences, receive some experience with procedures (e.g., bronchoscopy), learn pulmonary function interpretation, and do dictated reading relevant to their patients.  

140.40. Gastroenterology-KP. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110.  

Allison, Kaufman, Ukrow, Grossman  
As a member of the GI Consult team, student will work-up patients, observe and participate in diagnostic and therapeutic procedures, and attend all rounds and GI diversion conferences.  

140.41. Gastroenterology-SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth-year students.  

Cecco  
Students are responsible for evaluation and presentation of gastrointestinal patients on medical and surgical wards. Work-up typically discussed with gastroenterology staff. Students may also observe GI techniques including sigmoidoscopy, colonoscopy, endoscopy, liver biopsy. Conferences held weekly in conjunction with Surgery Pathology and Radiology.  

140.42. Clinical Toxicology & Pharmacology-SFGH. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110 and fourth-year standing.  

Olson  
The Poison Control Center handles over 200 calls per day, many from physicians managing an acute poisoning or drug overdose. Students will learn to use computerized and other poison information resources; participate in discussions of a variety of acute poisonings.  

140.43. Rheumatology & Immunology-VA. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110.  

Wofsy  
This is an introduction to cardiac rheumatology and immunology. The student will participate in inpatient and outpatient care and take part in didactic conferences relating to rheumatology and immunology.  

140.45. Endocrine Metabolism-VA. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor. Enrollment limited. Priority given to UCSF students.  

Sperstein, Arzadian  
An introduction to the diagnosis and treatment of endocrine-metabolic diseases. Areas covered are those endocrinopathies involving the major endocrine glands, as well as diabetes mellitus and hyperparathyroidism. Patients will be examined and treated in both the inpatient and outpatient services.  

140.46. Pulmonary Medicine-SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Fourth-year medical student in good standing.  

J. Murray, Hepwerson, Sheppard  
Pulmonary disease, including clinical manifestations, basic pathophysiology, use and limitations of diagnostic studies and treatment. Experience will be gained by seeing patients on wards and through a series of ongoing conferences, ward rounds and review sessions under close faculty supervision.  

140.52. Renal Medicine-VA. (1.5 per week) SS1, SS2, Su, F, W, Sp. Prerequisite: Medicine 110.  

Pollock  
A broad array of acute and chronic renal disease patients are worked up by the student under the direct supervision of the attending physician.  

140.53. Infectious Disease-MZ. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110 and fourth-year standing.  

L. Drew, Mintz  
Clinical and laboratory experience providing integrated approach to infectious disease. Emphasis on learning techniques in diagnostic microbiology (e.g., Gram stains, bacterial and viral cultures), and correlating these findings with diagnostic clues and patient management. Attend daily rounds; research opportunities available.  

140.55. Acting Internship-C. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth-year students.  

Busch  
Under supervisor's evaluation, will evaluate and share in the care of patients admitted to an acute care hospital. Experience includes history and physical examination, diagnostic and treatment planning, and writing orders and progress notes. Attend daily rounds and conferences.  

140.56. Geriatric Medicine-MZ. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and fourth-year standing.  

Luschen, Feigenbaum  
Students receive supervised, perform consults on hospitalized and clinic patients. They participate in monthly geriatric seminar; and become acquainted with Geriatric Day Care, Alzheimer's Day Care, and other community programs and resources.  

140.57. Cardiology-VMMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor.  

DeWeeis  
Students see patients in the coronary care unit, ward and as day case at the University of California Telehealth Facility at Fresno. They will develop and implement treatment plans with the consultant, read electrocardiograms, and attend all seminars and conferences.  

140.58. Pulmonary Disease-VAF. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor.  

P. Baylor  
Students up to Chest Service will have primary care responsibilities for medical inpatients under supervision of the Physician Director of the Respiratory Care Service. Instruction on topics such as the use of empi- rators, arterial blood gas sampling and techniques.  


Amato, Vincenti  
Rotation through an active renal transplant service including clinical immunology, clinical renal pathology, renal diagnosis such as X-ray, biopsy, scan. The student's experience in the care of inpatients and outpatients will encompass other internal medical problems as well.  

140.61. Advanced Medicine Clerkship-VAF. (1.5 per week) Su, F, W, Sp. Prerequisite: Fourth-year standing.  

R. Freeman  
Assignment to teams with first- and second-year resi- dents; rounds with attending faculty four to five times weekly; attend daily noon conferences; increased skills in history-taking, physical examination, write-ups, and oral presentation. Experience in writing orders counterchecked by resident.  

140.62. Emergency Medicine-MZ. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and fourth-year standing.  

Laurer  
Emergency room experience providing acute care to a mixed inner city and middle class population. Students see medical emergencies, minor trauma, and acute problems in a variety of disciplines including gynecology, ophthalmology, ENT, and orthopedics. Attendance at specialty conferences encouraged.  

140.63. Advanced Medicine Clerkship-KP. (1.5 per week) Su, F, W, Sp. Anderson  
Fourth-year elective rotation for one month on medical wards at Kaiser Foundation Hospital in Oakland. Students will be integrated into the residency training program and will be involved in the care of hospitalized patients in an urban community prepaid health plan hospital.  

140.64. Cardiology-U. (1.5 per week) SS1, SS2, Su, F, W, Sp. Prerequisite: Medicine 110.  

D. Perloff, Scheinman
Students receive instruction in reading electrocardiograms, in the use and interpretation of diagnostic procedures such as echocardiography, Holter monitoring, treadmill exercise testing, nuclear medicine, cardiac electrophysiology, and cardiac catheterization. Students attend cardiac and hypertension clinics, CCI rounds, and weekly conferences. MEDICINE

140.66. Internal Medicine--VAMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Fourth-year standing. Hollander
Students assigned to teams with first- and second-year residents, rounds with attending faculty, participation in daily conferences. Emphasis on pathophysiology of disease processes, management of acute medical problems. Refine skills in history-taking, physical examination, writing-up presentations, techniques of diag- nostic procedures. MEDICINE

140.68. Infectious Disease--VAMC & VAF. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Libke
Management of common and unusual infectious diseases. May include use of anti-microbials in presence of impaired renal or hepatic function, treatment of infection in immunologically compromised host, etc. Participation in patient evaluation, treatment follow-up, ward rounds, conferences. Microbiology laboratory can be arranged. MEDICINE

140.69. Cardiology--VAMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor. Grayson
Participation with housestaff in patient care on CCU, ICU, medical wards, outpatient clinics. Introduction to invasive and non-invasive diagnostic procedures, techniques of management in care of hospitalized and ambulatory patients. Attend ECG interpretations, CCI rounds, consults, and teaching conferences. MEDICINE

140.70. Hematology, Oncology--VAF--VAMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Fourth-year standing and Medicine 110. Stedborg
Students participate in the work-up of hospitalized patients and follow up progress of patients in specialty clinics through consultation by hematologic oncology staff. Clinical experience is augmented by reading program, slide review sessions, tumor board meetings, and specialty conferences. MEDICINE

140.71. Pulmonary Disease--VAMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor. Lehne, Hirayama
Evaluation and management of adult patients with respiratory disease, supervised by housestaff and faculty. Pulmonary Medicine section. Emphasis on physical examination of chest, interpretation of X-ray, arterial blood gases, pulmonary function studies. Gain familiarity with respiratory and other aspects of respiratory care. MEDICINE

140.73. Rheumatology & Immunology-SFVHC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. N. Lane, H.D. Perez
Students will be assigned inpatients and outpatients for work-up and management under the supervision of fellows and attending physicians. Students also will participate in clinical rounds, clinical conferences, research seminars and journal clubs. MEDICINE

140.75. Inpatient Medicine--K. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and fourth-year standing. Poygangsbaum
Acting internship at this urban community prepaid health plan hospital. Students examine patients, participate in ward rounds, and attend teaching seminars and conferences of the Department of Medicine. MEDICINE

140.77. Endocrinology/ Diabetes-Fresno. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Shipp
Students gain extensive experience in care of patients with diabetes and other endocrine disease through active participation in special diabetes inpatient units, ward consultations, diabetes and endocrine clinics, and patient educational programs located at Valley Medical Center and in the community. MEDICINE

140.78. Critical Care Medicine--VAMC. (1.5 per week) Su, F, W, Sp. Hirayama
Students participate in the management and evalua- tion of critically ill patients in the Medical Intensive Care Unit. This includes the interpretation of laboratory results, blood gases and chest X-rays and the use of mechanical ventilation and hemodynamic monitoring. Supervision is by full-time faculty with senior Medicine residents. MEDICINE

140.79. Inpatient Medicine--STM. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. LeNerth
The student, teamed with a resident, will evaluate and share in the care of patients admitted to a community-based hospital. Students will take call, attend teaching rounds and conferences, attend clinical case afternoons per week. MEDICINE

140.80. GI and Liver Disease--VAMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor. Holmes, Arora, Peters
Students will become part of the GI-Liver team. In addition to basic patient evaluation, they will participate in the broad range of diagnostic and therapeutic endoscopic procedures. Participation in an active ambulatory clinic adds to the variety of patients seen. MEDICINE

150.91. Research in Medicine. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of faculty member in charge of student's research project and approval of third- and fourth-year coordinator. Papadakis
Students continue previously initiated research proj- ects under the guidance of faculty members. MEDICINE

150.93. Cancer Viruses. (1.5 per week) Su, F, W, Sp. Prerequisite: Basic course in microbiology J. A. Levy
Tissue culture techniques and animal experimenta- tion will be used to demonstrate the role of viruses in animal malignancies and autoimmune disease. Research serves as a model system for studying similar disorders in man. MEDICINE

The course is designed to develop a historical pre- spector of what and how clinical problems can be approached in a basic medical research laboratory and to develop by example, an analytical approach relating basic medical research to clinical medicine. MEDICINE

160.06. Chronic Fatigue Syndrome: Fact or Fiction? (1) W. Lecture 1 hour. Hughes, Rest
This class will meet once a week, and will cover the CDC Case definition, history, epidemiology, diagnos- is, treatment, research update, resources, socio- political context, doctor-patient interaction, etc. Guest lecturers will be used. MEDICINE

160.10. Clinical Medical Ethics. (1) F Seminar 1 hour. Lo
Introduction to clinical medical ethics through discus- sion of the medical literature. Active class participation and critical reading of articles will be required. Topics will include life-sustaining treatment, dilemmas regar- ding HIV infection, care of critically ill neurones, and allocation of resources. MEDICINE

170.01. AIDS/HIV: Overview and Update. (2) W Lecture 2 hours. Hollandar
A preclinical, multidisciplinary overview curriculum surveying the epidemic of AIDS and the human immuno- deficiency virus. Basic and clinical sciences and social/psychosocial topics are included. Other than a panel of persons with HIV/AIDS, the course format is by lecture, MEDICINE

Instruction in basic electrophysiologic principles and interpretation of electrocardiograms. MEDICINE

170.05. EKG Interpretation. (1) W. Prerequisite: Medicine 133A Lecture 1 hour. Rapaport
Review of physical principles of electrocardiography and clinical application of electrocardiographic inter- pretation. MEDICINE

Focus on research interests of UCSF faculty. Provides broad introduction to campus research, practice in reading and analyzing research publications. Speaker's talk includes discussion of personal background, present research, background description on research area, and discussion of future research plans. MEDICINE

170.10. Introduction to Occupational Medi- cine. (1) F Seminar 1 hour. Balnes
Practice of occupational medicine as related to the prevention, recognition, and treatment of disease and injuries resulting from employment. Interaction of economic, political, and social forces bearing on worker health problems. MEDICINE

170.11. Introduction to Environmental Medi- cine. (1) W Seminar 1 hour. Balnes
Introduction course in health issues related to the environment. MEDICINE

170.12. Introduction to Geriatric Medicine. (1.5) W Lecture 1.5 hours. Luxenberg
Course covers the physiology and psychology of nor- mal aging and health care problems of the elderly, including functional status and cognitive impairment. Use of medications, health care policies, multi- disciplinary geriatric health care teams, and ethics are reviewed. MEDICINE

170.13. Art and Science of Health Services Research. (2) F Prerequisite: Graduate training in applied health research, e.g., public health, medical sociology, health economics, preventive medicine. Lafti
This course covers issues from the design and writing of grant proposals to choice of data, analytic tech- niques, presentation of results, publication strategies, and project management. Students should be involved in a dissertation or major project. MEDICINE

This course presents an overview of occupational health, with seminars and site visits. MEDICINE

180. Industrial Toxicology. (2) F Prerequisite: Consent of instructor. Lecture 2 hours. Osterloh
To provide understanding of basic principles of toxicology as related to work, environment and workers' health. Emphasis is on chemicals including heavy metals and pesticides, methods of surveillance, principles of acute and chronic toxicity testing, includes lectures, student presentations, and discussion. MEDICINE
A series of discussions is conducted in various subspecialties of internal medicine. Students take an active part in the presentation and discussion of the problems involved, including reference to the literature, clinical demonstrations, and directed student participation. MEDICINE

402. Medical Literature Seminar. (1.5) F, S, W. VA Steiger
Students read recent literature in internal medicine, with assigned reading, required reports, and evaluation of presented material by interests, resident, and faculty. MEDICINE

403. Specialty Seminar. (2) F, W. S. R.K. Root
Students conduct in the fields of gastroenterology, hematology, cardiology, electrocardiology, endocrinology, chest diseases, psychosomatic medicine, arthritis and rheumatic diseases, infectious diseases, and radiology. Library research, occasional formal reports and patient presentations are required. MEDICINE

404. Specialty Seminar. (4) F, W, S. SFCH H. Williams and Staff
Seminars are conducted in cardiology, hematology, gastroenterology, infectious diseases, metabolic disease, and pathology, involving discussions, required reading, and reports. MEDICINE

405. Specialty Seminar. (4) F, W, S. VA Steiger
Seminars are conducted in cardiology, electrocardiology, hematology, gastroenterology, radiology, fluid and electrolyte balance, endocrinology and pathology, involving discussions, required reading, and reports. Elective seminars include a chest disease conference, joint medical and surgical conference, tumor board, dermatology conference, and neuropsychiatry conference. MEDICINE

Study programs are arranged with appropriate faculty members on an individual basis. MEDICINE

407. Clinicopathological Conference. (1) F, W, S. SFCH H. Williams, VA Steiger
Residents take an active part in the presentation and discussion of problems connected with the correlation of clinical manifestations of disease with postmortem studies. Conferences include reference to the literature, clinical demonstrations, and laboratory work. MEDICINE

408. EEG Interpretation. (2) S, F, W. Sp. Sokoloff
Seminars (individual instruction) for residents in medicine and trainees in radiology by cardiac consultation in the interpretation of all electrocardiograms and phonocardiograms taken at UC MEDICINE.

411A. Introduction to Molecular Genetics. (4) S. Lecture 3 hours. Conference 1 hour. Gitschier, Ganso, Parslow

A general overview of molecular genetics, aimed principally at fellows in clinical departments. MEDICINE

411B. Introduction to Cell Biology. (4) S. Lecture 3 hours. Conference 1 hour. Kelly
A brief introduction to contemporary cell biology for clinical fellows. MEDICINE

411C. Laboratory Techniques. (3) Sp. Prerequisite: Medical fellows in School of Medicine. Lab: 40 hours. Work for 2 weeks. Welch, Pytelka
A short, but intensive, laboratory course in modern laboratory techniques of cell and molecular biology meant to facilitate transition of medical fellows begins their rotation in basic research laboratories. MEDICINE

420. Intro to Structural Biology. (3) Sp. Lecture 3 hours. Cohen, Kunze, Crick
Introductions to structural biology. Focus on understanding protein structure and how protein structure is determined. Implications of protein structure for function. MEDICINE

440. Postdoc Seminar in Health Economics. (4) Sp. Restricted to postdoctoral fellows in REW Clinical Sciences Program and NIMH-funded Clinical Sciences Research Training Program. Seminar 4 hours. Henke
Provides survey of economic methods, models, and empirical findings related to the health care sector. Students will learn to use economic techniques to examine health care problems and policy options. MEDICINE

Residents are responsible for the care of patients under the direction of the attending staff, and participate in student teaching. Third-year, senior and chief residents provide teaching and consultation service in the hospitals and outpatient clinics. MEDICINE

Residents are responsible for the care of patients under the direction of the attending staff, and participate in student teaching. Senior residents provide teaching and consultation service in the hospital and outpatient clinics. MEDICINE

452. Clinical Medicine. (1.5 per week) S, F, W, S. VAT Essential
Residents are responsible for patient care under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, and consultations. The chief resident, in addition, has certain responsibilities involving the resident, and consults for all other hospital services. MEDICINE

460. Clinical Primary Care. (1.5 per week) S, F, W, S. Crede and Staff
Interns in the Primary Care-Track of Internal Medicine are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Medicine Internship Program as well as related clinical services such as Dermatology, Neurology. MEDICINE

461. Clinical Primary Care. (1.5 per week) S, F, W, S. Crede and Staff
Residents in the Primary Care-Track of Internal Medicine are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Medicine Internship Program as well as related clinical services such as Dermatology, Neurology. MEDICINE

490. Clinical Medicine. (1.5 per week) S, F, W, S. SFCH H. Williams
Interns rotate through medical wards and emergency hospital. Under the supervision of the attending staff, they are responsible for the care of patients, including history-taking, medical workups, laboratory tests, and consultation. MEDICINE

Interns are responsible for the care of patients under the direction of the attending staff, and participate in student teaching. MEDICINE

Microbiology and Immunology

100A. Medical Immunology. (2) Sp. Prerequisite: Biochemistry 100A-B. Lecture 2 hours. Equivalent to Microbiology 121 and 190A. W. Levinson
Lectures on the fundamentals of immunology. Small group seminars on patient-related problems in this field. MICROBOL

100B. Medical Microbiology. (6) F. Prerequisite: Biochemistry 100A-B. Lecture 4 hours. Lab 3 hours. Conference 1 hour. Equivalent to Microbiology 190B. W. Levinson
Pathogenesis of infection by bacteria, fungi and viruses. Essentials of diagnosis, treatment, and epidemiology of disease. Laboratory demonstrations and exercises of essential medical skills. Problem-solving exercises and small group seminars involving clinical cases. MICROBOL

110. Immunology in Pharmacy, (2) Sp. Prerequisite: Biochemistry 120A-B. Required course for students in the School of Pharmacy. Lecture 2 hours. Brodsky

102

103
Microbiology & Immunology

Lectures on the fundamentals of immunology, drugs in hypersensitivity and immunosuppression. MICROBIOI

116. Microbiology and Immunology in Dentistry (W) Lecture 4 hours. Lab 6 hours. Petroleum, Felton, DeFranco Comprehensive presentations of microorganisms including bacteria, fungi, viruses; fundamentals of infection and resistance, immunology, disinfection, sterilization, and antimicrobial agents. Laboratory studies and demonstrations on indigenous oral flora and applications of microbiology to dentistry. MEDICINE

120. Microbiology in Pharmacy (4) Sp. Prerequisite: Successful completion of all first-year required coursework. Lecture 3 hours. Lab 3 hours. Lecture Fundamentals of microbiology for pharmacy students with emphasis on mechanisms of disease production by bacteria, fungi, and viruses. Morphology, physiology, and immunology techniques used in laboratory diagnosis of selected bacterial and fungal infections. Includes studies in antibiotic susceptibility, disinfection, and sterility. MICROBIOI

150.01. Microbiology Research (1.5 per week) Su, F, W, Sp. Prerequisite: Microbiology 110A and 110B and consent of instructor. Staff Research in microbiology, block elective for fourth-year students. MICROBIOI

170.01. Medical Problem-Solving (2, F, W, Sp. First-year medical students only, Conference 2 hours. Library review 2 hours. Weisnoff Small-group medical problem-solving conference using real clinical cases as a springboard for exploration of underlying issues in basic and clinical sciences. The emphasis is on pathophysiological reasoning, independent learning, and working in a group. Teaching is Socratic and minimally directive. MEDICINE

170.02. Case of the Week (1) F. Prerequisite: Microbiology 100B concurrently Seminar 1 hour. Weisnoff Infectious disease cases are discussed in a problem-solving format. MEDICINE

190A. Med Immunology-Grad Studies (2) Sp. Prerequisite: Biochemistry 100B-A Lecture 2 hours for nine weeks. Equivalent to Microbiology 100A and 121. Weisnoff Lectures on the fundamentals of immunology. Small group seminars on patient-related problems in this field. MICROBIOI

190B. Graduate Medical Microbiology (6) F. Prerequisite: Biochemistry 100B-A Lecture 4 hours. Lab 3 hours, Conference 1 hour. Weisnoff Pathogenesis of infection by bacteria, fungi, and viruses. Essentials of diagnosis, treatment, and epidemiology of disease. Laboratory demonstrations and exercises of essential medical skills. Problem-solving exercises and small group seminars involving clinical cases. MICROBIOI

198. Supervised Study (1-5) Su, F, W, Sp. Prerequisite: Consent of instructor. Staff Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. MICROBIOI

199. Laboratory Project (1-5) F, W, Sp. Prerequisite: Consent of instructor. Staff A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. MICROBIOI

203. Cellular Immunology (3) F. Prerequisite: General knowledge of immunology and biochemistry. Lecture 3 hours. Offered in alternate years. Not offered 1993-94. DeFranco, J. W. Goodman Course covers cellular and genetic basis of immunoreactivity, properties of immunocompetent cells, cell interactions in the immune system, and regulatory circuits. MICROBIOI

204. Molecular and Cellular Immunology (3) W. Prerequisite: General knowledge of immunology. Lecture 3 hours. Brodkas Topics to be covered: immunoproteins, structure and genetics of immunoglobulins, lymphocyte surface molecules, T cell receptors, antigen transduction, antigen presentation, MHC restriction, lymphocytes, T cell effector mechanisms, lymphocytes, and immunology. MICROBIOI

208. Molecular Biology of Animal Viruses (1.5) F. Prerequisite: General knowledge of molecular biology concepts and structure and multiplication of viruses. Lecture 1.5 hours. Seminar 1.5 hours. Offered in alternate years. Not offered 1993-94. Varsnas, Gamson, J. M. Bishop, Levitsow The nature of viruses: dynamics of virus-cell interaction with emphasis on animal virus systems; control of expression of virus-specific information in lytic and temperate infections; role of viruses in immunization of cells. MICROBIOI

209. Special Topics in Immunology (2) F, W. Conference 2 hours. Goodmann Small topic group in which topics and corequisite reading will be selected for discussion with individual faculty members. MICROBIOI

210. Research Problems in Microbiology (1-5) F. Prerequisite: Microbiology 100A, 100B and 206. Lab and conference. Halade Participation in research problems in a mycology laboratory. This is not a structured laboratory course, but rather a practical research experience involving basic research with pathogenic fungi. MICROBIOI

215. Laboratory Rotation (3) F, W, Sp. Prerequisite: Consent of instructor. Lab 9 hours. Staff Lab research for one quarter with a departmental faculty member to familiarize new graduate students with experimental approaches to microbiological or immunological problems of current interest. MICROBIOI

220. Selected Topics Seminar (1) F, W, Sp. Seminar 1 hour. Staff General microbiology; individual research of advanced graduate students, invited speakers and staff members. Reviews of special topics and journal articles by advanced students and faculty. MICROBIOI

221. Graduate Research Seminar (1) Seminar 1 hour. Staff Seminar series in which graduate students present their thesis research. MICROBIOI

250. Research (1-4) F, W, Sp. Staff MICROBIOI

299. Dissertation (6) F, W, Sp. Prerequisite: Admission to candidacy and permission of the graduate advisor. Staff For graduate students engaged in writing the dissertation for the Ph.D. degree. MICROBIOI

Microscopic Imaging

190.1. Microscopic Imaging (3) F. Prerequisite: Microbiology 110A and 110B and consent of instructor. Staff Research in microscopic imaging, block elective for the fourth-year students. MICROBIOI

Neurological Surgery

Core Clerkship: Neurology 110. Students serve as clinical clerks in the inpatient and outpatient clinics. 140.01. Advanced Neurosurgery Clerkship (1.5 per week) Su, F, W, Sp. C. B. Wilson The student will become a member of the housestaff, attending ward rounds, working up patients, assisting at operations, and taking night call on rotation with a resident. Limited to one student per hospital. NEURO SURG

140.02. Off-Campus Clerkship (1.5 per week) Su, F, W, Sp. Prerequisite: Neurology 110. Pitts, P. Weinstein Clinical clerkship in approved hospitals by special arrangement, and approval of the dean and chairperson of the department. NEURO SURG

150.01. Research in Neurosurgery (1.5-5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor and department. Passing grade in NB Examination Part 1. 40 hours per week. Staff

Research project under the direction of a member of the faculty. Extensive background reading will be required and discussion of important topics will be held at weekly laboratory and program project research conferences. NEURO SURG

150.02. Supervised Study (1-5) F, W, Sp. Prerequisite: Consent of instructor. Staff Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. NEURO SURG

150.03. Laboratory Project (1-5) F, W, Sp. Prerequisite: Consent of instructor. Pitts A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. NEURO SURG

400. Staff Conference. (2) Su, F, W, Sp. C. B. Wilson Residents, under supervision, prepare and present case histories of ward patients including laboratory work, X-ray studies, special investigation and reference to the literature. Discussion is led by the faculty with participation by visitors. NEURO SURG

402. Clinicopathological Conference. (2) Su, F, W, Sp. R. Davis, C. B. Wilson Residents discuss clinicopathological aspects of cases, and their correlation with the literature and special studies. Faculty and visitors discuss developments in related fields. The curriculum is based on conferences and participation in gross autopsies on patients from the Neurological Surgery Service. NEURO SURG

403. Literature Review. (1) Su, F, W, Sp. Pitts Recent literature in neurology and neurosurgical surgery is presented. Discussion by members of the faculty in attendance and by visitors from other schools interested in this and related fields. NEURO SURG

450. Clin Neurological Surgery—UC. (10) Su, F, W, Sp. C. B. Wilson Residents, under supervision, are responsible for patient care in the ward and outpatient clinics including history-taking, physical examinations, laboratory tests, and consultations. In addition, the resident has certain teaching and administrative responsibilities required by the attending staff. NEURO SURG
Residents are responsible for diagnosis and care of patients in ward and clinic and performance of stud-
ies and selected neurosurgical procedures under supervision of the attending staff. They also present
patients at conferences and attend seminars and rounds at UC. UNIVERSITY SURG.

Interns rotate through neurological surgery wards. Under the supervision of the attending staff, they are
responsible for the care of patients, including history-
taking, neurological examinations, laboratory tests,
diagnostic procedures, and consultation. UNIVERSITY SURG.

Neurology
Second-Year Coordinated Instruction—Medicine
132A-B-C. Lecture-demonstrations and section work devoted to the supervised examination of
patients. 
(1.5 per week) Su, F.W., Sp. Preceptor: Medicine 132A-B-C. Concurrent enrollment in Psychiatry 135.
Lazar squat students are assigned patients for study under supervision
of attending and resident staff. They attend ward rounds, attending rounds, grand rounds, conferences and
lecture-seminars, emphasizing diagnosis and management of common clinical problems and psy-
chiatric aspects of neurology. NEUROLOGY

140.01A-B-C. Advanced Clinical Clerkship. 
(1.5 per week) Su, F.W., Sp. Preceptor: Neurology 110 and fourth-year standing. 
UC B. SF Gh CV A. 
UC Hauser, SF Gh Simon, VA Sharp 
Residents serve as acting interns on the inpatient ser-
vice. Attendance at departmental clinical rounds, seminars, and conferences is required. NEURO-
LOGY

140.02. Off-Campus Clerkship. 
(1.5 per week) Su, F.W., Sp. Preceptor: Neurology 110. 
Hauser 
Clinical clerkship in approved hospitals by special arrangement and approval of the dean and the chair-
person of the department. NEUROLOGY

140.03. Outpatient Clinical Neurology. 
(1.5 per week) Su, F.W., Sp. Preceptor: Neurology 110 and consent of instructor. 
Engstrom 
Fourth-year students serve as clinical clerks in the outpatient clinic. Emphasis is placed on developing
neurological history and examination skills applicable to outpatient problems (i.e., Parkinson's disease) likely
to confront the non-neurologist. NEUROLOGY

198. Supervised Study. 
(1-3) Su, F.W., Sp. Preceptor: Consent of instructor. 
Hauser and Staff 
Library research and directed reading under supervi-
sion of a member of the faculty with the approval of the
chairperson of the department. NEUROLOGY

199. Laboratory Project. 
(1-5) Su, F.W., Sp. Preceptor: Consent of instructor. 
Hauser and Staff 
A laboratory research project under direction of a member of the faculty with the approval of the
chairperson of the department. NEUROLOGY

400. Neurosciences Seminar. 
(1.5 per week) Su, F.W., Sp. 
Hauser, D. Greenberg, F. Sharp 
Seminars covering selected subjects in the basic sci-
ence relevant to neurology including neu-
ronanatomy, neurochemistry, neuropathology, and
neurophysiology. NEUROLOGY

401. Grand Rounds. 
(1) Su, F.W., Sp. 
Hauser 
Conference includes resident preparation and pres-
entation of patient case histories including reference
to the literature, laboratory work, and special studies.
Faculty members and visiting professors from other
universities discuss new developments in their re-
spective fields. NEUROLOGY

402. Neurological & Neurosurgical Path. 
(1) Su, F.W., Sp. 
R. Davis 
Course involves the presentation and discussion of
clinical histories and pathologic findings in selected
cases of neurologic interest and histopathologically
studied and discussed of surgical and postmortem spec-
iment from neurological and neurosurgical patients. 
NEUROLOGY

403. Neuropathology Research. 
R.L. Davis 
Course involves pathologic and clinicopathologic re-
search into various aspects of neuropathology. 
Specific subjects of research are chosen in conjunc-
tion with members of the staff NEUROLOGY

(1) F.W., Sp. 
D. Norman 
Neuroradiologic techniques and interpretations are
reviewed in detail with particular emphasis on X-
yrays of the skull and spine, pneumoencephalography,
myography and arteriography. NEUROLOGY

411. Neurology Research. 
(5-13) Su, F.W., Sp. 
Hauser 
Clinical and basic research in neurological disease. 
After consultation, assignments to one of the several
departmental laboratories will be possible. NEU-
ROLOGY

412. Neuropathology Research. 
(10) Su, F.W., Sp. 
VA Sharp 
Specific projects in experimental pathology of the
nervous system may be undertaken by direct arrange-
ment. Techniques include neurohistology, histologic
autoradiography, and electron microscopy. NEU-
ROLOGY

(10) Su, F.W., Sp. 
Hauser 
Residents are responsible for the care of patients un-
der the direction of the attending staff, and participate
in student teaching. They serve on the inpatient, out-
patient and consultation services. NEUROLOGY

453. Clinical Electroencephalography. 
(1.5 per week) Su, F.W., Sp. 
Aminoff 
Residues learn interpretation of electroencephalo-
grams under the supervision of experienced electro-
encephalographers. They interpret electroencephalo-
grams on patients they have seen clinically, with
individual instruction available as required. Instruc-
tion is accredited by the Board of Qualification of the
American Electroencephalographic Society. NEU-
ROLOGY

454. Clinical Electromyography. 
(1.5 per week) Su, F.W., Sp. 
Olney 
Students learn the application of electromyography in
the diagnosis of patients seen in the wards and in the
outpatient clinic, with individual instruction as re-
quired. NEUROLOGY

(1.5 per week) Su, F.W., Sp. 
Malamed 
Residents spend three months or more performing
supervised autopsies and pathologic studies of brain,
nerve and muscle. NEUROLOGY

(1.5 per week) Su, F.W., Sp. 
Berg 
Course offers experience in the diagnosis and man-
agement of children with acute and chronic neuro-
logical disorders. Outpatient clinic is held weekly
for pediatric convulsive disorders and behavioral and
learning problems of the schoolchild. NEURO-
LOGY

(4-5) Su, F.W., Sp. 
W. Hoyt 
Residents participate in clinical evaluations of patients
in preparation for rounds. Clinical teaching in neuro-
ophthalmology. NEUROLOGY

Neuroscience
117. Neurobiology. 
Conference 1 hour.
Sargent, Wentworth, Christie, Steller
Structure and function of the nervous system. The course will cover the fundamentalsthe neurophysiology and the organization of the nervous system. Emphasis will be placed on the oral cavity, STOMATOL.


Sargent, S. M. W., Steller
Structure and function of the nervous system. The course will cover the fundamentals of neurophysiology and the organization of the nervous system. Emphasis will be placed on the oral cavity, STOMATOL.

201. Basic Concepts in Neuroscience. (6) F. Lecture 4 hours. Conference 2 hours. L. Jan., Y.-Y. Nan
An interdisciplinary introduction to fundamental aspects of the nervous system function. Course emphasizes the basic concepts of neuromodulation, neurochemistry, the cell biology of the neuron, and mechanisms of neuronal integration.

215. Laboratory Rotation. (4) F.W. Sp. Prerequisite: Consent of instructor. Lab 12 hours.
Reichardt
A laboratory rotation course to familiarize new departmental graduate students with various approaches to neurobiological research.

220. Selected Topics. (1-5) F.W. Sp. Prerequisite: Consent of instructor. Seminar 1 hour.
Z. Hall
Topical areas in neurobiology are selected as development, anatomy and physiology of the visual system, biochemistry of neurotransmitters. Pertinent papers from the recent literature are read and discussed. Each student must participate regularly and present one seminar per quarter.

222. Advanced Topics in Neurochemistry and Molecular Neurobiology. (5) F Lecture 11 hours. Seminar 2 hours.
Mobley, Levins
Lectures and critical discussion of current research on neurotransmitter systems, receptors and molecular basis of neuronal signal transduction.

231. Developmental Neurobiology. (3) F. Prerequisite: Neuroscience 201. Lecture 3 hours.
Reichardt, W.-N. Jan., L. Jan., J. L. Wall
Course covers areas of nervous system development with emphasis on molecular, genetic, and cellular approaches. Much of the class will focus on recent studies using transgenic, Drosophila, C. elegans, and zebrafish.

225. Neurobiology of Disease. (3) Sp. Prerequisite: Neuroscience 201 and consent of instructor. Seminar 3 hours.
Mobley, Fields, Robenstein
Seminar format with student reading and presenting papers in the current literature of neurobiological disease. Emphasis will be on the physiological and molecular bases of disease.

239. Biophysics of Membrane Excitability. (3) F. Prerequisite: Neuroscience 201 and consent of instructor. Seminar 3 hours.
Lansman
Course is designed to acquaint students with analytical methods used in analyzing excitation in nerve and muscle. Topics include: review of electrical fundamentals, LaPlace transform, linear cable theory, thermodynamic and kinetic descriptions of electrodiffusion, voltage clamp methods, and Hodgkin-Huxley analysis of nerve excitation.

240. Synaptic Mechanisms in Periphery & CNS. (3) F. Prerequisite: Neuroscience 201. Seminar 3 hours.
Nicolis, Malenka
This is primarily a reading course in which recent papers on various aspects of synaptic pharmacology and plasticity at the CNS will be discussed in depth.

249. Advanced Topics in Integrative Neurobiology: The Vertebrate Retina. (3) F. Prerequisite: Neuroscience 201. Seminar 3 hours.
Steinberg, Copenhagen
Selected topics in the physiology of the vertebrate retina. Emphasis on the major processes of current retinal research as studied by electrophysiological and pharmacological methods. Study of the retina following the path of signal processing from photoreceptors to outer plexiform layer, inner plexiform layer, and the ganglion cell.

242. The Auditory System. (3) F Lecture 3 hours.
Merzenich
Course will review in lectures, laboratory demonstrations, and in discussions the state of understanding the peripheral and central nervous system processes underlying hearing and speech perception.

240. Somatosensory Systems and Pain. (3) F. Prerequisite: Neuroscience 201 and consent of instructor.
Fields, Merzenich, Levins, Raisman
This is predominantly a lecture and discussion format course. The course will examine the neural basis of somatic sensation including pain and pain modulation. A general theme will be the correlation of information derived from pharmacology, anatomy, physiology, behavior and human studies. Clinical problems will be reviewed insofar as they illustrate important principles or gaps in our understanding of the neurobiology of somatosensory systems and pain.

244. Motor Systems in Mammals. (3) F. Prerequisite: Neuroscience 201 and consent of instructor. Seminar 3 hours.
Libiger
Through readings from the literature and background lectures by the instructor, we will survey both classical and current approaches to understanding the control of motor activity in mammals.

245. The Limbic System. (1.5) F. Prerequisite: Neuroscience 201. Lecture 1 hour for 6 weeks. Seminar 2 hours for 6 weeks.
Stryker, Malenka
Lectures and critical discussion of current research on the limbic system in the mammalian brain and its relationship to behavior. Topics include the neuronal bases of learning, memory, motivation, and emotion; spatial learning; the meso-limbic reward system; and synaptic plasticity.

246. Neuroendocrinology. (1.5) F. Sp. Prerequisite: Neuroscience 201 or consent of instructor. Lecture 1 hour. Seminar 2 hours.
Dallman, Weiner
Lectures and critical discussion of current research on the hypothalamic and in relationship to vegetative behaviors. Topics include the neural bases and integration of cardiovascular rhythms, hormone secretion, feeding, drinking, and sexual behaviors.

250. Research. (1-8) F, S.W. Sp. Prerequisite: Consent of instructor. Laboratory.
Staff
PHYSIOLOGY

299. Dissertation. (0-12) F, S, W. Sp. Prerequisite: Approval of the graduate adviser.
Staff
For graduate students engaged in writing the dissertation for the Ph.D. degree.

Nursing

140. Integrated Sciences. (3) F Lecture 3 hours.
M. Engler
Course focuses on microbiological concepts and chemical principles essential to nursing practice.

141. Anatomy and Physiology. (6) Sp Lecture 5 hours.
B. Peterson
This introductory course integrates human anatomy and physiology of the major organ systems and emphasizes the intimate relationship between structure and function. The course provides the foundation needed to understand human responses to wellness and illness. PHYSIOLOGY NURS

142. Introduction to Nursing. (11) Sp. Lecture 3 hours. Patient contact 24 hours.
C. West
Course explores the concepts of health and illness and role of the professional nurse. Focuses on using the nursing process in care of persons across the adaptation and developmental continua. Concurrent laboratory designed to develop skills and knowledge common to the nursing care of adults.

143. Effective Communication. (3) W Lecture 3 hours.
P. Underwood
Course reviews selected theories of human interaction and presents principles and techniques of effective communication as they relate to establishing and maintaining a helping relationship. Students use laboratory experience to develop skills in communication and interaction.

C. West
Course focuses on nursing assessment, diagnosis and care of adults with common medical-surgical conditions including problems common to the elderly. Clinical experiences are provided to allow for development of pertinent knowledge and skills. Application of content with clients. PHYSIOLOGY NURS

145. Pathophysiology. (2) F. Prerequisite: NURS 114, 114.2 Lecture 2 hours.
S. Janson-Hjerkilde
Course provides understanding of disease and its treatment as the basis for nursing assessment and intervention. Major disease entities will be explored, utilizing a conceptual organizational of the content. PHYSIOLOGY NURS

146. Parent-Child Nursing. (7.5) W. Prerequisites: NURS 114, 114, 114.2, 114.3, 145. Lecture 4 hours. Patient contact: 50.5 hours.
C. Kennedy
This clinical course in the nursing care of children and families integrates theoretical concepts related to the management of pediatric patients in acute and ambulatory settings. Application of concepts of growth and development of the child and family is included. FAM HEATH

147. Childbearing Families. (7.5) W. Prerequisites: NURS 114, 114, 114.2, 114.3, 145. Lecture 4 hours. Patient contact 10.5 hours.
K. Lee
Course focuses on biopsychosocial concepts focusing the basis for normal childbearing events and application to clinical situations. Emphasis is on nursing assessment and management of the woman and fetus during antepartum and intrapartum periods, and new mother and infant during the first postpartum month.

R. Staples
Course focuses on significant socio-cultural variations in health and illness, presenting issues that make particular impacts on nursing practice in a variety of settings. American will be given to cultural diversity associated with ethnicity and social class. SOC BEH NURS
189. Survey of Human Sexuality. (3) § P. Lecture 3 hours.

T. Ayres

Theories and concepts of sexuality, masculinity, and sexuality throughout the life cycle. Exploration of the wide range of human sexual behavior. Consent includes sexual response, common sexual dysfunctions, therapy, masturbation, homosexuality, and sexuality in some health conditions. FAM HLT/H

197. Group Independent Study. (1-5) § S1, S2, F, W. Sp. Lab 1-5 hours.

Staff

Students collaborate in clinical investigation and study special problems related to nursing and health sciences under the direction of faculty. Students may select topics for study related to their area of interest.

198. Supervised Study in Nursing. (1-5) § S1, S2, F, W. Sp. Prerequisite: Consent of instructor. Lab 3-15 hours.

Staff

Student conducts library research and does directed reading under supervision of a faculty member with approval of the chairperson of the department.

199. Laboratory Project in Nursing. (1-5) § S1, S2, F, W. Sp. Prerequisite: Consent of instructor. Lab 3-15 hours.

Staff

Student conducts a laboratory research project under direction of a faculty member with the approval of the chairperson of the department.

201. Curriculum & Program Development. (3) § F Prerequisite: Graduate standing or consent of instructor. Lecture 1 hour; Seminar 2 hours.

N. Nakamoto

Course reviews educational principles, nursing models, and conceptual framework for curriculum and program development to enable students to analyze, critique, and develop curriculums and programs for schools of nursing and health delivery systems.

PHYS/NURS

202A. Theory Development in Nursing. (3-4) § F Prerequisite: Doctoral standing. Lecture 3 hours.

A. Meteis

Examines philosophically and analytically the nature of theory and relationship between philosophy, theory, and science. Provides knowledge and experience in all stages of theory development, exploration, and critique of epistemological and historical ideas in nursing; scholarly exchange toward independent discovery. MENT HLT/H COM ADM

202B. Prototype Theories in Nursing. (3-4) § W. Lab 3 hours.

J. Graft

Comparative study and critical analysis of major prototype theories from which conceptions of nursing are derived. Emphasis is placed on systems, symbolic interaction, developmental exchange, and adaptation level theories. MENT HLT/H COM ADM

202C. Theories & Conceptual Frameworks. (3-4) § Sp. Prerequisite: Doctoral standing. Lecture 3 hours.

A. Meteis

Comparative study and critical analysis of major conceptual models and theories in nursing. Considers relationship, congruency of models to prototype theories; system, interaction, developmental, adaptation level theoretical implications of the impingement of nursing theories and models for practice and research. MENT HLT/H COM ADM

203. Consultation Theory & Process. (2-3) § W. Sp. Lecture 2 hours; Lab 3-6 hours.

D. Oda

Course provides a study of theories and concepts of consultation as a facilitating process relevant to nurses working in primary, secondary, and tertiary prevention services. Emphasis will be on consultation strategies. Optional laboratory for theory testing. MENT HLT/H COM ADM

204. Issues in Hospice Care. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

I. Martinson

Course explores history, function, and models of hospice care. Supportive physical/psychosocial nursing interventions to promote symptom control and family coping during end-stage of life are covered with special emphasis on AIDS. Research, legal, ethical issues, and nursing implications are discussed.

FAM HLTH

205.01 Clinical Knowledge Development. (4) § F Prerequisite: N202A. Lab 6 hours. Seminar 2 hours.

P. Larson

Course explores the nature of advanced clinical practice relevant to the area of focus in the doctoral program. Problems common to selected patients are explored. Phenomena are analyzed to develop knowledge for advanced nursing in clinical and administrative settings. PHYS/NURS

205.02 Clinical Knowledge Development. (4) § F Prerequisite: N202A. Lab 6 hours. Seminar 2 hours.

I. Martinson

Course explores the nature of advanced clinical practice relevant to the area of focus in the doctoral program. Problems common to selected patients are explored. Phenomena are analyzed to develop knowledge for advanced nursing in clinical and administrative settings. FAM HLTH

205.03 Clinical Knowledge Development. (4) § F Prerequisite: N202A. Lab 6 hours. Seminar 2 hours.

P. Underwood

Course explores the nature of advanced clinical practice relevant to the area of focus in the doctoral program. Problems common to selected patients are explored. Phenomena are analyzed to develop knowledge for advanced nursing in clinical and administrative settings. MENT HLT/H COM ADM

206. Nursing Management of Adult Psych Cond. (3) § F Prerequisite: N227 and N219 or equivalent, and consent of instructor. Lab 3 hours.

P. Underwood

Seminar is designed for graduate psychiatric nursing students to examine and discuss various theories and practice approaches to the nursing management of psychiatric disorders in adults. MENT HLT/H COM ADM

207. Clin Nsg Physiol. (3-5) § S1, S2, Su, F, W. Prerequisite: Doctoral standing. Lab 3-9 hours. Seminar 2 hours.

Staff

Course is an advanced study of the theory and research in the care of patients with psychological disorders and/or illness. In-depth examination of patient problems, assessment and management in the student's selected specialty area. Seminar with clinical laboratory. PHYS/NURS

208.01A. Concept Delineation in Physiological Nursing. (3) § W. Prerequisite: N205.01 or N205.02 or N205.03. Seminar 3 hours.

V. Carriher-Kohman

Seminar describes and analyzes phenomena relevant to nursing from theoretical, clinical, and empirical perspectives. Related concepts of interest to nursing are selected from observations in clinical settings and delineated in relation to the selected phenomena. PHYS/NURS

208.02A. Concept Delineation in Family Health Care Nursing. (3) § W. Prerequisite: N205.01 or N205.02 or N205.03. Seminar 3 hours.

Staff

Seminar describes and analyzes phenomena relevant to nursing from theoretical, clinical, and empirical perspectives. Related concepts of interest to nursing are selected from observations in clinical settings and delineated in relation to the selected phenomena. FAM HLTH

208.03A. Concept Delineation in Mental Health, Community, and Administrative Nursing. (3) § W. Prerequisite: N205.01 or N205.02 or N205.03. Seminar 3 hours.

Staff

Seminar describes and analyzes phenomena relevant to nursing from theoretical, clinical, and empirical perspectives. Related concepts of interest to nursing are selected from observations in clinical settings and delineated in relation to the selected phenomena. MENT HLT/H COM ADM

208.01B. Concept Measurement in Physiological Nursing. (3) § Sp. Prerequisite: N205.01 or N205.02 or N205.03. Seminar 3 hours.

P. Larson

Seminar focuses on measurement of selected concepts and their clinical manifestations. Existing measures are examined from theoretical, clinical, and empirical perspectives when the need for new measures is identified. PHYS/NURS
Nursing

208.02B. Conceptual Measurement in Family Health Care Nursing. (3) § W. Prerequisite: N205.01 or N205.02 or N205.03. Seminar 3 hours.

Staff

Seminar focuses on measurement of selected concepts and their clinical manifestations. Existing measures are examined from theoretical, clinical, and empirical perspectives when the need for new measures is identified. FAM HILTH

208.03B. Conceptual Measurement in Mental Health, Community, and Administrative Nursing. (3) § W. Prerequisite: N205.01 or N205.02 or N205.03. Seminar 3 hours.

Staff

Seminar focuses on measurement of selected concepts and their clinical manifestations. Existing measures are examined from theoretical, clinical, and empirical perspectives when the need for new measures is identified. MENT HILTH COM ADM

208.03C. Social Support/Theory, Res & Meth. (2-4) § W. Prerequisite: Doctoral standing. Seminar 2 hours. Independent study optional 3 or 6 hours for 3 or 4 units.

S. Rankin

Analysis of the literature relating social support to various health and adjustment outcomes with emphasis on conceptual and methodological issues. Students will develop a focused review of the social support literature relevant to their research and/or clinical interests. MENT HILTH COM ADM

209. Comparative Research Designs. (3) § F. Prerequisite: Doctoral standing or by consent of instructor. Lecture 3 hours.

M. Dodd, L. Lenz

Course critically analyses the elements of qualitative and quantitative research designs within the context of the research question to be asked and the existing knowledge in the area.

210. Information Technology and Nursing Care. (3) § W. Lecture 3 hours. Lab hours vary. S. F. Hult"

Staff

Course applies research from information technology and selected aspects of nursing care (diagnoses, nursing minimum data set, decision-making) in order to capture patient outcomes for program planning activities. MENT HILTH COM ADM

211A. Introduction to Research. (3) § F. Prerequisite: Elementary statistics or equivalent. Lecture 3 hours.

H. Wilson

Lectures and computer-assisted instructional materials present an overview of the research process, including sections on developing research questions, experimental design, instruments, sampling, and data analysis. Differing views of science will be explored. Course is designed as a competency-based instructional program. PHYSIOL NURS

211B. Community Health Research Critique. (3) § W. Prerequisite: Consent of instructor, with preference given to Community Health stu-

R. M. White

Course is a critical analysis of the published literature in community health. Emphasis is on the appraisal of research designs, conclusions and importance to community health nursing practice. MENT HILTH COM ADM

211-C. Death in Childhood Res. Critique. (3) § W. Prerequisite: N211A and consent of instructor. Seminar 3 hours.

I. Marvinson

Course is a critique of studies related to the professional management of death, childhood development of the concept of death, children's response to death in the family, death anxiety in family, ill children, and impact of death of a child on the family. FAM HILTH

211D. Critique: Studies in Family Health. (3) § W. Prerequisite: N211A or consent of instructor. Seminar 3 hours.

S. Gortner

Course is a critique of research addressing the family and its relationship to the health and illness of family members. Research considered classic in the field will be reviewed, as will contemporary research. FAM HILTH

211E. Neuroscience Research Critique. (3) § W. Seminar 3 hours.

Staff

Course presents the scholarly process of critiquing research in neuroscience nursing. The foci are: evaluation of the research process, assimilation of the scientific basis for this specialty, and examination of implications of empirical findings for neuroscience nursing. PHYSIOL NURS

211F. Critic of Onc Nursing Studies. (3) § W. Prerequisite: Consent of instructor. Seminar 3 hours.

M. Dodd, P. Halliburton

Course examines the scholarly process of critiquing published research in oncology nursing. Emphasis will be on evaluation of the research process utilized by investigators, and the implications of empirical findings for oncology nursing practice. PHYSIOL NURS

211G. Critique of Management Research. (3) § W. Prerequisite: N211A or consent of instructor. Lecture 3 hours.

S. Neidlinger

The course provides a critical analysis of studies which examine organizational behavior and administrative practice. The emphasis is on attitudes, insights, and abilities crucial to appreciation, appraisal, and utilization of research in management. MENT HILTH COM ADM

211H. Research Critique: Critical Care. (3) § W. Prerequisite: N211A. Seminar 3 hours.

V. Carriero-Kohlsman

Course critically examines related to the nursing assessment, plan, and therapy of acutely ill patients with multi-system failure. Students will learn to

211-J. Studies in Child Health. (3) § W. Prerequisite: N211A or equivalent or consent of instructor. Seminar 3 hours.

I. Marvinson

Course is a critique of research addressing the health pediatric client and those experiencing chronic ill-

211K. Occup Hls Res-Critical Review. (3) § W. Prerequisite: N211A or consent of instructor. Lecture 1 hour Seminar 2 hours.

J. Lipscomb

Course is a critical analysis of studies exploring the relationship of the workplace to health of the worker. Emphasis is on appraisal of relevant scientific litera-

211L. Ment Health Outcome Studies. (3) § W. Prerequisite: N211A or consent of instructor. Lab 3 hours. Seminar 2 hours.

S. Chaferz

Course will critique outcome studies in psychosocial care of the chronically or severely mentally ill. The intent is to develop research consumerism, through promotion of attitudes, insights, and abilities necessary for critical evaluation and utilization of health-related research. MENT HILTH COM ADM

211M. Studies in Perinatal Care. (3) § W. Prerequisite: N211A or equivalent or consent of instructor. Seminar 3 hours.

D. Allison

Course examines research in perinatal health care with a focus on parents and neonates. Research considered classic in the field will be reviewed, as will contemporary research. FAM HILTH

211N. Cardiopulmonary Res. Critique. (3) § W. Prerequisite: N211A or consent of instructor. Lecture 2 hours. Lab 2 hours.

B. Drew

Course examines research in critical care with a focus on parents and neonates. Research considered classic in the field will be reviewed, as will contemporary research. FAM HILTH

211P. Critical Care Outcomes Research. (3) § W. Prerequisite: N211A or equivalent or consent of instructor. Seminar 3 hours.

J. Lipscomb

Course critically examines research in critical care with a focus on parents and neonates. Research considered classic in the field will be reviewed, as will contemporary research. FAM HILTH

212A. Clinical Research Methodologies. (3) § W. Prerequisite: N211A. Lecture 2 hour. Seminar 1 hour.

N. Stotts

Course provides the opportunity for students to apply research methods in the development of a research proposal. Students will address areas significant to their patient population. PHYSIOL NURS

213C. Illness Management Research. (3) § W. Prerequisite: N211A; or doctoral course on research methods in social science or consent of in-

L. Reif

Methodologies for conducting exploratory studies on social psychological and organizational factors which affect the mental illness and delivery of health services. Problem identification, collection and analy-

214B. Institutional Care of the Aged. (3) § W. Prerequisite: N211A. Seminar 2 hours. Field work 3 hours.

J. Kayser-Jones

Seminar focuses on critiquing research studies in the institutional care of the elderly using a theoretical, historical, and cross-cultural approach. PHYSIOL NURS

215B. Research Critique: Trauma/Emerg.

S. Janson-Bjerklin

Course is a critical analysis of studies that explore management and implementation of care in emergency and trauma nursing. Emphasis is on the critique process related to studies for applicability to clinical practice. PHYSIOL NURS

217B. Studies of Sick Children. (3) § W. Prerequisite: N211A, or consent of instructor. Seminar 3 hours.

M. Lynch

Course critiques research addressing the complexities of care for the acute/critically ill child with prolonged and/or complex care needs. Classic and contemporaneou-

218B. Studies in Nurse-Midwifery. (3) § W. Prerequisite: N211A, or consent of instructor. Seminar 3 hours.

J. Doloseph

Course critiques research addressing the childbearing family and its relationship to nurse-midwifery practice. Research considered classic in the field will be reviewed, as will contemporary research. FAM HILTH

219B. Studies in Women's Health. (3) § W. Prerequisite: N211A, or equivalent, or consent of instructor. Seminar 3 hours.

D. Taylor

Course critiques research addressing women's health and health care across the life span. Research considered classic in the field will be reviewed, as will contemporary research. PHYSIOL NURS

215C. Clinical Research Methodologies. (3) § W. Prerequisite: N211A. Lecture 2 hour. Seminar 1 hour.

N. Stotts

Course provides the opportunity for students to apply research methods in the development of a research proposal. Students will address areas significant to their patient population. PHYSIOL NURS
Course analyses the needs of cardiovascular surgical patients. Physiologic and pathophysiologic mechanisms and surgical interventions are explored. Issues in clinical management are discussed from the theoretical perspective, and compared and contrasted with clinical practice. PHYSIOL NURS

218.028. Concepts in Oncology Nursing. (3) W Prerequisite: N218A. Seminar 3 hours.

Course analyzes the needs of the critically ill patient. Physiologic and pathophysiologic mechanisms and appropriate treatments are explored. Issues in clinical management are discussed from the theoretical perspective, and compared and contrasted with clinical practice. PHYSIOL NURS


S. Jansen-Bjerklie

This course critically examines diagnosis of the psychosocial human responses and standard psychiatric disorders. Emphasis is on the use of assessment tools (i.e., Mental Status Examination, Psychiatric History, DSM-IV, and PSE) across diverse clinical areas and with clients throughout the life span.

MENT HLTH COMADM

220.01. Adv. See in Nursing Research. (3) W Prerequisite: Successful completion of the qualifying examination and/or consent of instructor. Seminar 3 hours.

S. Gerster

A seminar which guides students in the design and conduct of research in specialty areas in family health care nursing. FAM HLTH

220.03. Adv. See in Nursing Research. (3) W Prerequisite: Successful completion of the qualifying examination. Restriction: Doctoral-level course. Seminar 3 hours.

V. Carriero-Kohlman

Seminar guides students in design and conduct of research in specialty areas in physiological nursing. PHYSIOL NURS

221.01. Pathophysiology of Cancer. (3) W Prerequisite: Admission to graduate program and graduate-level physiology of the cell. Audits by permission only. Lecture 2 hours. Seminar 1 hour. C. Miszkowski

Theoretical concepts of carcinogenesis, the natural history of representative cancers, and the mechanisms of action of certain therapeutic agents will be discussed. The clinical relevance for nursing of the associated pathophysiologic changes will be emphasized. PHYSIOL NURS

221.02. Cardiovascular Pathophysiology. (3) W Lecture 3 hours. P. Skov

Course is a study of pathophysiology, diagnosis, and treatments of major cardiovascular disorders that provide the basis for the nursing management of this population. Emphasis is on the acute phase of illness. PHYSIOL NURS

221.03. Trauma and Emergency Pathophysiology. (4) W Prerequisite: N221A (Physiological Basis of Nursing). Lecture 4 hours. B. Bires

Course focuses on pathophysiology of injury and emergency care. Exemplars of clinical states commonly seen in trauma and emergency care will be analyzed. PHYSIOL NURS

221.04. Critical Care Pathophysiology. (4) W Lecture 4 hours. V. Carriero-Kohlman

Course offers study of the multi-system effects of frequently occurring pathophysiological states in the critically ill. Emphasis is on major mechanisms and conse-
227A. Theories of Major Psychiatric Conditions. (4) F. W. Prerequisite: Consent of instructor. Seminar 4 hours.

P. Underwood
Course reviews major psychiatric conditions, outlined by the DSM-III-R, explores socio-cultural, psychological, and biological theories as dimensions in understanding the etiology, onset, course, treatment, nursing care, and outcome of selected conditions. MENT HLTH COM ADM.

227B. Theories of Major Psychiatric Conditions. (4) W. Prerequisite: Consent of instructor (N227A). Seminar 4 hours.

P. Underwood
Course reviews major psychiatric conditions, outlined by the DSM-III-R, explores socio-cultural, psychological, and biological theories as dimensions in understanding the etiology, onset, course, treatment, nursing care, and outcome of selected conditions. MENT HLTH COM ADM.

228. Primary Prevention of CV Disease. (2) S. E. F. W. Prerequisite: Consent of instructor. Lecture 2 hours.

M. Engler, M. Engler
Course critically analyzes data related to the primary prevention of coronary artery disease, sudden death, stroke. Major risk indicators and treatments for these diseases are reviewed. Guidelines for managing disease risk across the life span are provided. PHYSIOLOGY NURS.

228A. Quality Assurance. (3) F. Lecture 3 hours.

S. Henry
Course critically reviews strategies to design, monitor, and evaluate quality assurance programs. Theoretical linkages between QA and evaluation research are presented. MENT HLTH COM ADM.

230B. Human Resources Development. (3) F. W. Lecture 3 hours.

S. Henry
Strategies to design, implement, and evaluate human resource development programs are critically reviewed. Theoretical linkages between QA, human resource development, and evaluation research are presented. MENT HLTH COM ADM.

230C. Health Services Evaluation. (3) F. W. Lecture 3 hours.

W. Holzemer, S. Henry
Course presents a patient outcome model for health services evaluation research. The contributions of patient/client, provider, and setting characteristics to individual and organizational outcomes are critically analyzed. MENT HLTH COM ADM.

231. Issues in Nurse-Midwifery Practice. (3) S. Prerequisite: Enrollment in the midwifery program at UCSF School of Nursing, Seminar 3 hours. J. DeJoseph, J. Flanagan
Seminar focuses on a critical analysis of current issues in midwifery, including the context of policy, health policy, and patient education. MENT HLTH.

232. Clinical Pharmacology. (1-2) F. Prerequisite: Consent of instructor. Lecture 1-2 hours.

S. Echevar
Course focuses on clinical application of pharmacology in the management of patients, including frequently prescribed drugs for the treatment of chronic disorders and major acute illnesses across the lifespan. MENT HLTH COM ADM.

233. AIDS: Primary Prevention. (3) F. Lecture 3 hours.

C. Roper
Course focuses on the epidemiology and primary prevention of AIDS. Ethical and legal issues, access to care, and mental health issues are discussed. Emphasis is on teaching strategies for prevention with high-risk populations and those practicing high-risk behaviors. MENT HLTH COM ADM.

234. Specialty Research Seminar. (3) F. Prerequisite: Doctoral standing or consent of instructor. Seminar 3 hours.

N. Soto
Course evaluates research in the student's area of specialization. Emphasis is on critique of the design, methodology, and findings. Synthesis of the evaluations of studies results in the identification of major research questions in the field of study. PHYSIOLOGY NURS.

234A. Specialty Research Seminar. (3) F. Prerequisite: Doctoral standing or consent of instructor. Seminar 3 hours.

J. Hallburg
Course evaluates research in the student's area of specialization. Emphasis is on critique of the design, methodology, and findings. Synthesis of the evaluation of studies results in the identification of major research questions in the field of study. MENT HLTH COM ADM.

234B. Specialty Research Seminar. (3) F. Prerequisite: Doctoral standing or consent of instructor. Seminar 3 hours.

M. Styles
Course evaluates research in the student's area of specialization. Emphasis is on critique of the design, methodology, and findings. Synthesis of the evaluation of studies results in the identification of major research questions in the field of study. MENT HLTH COM ADM.

235A. Child Mental Health Assessment. (2) F. Lecture 2 hours.

S. Weiss
Course discusses assessment approach and diagnostic criteria for mental health problems occurring from infancy through adolescence. Child mental health status will be assessed across a spectrum of disorders through case studies. MENT HLTH COM ADM.

235B. Child Mental Health Counseling. (2) W. Prerequisite: N235A. Seminar 2 hours.

S. Weiss
Course examines cognitive, behavioral, and clinical theories of child mental health. Theories of group counseling will also be examined, including methods based on play, activity, and interview. MENT HLTH COM ADM.

236. Expectant Parent Group Education. (2-3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 2 hours.

D. Affonso
Theoretical reasoning is related to methodology and techniques of conducting expectant parent education groups. Exploration of content relevant to concerns of expectant parents encompassing pregnancy and early child rearing experiences. Current practice recommended, but not required. FAM HLTH.

237. Health Assessment through Life. (3-6) F. Prerequisite: Department of Family Health Care Nursing students. Approval by F COR. Current practice required. Lecture 2-3 hours. Lab 1-3 hours.

L. Ennis
Course presents theoretical principles of health assessment throughout the life cycle. Areas to be covered include methodologies of data gathering and data analysis essential to comprehensive health assessment of all groups. Laboratory experience provides application and integration of theory. FAM HLTH.

238A. Infant & Child Development. (3) F. Prerequisite: Consent of instructor. Lecture 3 hours.

J. Staff
Course covers major theories and research findings dealing with social, emotional, and cognitive development of the child from birth through school age. FAM HLTH.

238B. Adolescent Development. (3) W. Prerequisite: Consent of instructor. Lecture 3 hours.

M. Svedro
Course explores relevant theory, literature, and research findings dealing with normal development during the adolescent period. FAM HLTH.

239. Environ Issues in Psych Rehab. (3) S. Lecture 2 hours. Lab 3 hours.

L. Chafez
Course provides an overview of rehabilitative, residual, and interpersonal environments for the chronically or severely mentally ill. Considerations include properties of mental health programs, housing, and personal networks which appear to promote rehabilitation goals and overall quality of life. MENT HLTH COM ADM.

240A. Family Primary Care I. (3) F. Prerequisite: Enrollment in Family Practice Practitioner Program and N237. Lecture 5 hours.

S. Carroll
Theoretical concepts and knowledge for comprehensive assessment and management of common health conditions throughout the life cycle will be presented. Emphasis will be on primary care of the family unit. FAM HLTH.

240B. Family Primary Care II. (4-5) F. Prerequisite: N240. Lecture 4-5 hours.

B. Trineull
Critical analysis of clinical strategies and nursing interventions in health promotion and maintenance using research findings and theoretical frameworks related to risk screening, disease prevention, and health promotion in primary health care across the lifespan. FAM HLTH

246. PHCH: Symptom Assessment & Management. (3) § F Prerequisite: N245 and 270. Lecture 3 hours.
S. Rankin, Staff
Course introduces students to symptoms related to illness conditions commonly encountered in primary care. The client's clinical presentation, etiology, and appropriate management are discussed as they occur across the lifespan.

246.01. Seminar in Adult Primary Care. (1) § Sp Seminar 1 hour. S. Rankin, Staff
FAM HLTH

246.02. Seminar in Family Primary Care. (1) § Sp Seminar 1 hour. S. Rankin, Staff
FAM HLTH

246.03. Seminar in Gerontological Primary Care. (1) § Sp Seminar 1 hour. C. Dietrich, Staff

246.04. Seminar in Pediatric Primary Care. (1) § Sp Seminar 1 hour. K. Lee, Staff

246.05. Seminar in Women's Primary Care. (1) § Sp Seminar 1 hour. Taylor, Loomell, Staff

247. PHCH: Complex Health Problems & Management. (3) § F Prerequisites: N270, N245, N246, or consent of instructor. Lecture 3 hours.
B. Burgel, Staff
Course introduces the more complex health problems encountered in primary care. Client's clinical presentation, underlying causes, and appropriate treatment are discussed. Separate specialty track seminars permit elaboration of problems as they occur in the specialty. FAM HLTH

248. Group Independent Study. (1-6) § F,W,S Prerequisite: Consent of instructor. Lecture 1-6 hours.
Staff
Students collaborate in clinical investigations and other studies of special problems in nursing and health sciences under the direction of faculty. Students may select areas related to their long-term interests and future research or clinical program.

249. Independent Study. (1-5) § F,W,S Prerequisite: Consent of instructor. Lecture 1-5 hours.
Staf
Student undertakes a personal study with emphasis on special problems in nursing. Students may select an area of study which is related to his/her area of interest or future goals.

250. Research. (1-8) § F,W,S Prerequisite: Admission to doctoral study and consent of instructor. Staff
Course offers students an opportunity to engage in research with selected faculty, INTERDEPARTMENTAL

250.01. Research Rotation. (1-6) § S,F,W,S Prerequisite: Completion of first year of doctoral study and consent of advisor. Lab 3-18 hours.
Staf
The student will participate in ongoing faculty research. This experience will contribute to the student's methodological or substantive expertise.

250.02. Clinical Research Rotation. (1-6) § S,F,W,S Prerequisite: Completion of first year of doctoral study and consent of advisor. Lab 3-18 hours.
Staf
The student will participate in ongoing faculty clinical research. This experience will contribute to the student's methodological or substantive expertise, INTERDEPARTMENTAL.

251. Advances in Vascular Nursing. (2) § S51, S52, S,F,W,S Prerequisite: Consent of instructor. Learning modules 10 hours.
C. Hubner
Course examines the theoretical basis of prevention, intervention, adaptation, and rehabilitation in peripheral vascular insufficiency utilizing relevant research. Computer simulations facilitate rhythm and application of content. PHYSIOL NURS

252. Issues in Scientific Inquiry. (2-4) § F Prerequisite: Consent of instructor. Restriction: Doctoral-
Nursing

level students who have completed the preliminary exam. Seminar 2-4 hours.

Staff

Course provides a forum for discussion of issues in the conduct of the scientific investigations emphasizing these situations and problems associated with the content areas specific to the students' own interests.

PHYSIO NURS

253. Innovative Subsystems of Nursing Care. (3) S.W. Restriction: Doctoral level—suggested D.N.S. Seminar 3 hours.

J. Martinson

Course provides instruction in the development of a nurse-directed subsystem of care, including the capability to develop a feasible, functioning system in plan design for collection and analysis of data needed for evaluation. FAM HILTH

254. Fetal-Newborn Development. (2) S.P. Lecture 2 hours.

M. Lynch

Course is a study of body system development during embryonic, fetal, and postnatal growth. Emphasis is on normal anatomical and physiological development, critical periods of developmental alterations, and transitions for extrauterine adaptation. Implications for nursing practice are explored. FAM HILTH

254.01. Pediatric Health Assessment. (2-3) S.P. Prerequisite: Consent of instructor. Restriction: For students enrolled for 2 Credit units must be provided of a concurrent supervised physical assessment experience. Lecture 2 hours. Lab 3 hours.

P. Jackson, K. Duderstadt

Course presents theoretical principles and assessment techniques for determining health status of children, including health history and physical examination. Focus is on collection and interpretation of clinical data. Laboratory or concurrent practicum required. FAM HILTH

255.03A. Common Pediatric Illness Management. (2) S.P. Prerequisite: Consent of instructor. Lecture 2 hours.

P. Jackson

Course presents theories, concepts, and knowledge for comprehensive assessment and management of common pediatric illnesses. Emphasizes the most common acute conditions managed by a PNP in collaboration with pediatrician. Integrates history taking, physical findings, diagnosis, and management. FAM HILTH

255.03B. Common Pediatric Illness Management. (3) S.W. Lecture 3 hours.

K. Diesselhorst

Course presents theories, concepts, and knowledge for comprehensive care of children with common pediatric illnesses. Emphasizes common acute conditions managed by a clinical nurse specialist in Pediatric Primary Care in collaboration with a physician. FAM HILTH

256. Transitions & Health. (3) W.S. Lecture 3 hours. Course may be repeated for credit.

A. Meleis

Critical and analytical review of theories and research that links health of the individual and families to transitions and transitions. Focuses on responses and coping with situational, developmental, health-illness, and sociocultural transitions. Nursing therapeutic theories will also be explored. MENT HILTH COM ADIM

257. Biology of Aging. (3) W.S. Seminar 3 hours.

M. Wallhagen

Course focuses on the biology, pathophysiology, and current theories of human aging. Clinical application of theory for nursing practice is provided. PHYSIO NURS.

258A. Family/Childbearing Theory. (3) S. Seminar 2 hours. Field work 3 hours.

J. Delosoph

Course is an introduction to the theoretical foundation of knowledge about the childbearing family. A selection of nursing theories is used to assist the student to analyze the psychosocial and physiological factors impairing the family during the childbearing cycle. FAM HILTH

258B. Family/Childbearing Phenomena. (3) S. Seminar 2 hours. Project 3 hours.

D. Affman

Course studies prenatal phenomena identified in national reports for their theoretical practice, and research implications. Phenomena include prevention of low birthweight infants, contemporary stressors for childbearing families, cognitive model to assess cultural diversity in perinatal health care, and related legislation. FAM HILTH

258C. Family/Childbearing Theory. (3) S. Prerequisite: N 289A and N 258B. Seminar 3 hours.

M. Gershwin

Clinical seminar addresses psychosocial and pathophysiologic issues of pregnancy, childbirth, parenting, and family/marital relationships during childbearing; focus on self-care practices for family; emphasis on midwife as facilitator of adaptation. FAM HILTH

259.01. Women's Reproductive Health. (1-5) F. Lecture 1-5 hours.

L. Lonsmuhl

Course provides exploration of theories, concepts, and knowledge necessary to maintain and promote women's health. Emphasis is on application of current research: decision-making and management of pregnancy, the interconceptional period, and the climacteric, including collaboration with health team members. FAM HILTH

259.02. Special Problems in Women's Health. (1-4) S.W. Prerequisite: Consent of instructor. Lecture 1-4 hours. Seminar optional 1 hour.

D. Taylor, L. Lonsmuhl

Emphasis is on theory and management of biopsychosocial deviations from normal in women be-

120

262B. Women's Health Roles/Ices II. (1) S.W. Prerequisite: N 262A. Seminar 1 hour.

J. Delosoph

Seminar focuses on critical analysis of issues influencing women and enhancements of contemporary practice for women's health care providers. Impact of current legal, legislative, technological, and health care delivery models are discussed. FAM HILTH

263. Bereavement. (2-3) S.P. Seminar 2 hours. Lab 0-3 hours.

B. Marriott

Course analyzes empirical research and theory dealing with bereavement. Underlying physiological and psychological mechanisms and response to grief will be explored across the lifespan. FAM HILTH

265. Management of Clinical Occupational Health Problems. (3) S.W. Prerequisite: Consent of instructor. Lecture 3 hours. Lab 1 hour.

B. Burtle

Multidisciplinary course exploring the evaluation and clinical management of acute and chronic occupational and environmental health problems. Clinical diagnostic and epidemiological methods are used in evaluation of occupational health problems, including health hazard evaluation, surveillance, and disability evaluations. MENT HILTH COM ADIM

266. Applied Pathophysiology of AIDS. (2) S.W. Prerequisite: Undergraduate biology or consent of instructor. Lecture 2 hours.

A. Lewis, T. Moran, G. Gee

Course describes theories of the natural history of AIDS and AIDS-related diseases. Sympathetic diagnostic tools, treatments, and investigational protocols will also be reviewed. Clinical cases and nursing management using secondary prevention techniques will be emphasized. PHYSIO NURS

267. Ethical Dilemmas & Nursing Practice. (3) S.W. Lecture 2 hours. Library research 3 hours.

A. Davis

Course explores ethical dilemmas, ethical dilemmas in health care and nursing practice. Focus is on case studies depicting ethical dilemmas in nursing practice, nursing research, and health policy. MENT HILTH COM ADIM

268. Psychiatric Liaison Nursing. (2) S.W. Prerequisite: N 211A and enrollment in the child or adult psychiatric nursing specialty track, Department of Mental Health, Community, and Administrative Nursing, or consent of instructor. Lecture 2 hours.

L. Chafetz

Course reviews the emerging literature on psychiatric liaison nursing. Reports on roles of psychiatric nurses in medical settings will be critically analyzed, as well as clinical studies from the area of general hospital psychiatry. Comparative models of practice are discussed. MENT HILTH COM ADIM


M. Styles
271A. Current Concepts in Occupational Health. (2) [F: Prerequisite: Consent of instructor. Lecture 2 hours.]
J. Lipshitz
Course analyzes structure and organization of the occupational health system, regulatory control mechanisms for worker protection, and worker's role in health and safety. Major issues and trends in occupational health are explored. MENT HELTH COM ADM

273. Current Concepts in Occupational Health Nursing. (2) [W: Prerequisite: Consent of instructor. Lecture 2 hours.]
J. Jechko
Course analyzes structure and organization of the occupational health system, regulatory control mechanisms for worker protection, and worker's role in health and safety. Major issues and trends in occupational health are explored. MENT HELTH COM ADM

274. Safety and Health Hazards/Workplace. (3) [Sp. Lecture 2 hours. Lab 1 hour.]
B. Novich
Course introduces principles of industrial hygiene and safety for identification of chemical, biological, physical, ergonomic, and safety hazards at work. Students will identify environmental monitoring methods, select health surveillance and safety measures, and discuss methods of control exposure to injuries. MENT HELTH COM ADM

275A. Physiological Basis for Nursing. (1-3) [F: Lecture 1-3 hours.]
M. Engler
Course studies physiological theories applicable to nursing. Focus is on normal cell functions and nervous and endocrine systems which serve as a basis for nursing practice. PHYSIO NURS

275B. Physiological Basis for Nursing. (1-3) [W: Lecture 1-3 hours.]
M. Engler
Course studies physiological theories applicable to nursing. Focus is on normal cell functions and nervous and endocrine systems which serve as a basis for nursing practice. PHYSIO NURS

275C. Neonatal Pathophysiology. (2) [Sp. Lecture 2 hours.]
D. Ainslie
Course is a study of the major disease processes encountered in the neonate and their relation to nursing practice. The course will address etiology, manifestations and treatment during the acute phase of illness. FAM HELTH

276. Theoretical Perspectives for Nsg Practice. (3) [F: Lecture 3 hours.]
P. Benner
Comparative study of selected nursing conceptions and theories and their implications for nursing practice, curriculum development, and research. Critique of theories will address key questions relevant to nursing goals, intervention focus and outcomes, recipients of nursing, and social significance. PHYSIO NURS

277. Assessment/Management of Psychosocial Problems. (3) [F: Prerequisite: N275 or consent of instructor. Lecture 3 hours.]
J. Faucher
Course focuses on assessment and management of psychosocial problems and psychiatric conditions. Course is designed to assist students in determining patients for management and for referral and to develop beginning skills in managing selected patients. MENT HELTH COM ADM

278. Nursing Science History & Philosophy. (4) [F: Prerequisite: Doctoral-level standing or consent of instructor. Lecture 2 hours. Seminar 2 hours.]
J. Gortner
Course is an analysis of history and philosophy of nursing science in the United States and abroad, addressing origins of scientific questions and activity, contemporary philosophic perspectives, and debates currently ongoing regarding drugs, conduct, and outcomes of nursing research. FAM HELTH

279A. Family Nursing Theory. (3) [F: Lecture 2 hours. Seminar 2 hours every other week.]
C. Chosa
Course provides an introduction to family theories about systems, development, and stress. Lectures identify relation of stressors with family health or illness and agnates of family theories to family health. Seminars focus on interviewing techniques to assess family health. FAM HELTH

279B. Family Nursing Interventions. (3) [W: Prerequisite: N279A or consent of instructor. Lecture 2 hours. Seminar 1 hour.]
C. Chosa
Course integrates family theoretical and therapeutic concepts to focus on nursing assessment and intervention strategies for family problems in health and illness. FAM HELTH

279C. Cultural Issues in Family Health. (2) [Sp. Prerequisite: N279B and consent of instructor. Lecture 1 hour. Seminar 1 hour.]
Staff
Course involves analysis of family, cultural, and behavioral theories and issues leading to clinical intervention in family primary care. FAM HELTH

280. Ind Primary Health Care. (2) [W: Seminar 2 hours.]
J. Lipson
Seminar is a discussion of assigned readings on the political economy and practical implementation of community-oriented primary health care programs in the international realms, including discussion of the nation’s role in such programs. MENT HELTH COM ADM

281A. Res Sens: Hlth & Its Correlates. (2) Sp. Prerequisite: Enrollment in Ph.D program in nursing or consent of instructor. Seminar 2 hours. S. Weiss
Seminar critically examines theory and research focused on personal and environmental factors that influence health and illness. Concepts of person, environment, and health will be analyzed and discussed as they pertain to the development of nursing science through research. FAM HELTH

281B. Res Sens: Hlth & Its Correlates. (3-4) [Sp. Prerequisite: N281A and enrollment in Ph.D program in Nursing, or consent of instructor. Lab 3 hours. Seminar 3 hours.] I. Martenson
Course critically examines faculty research investigating nursing science from the perspective of person, environment, and health. PHYSIO NURS

282. Geriatric Pharmacology (3) [W: Lecture 3 hours.]
S. Echave, C. Dietrich
Course explores clinical management of pharmacologic and integration of drug therapy into the therapeutic plan and nursing care of older adults. The course focuses on drug therapy and uses in multiple settings for the treatment of chronic disease and minor acute illnesses. PHYSIO NURS

283A. Pediatric Normal/Abnormal Function. (1-3) [F: Lecture 1-3 hours.]
M. Lynch
Course studies physiologic function of the cellular, neurologic, and respiratory systems as modified by developmental needs, system immunarest, and pathophysiologic processes in the pediatric population. Implications for pediatric nursing practice will focus in relation to normal/abnormal system function. FAM HELTH

283B. Pediatric Normal/Abnormal Function. (1-3) [W: Lecture 1-3 hours.]
M. Lynch
Course studies physiologic function of the cardiovascular, hematologic, and immunologic systems as modified by developmental needs, system immunarest, and pathophysiologic processes in the pediatric population. Implications for pediatric nursing practice will be addressed in relation to normal/abnormal system function. FAM HELTH

283C. Pediatric Normal/Abnormal Function. (1-3) [Sp. Lecture 1-3 hours.]
M. Lynch
Course studies physiologic function of the gastrointestinal, renal, and endocrine systems as modified by developmental needs, system immunarest, and pathophysiologic processes in the pediatric population. Implications for pediatric nursing practice will be addressed in relation to normal/abnormal system function. FAM HELTH

284. Adolescent Health Care. (2) [F: Prerequisite: Consent of instructor. Seminar 2 hours.]
S. Sveden, J. Brokering
Examination and analysis of theory and research related to health care of adolescents and their families in
285. Assessment of Women’s Health. (3) S. Prerequisite: Consent of instructor. Restrictions: Women’s Health Nurse Practitioner students. Lecture 2 hours. Lab 3 hours.

J. Neesen, L. Lemmel
Course presents theoretical principles of health assessment. Areas to be covered include methodologies of data gathering and data analysis essential to comprehensive health assessment of women. The laboratory experience provides application and integration of theory. MENT HLTH COMM

286A. Research in Stress & Coping. (3-6) W. Prerequisite: Consent of instructor or doctoral-level theory development. Lecture 3 hours. Contact for 1 unit for proposal development (optional).

P. Benner
Course critically analyzes the relationship of stress and coping to health and illness. Examines theoretical and empirical links between coping strategies and therapeutic interventions. Emphasis is on research programs. PHYSIO NURS

286D.2B. Stress & Coping in Cancer. (3-6) W. Prerequisite: Consent of instructor. Lecture 3 hours. Contact for 1 unit for research proposal (optional).

P. Benner
Course examines the current nursing, behavioral, medical, and epistemological research relating stress and coping to the etiology and course of cancer. Theoretical and empirical links between coping resources, strategies, and helping interventions are also included. PHYSIO NURS

287A. Organizational Theory & Research. (3) S. Prerequisite: Consent of instructor. Lecture 3 hours.

M. Flood
A critical review and analysis of major organizational theories and research. Emphasis is on open-systems theories to examine characteristics of health service organizations and the role of management. MENT HLTH COMM

287B. Behavior in Organizations. (3) W. Prerequisite: N287A and consent of instructor. Lecture 3 hours.

H. DeGroot
Course considers the characteristics, causes, and consequences of behavior and experiences of individuals as they function in organizations. Emphasis is on personnel management and other managerial functions. MENT HLTH COMM

287C. Processes in Administration. (3) S. Prerequisite: N287A and 287B or consent of instructor. Lecture 3 hours.

S. Neidlinger
Course provides a synthesis and application of management theories and administrative processes. Emphasis is on leadership, planning, organizing, controlling, decision making, managing change, and evaluating. MENT HLTH COMM

287D. Financial Management for Nurse Administrators. (4) S. Lecture: 3 hours. Lab 3 hours.

V. Cleland
Course offers introduction to financial accounting principles as they relate to financial management in health care settings. Emphasis is on the manager's role and responsibilities in budgeting, monitoring, controlling, and in costing nursing care. Laboratory permits skill development. MENT HLTH COMM

288A. Executive Nursing Administration. (3) S. W. Prerequisite: Consent of instructor. Seminar 3 hours.

Staff
Seminar offered to doctoral students, analyzing theories and research related to executive nursing roles in academic and service settings. Course examines administrative concepts pertaining to governance, use of power, corporate design, and executive scholarship. MENT HLTH COMM

288B. Cost Methodology in Nursing. (3) S. Prerequisite: N211 OR (B.C. of Management Research) or equivalent, N287D (Financial Management for Nurse Administrators) or equivalent, and doctoral study or consent of instructor. Lecture 2 hours. Field work 3 hours.

V. Cleland
Course is a critical analysis and synthesis of accounting and economic principles relating to the cost of nursing care. Cost methodology is used to determine cost of service, cost averages, marginal cost, cost-effectiveness, and cost-benefit. MENT HLTH COMM

288C. Academic Administration Seminar. (3) S. E.W. Prerequisite: Consent of instructor. Seminar 3 hours.

Staff
Seminar designed for doctoral students in nursing administration interested in the field of administration. Course analyzes and evaluates theories, models, principles, and practices relative to administrative roles in diverse academic settings. MENT HLTH COMM

289. Labor Relations. (3) S. W. Prerequisite: Consent of instructor. Lecture 3 hours.

W. Neff
Course critically analyzes organization and exchange theories relative to managing employer-employee relations in health care and educational settings. Emphasis is on labor movement, labor legislation and regulation, contract negotiations, and grievance procedures. MENT HLTH COMM

290.1. Family Health Nursing Practice. (3-6) S. Prerequisite: Enrollment in program. Lab 0-3 hours. Seminar 3 hours.

C. Gilliss
Comparative analysis of classical theories and methodologies for deriving a theory base for family health nursing. Emphasis is on instructional, role, structural-functional, and systemic theories. FAM HLTH

290.02. Family Health Theory. (3-6) S. Prerequisite: N290.01. Seminar 3 hours. Independent Study 0-3 hours.

C. Gilliss
Course is a comparative analysis of theories apropos to deriving a theory base for family health nursing. Emphasis is on developmental, ecological, field, conflict, stress, and adaptation theories. FAM HLTH

291. Acute Psych Care in the Community. (2) S. Seminar 2 hours.

L. Chafetz
Course reviews clinical problems encountered in acute psychiatric services in community settings. In addition to direct care issues, students have the opportunity to discuss the socio-cultural, legal, ethical, and economic factors which influence provision of services. MENT HLTH COMM

292A. Physiology of Pregnancy. (2) S. E.W. Prerequisite: Consent of instructor. Lecture 2 hours.

K. Lee, L. Ennis
Course reviews and analyzes advanced physiology and pathophysiology of pregnancy and their impact on the maternal-fetal unit as a basis for nursing practice and research. Emphasis is on reproductive and endocrine systems affecting adaptation and development during pregnancy. FAM HLTH

292B. Physiology of Pregnancy. (2) S. W. Prerequisite: Consent of instructor. Lecture 2 hours.

L. Ennis
Course reviews and analyzes advanced physiology and pathophysiology of pregnancy as a basis for practice and research. Emphasis is on cardiovascular, hematology, neuroendocrinology, and renal systems affecting adaptation and development during pregnancy. FAM HLTH

294. Foundation of Nurse-Midwifery Care. (3) S. Prerequisite: Enrollment in Nurse-Midwifery Specialty Lecture 3 hours.

L. Ennis
Course focuses on theory supporting midwifery management of the low- to high-risk fetus and newborn. Content traces human development from conception through adaptation to neonatal life. Course articulates with clinical laboratory which monitors newborn health: assessment and management skills. FAM HLTH

295. Quasi-Experimentation in Neg Res. (3) S. E.W. Prerequisite: Consent of instructor. Seminar 3 hours.

W. Holmme
Seminar addresses validity issues of quasi-experiments in nursing research. Designs examined in nursing literature include non-equivalent control group designs, interrupted time-series designs, passive observation, and randomized experiments. MENT HLTH COMM

296. Teaching-Learning Processes. (4) S. 551 or 552. W. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 2 hours.

Staff
Course analyzes principles, theories and research in the field of teaching with emphasis on teaching strategies and evaluation methods applicable to clinical and educational settings. A microteaching format is incorporated for application and evaluation of selected teaching interactions. PHYSIO, NURS

297. Human Responses to Pain. (2) S. Lecture 2 hours.

M. Svedera
Course explores research related to physiological, psychological, and social responses to human pain; nursing implications for pain assessment, and management of acute and chronic painful conditions across the life span. FAM HLTH

298. Thesis or Comprehensive Exam. (0) S. W. Prerequisite: Advancement to candidacy and permission of the graduate advisor.

Staff
For graduate students engaged in writing the thesis for the master's degree or taking a comprehensive examination required for the master's degree.

299. Dissertation. (0) S. W. Prerequisite: Advancement to candidacy and permission of the graduate advisor.

Staff
For graduate students engaged in writing the dissertation for the Doctor of Nursing Science (D.N.S.) or Doctor of Philosophy in Nursing degree.

401. Teaching Residency. (4-12) S. W. Prerequisite: Consent of instructor. Lab 12-36 hours.

Staff
Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor.

402. Administration Residency. (2-12) 551, 552. S. W. Prerequisite: Completion of N287ABC and N287D, each with a grade of B or higher, and consent of instructor. Lab 6-36 hours.

Staff
Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor. MENT HLTH COMM

403. Consultation Residency. (4-12) S. W. Prerequisite: Consent of instructor. Lab 12-36 hours.

Staff
Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor. MENT HLTH COMM

404. Clinical Residency. (4-12) S. W. Prerequisite: Consent of instructor. Lab 12-36 hours.

Staff
Student has opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor.
Nursing

404.01. Adult Primary Care Nursing—Clinical Practicums. (4-12) § F.W. Sp. Prerequisite: Consent of instructor. Lab 12-36 hours.

Staff

Course provides an opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor. Focus on development of the pediatric clinical specialist role in ambulatory child health care. FAM HLTH COM ADM.

404.02. Advanced Practice Residency. (2-12) § Su, F.W. Sp. Prerequisite: Consent of instructor. Parent contact 6-36 hours.

Staff

Course provides student with the opportunity to apply and evaluate theories, concepts, and skills under the supervision of a preceptor in one or more clinical practice settings. FAM HLTH.

404.06A. Ped Clin Residency. (1-8) § F. Prerequisite: Consent of instructor. Lab 12 hours. Seminar 2 hours. Conference 1 hour.

D. Goldman

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory child health care. FAM HLTH.

404.06B. Pediatric Residency. (4-6) § W. Prerequisite: Consent of instructor. Lab 10-16 hours. Seminar 2 hours. Conference 2 hours.

P. Jackson

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory child health care. FAM HLTH.

404.06C. Pediatric Residency. (4-6) § Sp. Prerequisite: Consent of instructor. Lab 10-16 hours. Seminar 2 hours.

P. Jackson

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory child health care. FAM HLTH.

405. Practicum in Mental Health & Com Nurs. (1-5) § F.W. Sp. Prerequisite: Consent of instructor. Lab 5-24 hours.

Staff

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical experience in selected aspects of mental health and community nursing. Equipped clinical laboratory experience is designed to develop mastery of advanced skills. MENT HLTH COM ADM.

406. Practicum in Family Health Care Nursing. (1-5) § F.S1, S2, Su, F.W. Sp. Prerequisite: Consent of instructor. Lab 5-24 hours.

Staff

Course provides student opportunity to apply theory in clinical practice to further skills and to extend clinical experience in selected aspects of family health care nursing. Equipped clinical laboratory experience is designed to develop mastery of advanced skills. MENT HLTH.

407. Practice in Physiological Nursing. (1-8) § F.W. Sp. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical experience in selected aspects of physiological nursing. Equipped clinical laboratory experience is designed to develop mastery of advanced skills. PSYCHOL NURS.

407.01. Cmng Mngmt of Older Adults. (2) § F. Prerequisite: Concurrent enrollment in N242B, N257 or consent of instructor. Lab 6 hours.

M. Wallenberg

Course provides opportunity for skill development in comprehensive assessment of acutely ill older adults. It emphasizes problem identification as a basis for planning scientifically based care from a multidisciplinary perspective and within the context of the life continuum. PHARM, NURS.

408. Clinical Residency. (4-12) § S1, S2, Su, F.W. Sp. Prerequisite: Consent of instructor. Lab 12-36 hours.

Staff

Course provides student the opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor.

410. Teaching Practicum. (1-8) § F.W. Sp. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Supervised practice in selected components of the teaching role in nursing.

411A. Introduction to Computers. (2) § F.W. Sp. Lecture 2 hours.

R. Slaughter

Course presents overview of the impact of computer technology upon nursing. Course is upon hardware and software for nursing in the mainframe to micro environment. Word processing for scientific writing using IBM PC is an integral part of the class. PHARM, NURS.

411B. Fiscal Modeling. (2) § F.W. Prerequisite: N411A. Priority of space available to Administration student. Lecture 2 hours.

R. Slaughter

Course emphasis is on the use of the computer as a tool for the nurse manager in financial planning. PHARM, NURS.

411C. Computers in Administration. (2) § F.S1, S2, Su, F.W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

R. Slaughter

Course provides an introduction to administrative information systems and their impact upon patient care. Emphasis will be on data base management systems in a nursing administration environment. PHARM, NURS.

411D. Introduction to Computers. (2) § F.W. Sp. Lecture 1 hour. Lab 1 hour.

J. Groot

Course provides an introduction to microcomputer, focusing on word processing, DOS basics and hard disk management, hardware and software applications, and purchasing a system. PHYSIO, NURS.

411E. Data Management. (2) § SS1, F.W. Sp. Prerequisite: None. Biostatistics 187 or 185AB are recommended. Lecture 1 hour. Lab 3 hours.

S. Poli

Course offers hands-on experience with computers and programs that can be used for data management and statistical analysis. The benefits of considering options for data collection, entry, analysis, and preparing research strategy before data are collected is emphasized. PHYSIO, NURS.

Nutrition

130. Nutrition & Health. (2) W. Lecture 2 hours.

S. Silverstein

An introduction to the basic principles of human nutrition. Subject material is related to the maintenance of normal nutrition throughout one's lifetime, and emphasis is on normal nutrition and its preventive role in maintaining general health, specifically oral health. DENT PUB HLTH.

160. Nutrition. (2) F. Lecture 2 hours.

S. Silverstein

The goal of the course is to teach nutrition to dental hygiene students. The students will understand the techniques of dietary counseling that can be used in the practice of dental hygiene. DENT PUB HLTH.

180. Nutrition & Preventive Dentistry. (1) § Sp. Lecture 1 hour. Laboratory 1 hour. Prerequisite: Senior status in dental hygiene program, Nu 130B.

Talbott

Supervised practicum in nutrition counseling with dental hygiene students. Students will apply techniques of diet analysis, preventive program planning, and patient counseling. DENT PUB HLTH.

200. Maternal & Infant Nutrition. (2-4) § Sp. Prerequisite: Consent of instructor. Lecture 2-4 hours.

Y. Gutierrez

Application and current maternal nutrition research to students in working with other health professionals to offer interdisciplinary maternal nutrition counseling, the prevention of low birth weight. Emphasis will be on cross-cultural factors in assessment and counseling. FAM HLTH.

202. Family Nutrition Counseling. (1) § Sp. Prerequisite: Consent of Instructor. Lecture 3 hours.

Y. Gutierrez

Theory and practice in the interpretation of current concepts, principles, and research in nutrition for family counseling. Emphasis on cultural dietary patterns. FAM HLTH.


Y. Gutierrez

Course provides study of nutritional principles, concepts, and knowledge needed to interpret child nutrition, both healthy and ill. Emphasis is on growth processes, feeding practices, disease-induced nutritional deficiencies, common problems, and intervention approaches. Cross-cultural aspects included. FAM HLTH.

249. Independent Study in Nutrition. (1-4) § F.W. Sp. Prerequisite: Completion of or concurrent enrollment in Nu 202, or Nu 202A, or Nu 208. Lecture 1-4 hours.

Y. Gutierrez

Course is designed to focus on the exploration of selected nutritional issues in clinical nursing practice. Guided study will include analysis of scientific and popular nutrition literature, and identification and delineation of therapeutic approaches. FAM HLTH.

Obstetrics, Gynecology and Reproductive Sciences

110. Ob/Gyn Core Clerkship. (1.5 per week) Su, F.W. Sp. Prerequisite: Medicine 132A-B-C.

R. Glass, Braga

Basic principles and fundamental techniques in obstetrics and gynecology are discussed in a series of seminars, case discussions, and teaching clinics. Student gains practical experience in clinics, wards, delivery room, and operating room under direct supervision. OBI GYN R S.

140. Advanced Clinical Clerkships. (1.5 per week) Su, F.W. Sp. Prerequisite: Satisfaction of completion of Obstetrics and Gynecology 110, Pediatrics Core Clerkship and 110, and either Medicine 110 or Surgery 110 Core Clerkships.

Robinson

Advanced clinical clerkship, obstetrics and/or gynecology at other accredited hospitals, as individually arranged.

140.05. Advanced Obst/Gyn Clerkship—VAMC. (1.5 per week) Su, F.W. Sp. Prerequisite: Satisfactory completion of Obstetrics and Gynecology 110, Pediatrics 110, and Medicine 110 or Surgery 110. Open only to 4th-year medical students of schools in U.S., and Canada.

140.06. Advanced Obst/Gyn Clerkship—SFCH. (1.5 per week) Su, F.W. Sp. Prerequisite: Obstetrics and Gynecology 110, Pediatrics 110, and either Medicine 110 or Surgery 110, or consent of instructor. A. Korn
Students will observe, work up and present ophthalmology cases at the Eye Clinic. They will attend department rounds and conferences.

140. 02. Off-Campus Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

Good Clinical clerkship in approved hospitals by special arrangement and approval by the dean and the chairperson of the department. OPHTHALMO.

140. 03A. Advanced Clinical Clerkship-SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor. One student per block.

Self. Good Students serve as externs on the Ophthalmology Service. They work up and present cases in the outpatient clinic and on the wards; and have the opportunity to participate in the operating rooms. On-call and weekend responsibilities should be expected.

OPHTHALMO.

140. 06. Adv. Ophthalmology Clerkship-VA. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

Zarbin Clinical observation of patients in clinics, wards and surgery. OPHTHALMO.

150. 02. Ophthalmology Research. (1.5 per week) Su, F, W, Sp. UC, UCR, SFRRH R. Sweet, C. Webb Residents are responsible for the care of patients in the hospital and outpatient clinic. Formal and individual instruction is conducted. OBGYN R S.

Ophthalmology

First-Year Coordinated Instruction-Medicine 131A-B-C. Lecture-demonstration and practical work devoted to the supervised examination of patients.

Core Clerkship-Surgery 110 and 111 include lectures and clinical experience in the diagnosis and care of eye disease.

140. 01A. Advanced Ophthalmology Clerkship-UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Surgery 110 or consent of instructor.

M. Drake Students will serve as externs on the ophthalmology ward. They will work up and present patients, and attend surgery and postoperative clinics. This is an intensive clerkship where students will be on twenty-four hour call the entire time.

OPHTHALMO.

140. 01B. Advanced Ophthalmology Clerkship-UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

Good
Oral Biology

Ryder
Introduction to the etiology, pathogenesis, and diagnosis of dental caries and periodontal disease. STOMATOL

108.02. Micro/Immuno of Caries & Perio. (2) F Prerequisite: Oral Biology 106.01. Lecture 2 hours. Lecture
Johnston
An in-depth study of the microbiology and immunology of periodontal disease and dental caries. The formation and pathogenic potential of dental plaque are discussed. STOMATOL

108.03. Cariology & Preventive Dentistry (3) W Prerequisite: Oral Biology 106.01 & 109.02. Lecture 2 hours, seminar 1 hour.
Newburn
Principles in the prevention and treatment of caries. Topics covered include composition and function of dentin, dietary factors in the pathogenesis of caries, the role of fluoride in caries prevention, and overall treatment planning for high caries risk patients. STOMATOL

111. First Year Special Study. (2) F Prerequisite: Passing placement examination and consent of instructor. Lecture 2 hours.
Newburn
Discussion of biological problems of interest in dentistry including saliva, mineral metabolism, hydroxyapatite crystal structure, connective tissue, bacterial cell wall, oral bacterial metabolism, and blood coagulation. STOMATOL

116. Intro to Oral Biology. (2) F Lecture 1 hour, lab 2 hours.
Ryder
Introduction to oral biology correlating morphology, chemistry, function of dental and periodontal tissues. Topics include enamel, dentin, cementum, pulp, dental caries, tooth eruption, periodontium, oral mucous membranes. STOMATOL

150. Introduction to Oral Biology. (1) F Prerequisite: Dental Hygiene standing. Lecture 1 hour.
Ryder
Introduction to oral biology correlating morphology, chemistry, function of dental and periodontal tissues. Topics include enamel, dentin, cementum, pulp, dental caries, tooth eruption, periodontium, oral mucous membranes. STOMATOL

Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the division. STOMATOL

199. Laboratory Project. (1-5) F, W. Sp. Prerequisite: Consent of instructor. Lab 3-15 hours.
Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the division. STOMATOL

209. Connective Tissue Seminar. (2) F & W. Seminar 2 hours.
Bhattacharji
A course in connective tissue biology, concerned mainly with the development, differentiation, and pathology of connective tissues. Includes topics such as regulatory controls of connective tissue macromolecules, fibrosis, wound healing, inflammation, tissue destruction, and selected genetic disorders. STOMATOL

210. Topics in Virology. (1) F Prerequisite: General knowledge of microbiology, immunology, molecular biology, or consent of instructor. Seminar 1 hour.
Newburn
Small group tutorial in which special topics in virology and correlated reading will be selected for discussion by students and staff members. STOMATOL

211. Saliva and Salivary Glands. (2) F Prerequisite: Consent of graduate advisor and instructor. Seminar 2 hours. Offered in alternate years; contact Oral Biology office for next offering.
Newburn
Current information on the composition, regulation, and function of the secretions from the major and minor salivary glands. Special consideration will be given to salivary gland dysfunction and its consequences. STOMATOL

215. Laboratory Rotation. (4) F, W, Sp. Prerequisite: Consent of instructor. Lab 12 hours.
Staff
A laboratory rotation course to familiarize first-year graduate students with various approaches to research in Oral Biology. STOMATOL

Staff
A seminar series covering current advances in research in oral biology in a systematic manner. Current literature will be critically reviewed by students under faculty supervision, or by faculty or guest lecturers. STOMATOL

221. Extracellular Matrices. (2) F Prerequisite: Consent of graduate advisor and instructor. Seminar 2 hours.
Damsky
Assembly and composition of extracellular matrices, including interactions that occur between cells and matrices. Emphasis on the role of various extracellular matrices during development, function of cell-matrix interactions in the adult, and the perturbation of these relationships that accompanies various disease processes. STOMATOL

222. Mineralization. (2) W Prerequisite: Oral Biology 221. Consent of graduate advisor and instructor. Seminar 2 hours.
Kramer
Recent information on cell biology and physiology of mineralized tissues, and cell biology and development of cell types that produce the extracellular matrices that are subsequently mineralized. Emphasis on process of mineralization and the hormone regulation of mineral deposition and mobilization. STOMATOL

223. Cell Physiology. (2) Su. Lecture 1.5 hours. Conference 0.5 hours.
Rothsman, Sargent, A. Miller, Greunert
Survey of selected topics in cellular physiology, including a discussion of cell permeability, electrical properties of cells, muscle contraction, secretion, and stimulus-response coupling. STOMATOL

224. Host Response. (2) F Prerequisite: Consent of graduate advisor and instructor. Seminar 2 hours.
Perreira
Components of the immune system, survey of the various immunologic mechanisms in host responses, and current working concepts of the immune system. Overview of consequences that failure, exaggeration, or inability to distinguish self from non-self, may have for the host. STOMATOL

225. Oral Microbiology and Virology. (2) F, W Prerequisite: Oral Biology 224 or consent of graduate advisor and instructor. Lecture 2 hours.
Aragon, Pereira, and Staff
Current information on pathogenic mechanisms involved in oral diseases, with emphasis on the structure, metabolism, genetics and ecological relationships of bacteria and viruses that affect oral tissues. STOMATOL

226. Advanced Oral Microbiology. (3) F, W Prerequisite: Oral Biology 224 & 225 or consent of graduate advisor and instructor. Lecture 3 hours.
Armitage, Newburn, Brannam, Johnston, Richards
Continuation of studies in oral microbiology begun in Oral Biology 225. In-depth study of the structure, metabolism, genetics, and ecological relationships of bacteria, yeasts, and fungi that affect oral tissues. STOMATOL

Staff
Students review a small group of related papers and examine intensively the most significant paper. Students will present four such Journal Club talks in their first two years. A written report will be required in the other quarters. STOMATOL

Staff
Students review a small group of related papers and examine intensively the most significant paper. Students will present four such Journal Club talks in their first two years. A written report will be required in the other quarters. STOMATOL

Staff
Reading and conferences under the direction of a member of the staff. STOMATOL

Oral Diagnosis

Danzo
Dental clinical problems; recognition and resolution. Clinical activities include review of medical and dental histories; examination of oral and para-oral structures; radiographic, microscopic and macroscopic evaluation and preparation for appropriate medical or dental treatment; diagnosis and treatment of acute dental problems; management of the dental patient in pain, or during comprehensive dental treatment. STOMATOL

Danzo
Recognition and resolution of dental clinical problems. Emphasis is on management of the patient in pain during clinic hours and out-of-hours. Students will examine oral and para-oral structures; review case histories for clinical implications for dental therapy; prescribe, make and interpret dental radiographs; treat oral cavity disease. Senior students will take the place of teaching assistants for their junior partners. Seniors will present cases. STOMATOL

169. Hygiene's Role in Recog of Dental Disease. (0-1) Su, W, Sp. Prerequisite: Oral 129 and senior dental hygiene status. Clinic 3 hours.
Danzo, Angin
In the clinical setting, the students review medical and dental histories, examine oral and para-oral structures,
189. Acute Dental Care Clerkship. (1-10) E.W., Sp. Sanford Advanced instruction and clinical experience in the diagnosis and treatment of acute dental problems. STOMATOL.

Oral & Maxillofacial Surgery

109. Clinical Oral Surgery. (0-5) SS. F.W., Sp. Prereq: Third-year standing. For senior tooth extraction, student must have passed Oral & Max. Surgery 120, 130.01, 130.02, 130.03, 131, and 132 and have consent from the course supervisor. Clinical variable.
R. Smith, Gordon, Pogrel

Students learn to recognize and treat common dental and medical emergencies; perform routine endodontic and minor oral surgical procedures; assist on major procedures in operating room setting; utilize common techniques for oral and maxillofacial surgery; participate in patient care. Lecture 1 hour. R. Smith, Walsh

This course offers the same lectures about prevention and management of common medical emergencies as are given to third-year dental students (OMFS 132). However, the prerequisites do not apply, and the academic standards are adjusted to the student's background. OMFS 152 does not include the CPR experience. ORAL & MAX SURG.

189.04 Adv Clin Oral Surgery & Implantology. (0.16-1.6) E.W., Sp. Prerequisite: Fourth-year standing and approval of department chairman.
R. Smith, Gordon

Clerkships at UC, affiliated or other institutions. Students participate in oral surgery care of ambulatory and hospitalized patients and attend seminars and conferences. ORAL & MAX SURG.

189.05 Supervised Study. (1-5) E.W., Sp. Library research study 3-15 hours.
Pogrel & Staff

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. ORAL & MAX SURG.

190.01 Laboratory Project. (1-5) F.W., Sp. Prerequisite: Approval of laboratory project by department chairman. Lab 3-15 hours.

Kaban & Staff

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. ORAL & MAX SURG.

200. Interdisc Clin Correlations. (1.5) S. Prereq: Third-year student enrolled in postgraduate professional programs in good academic standing. Lecture 2 hours.
Pogrel

Course focuses on critical analysis of theoretical, basic, and clinical concepts underlying the assessment and management of problems involving oral and maxillofacial diseases, deformations, and dysfunctions. The application of research findings to clinical practice is stressed. ORAL & MAX SURG.

190.02 Advanced Techniques in Pain Control. (1) F. Prerequisite: Two-week anesthesia rotations. Semi- nar 1 hour.
Koppe

The rotations attend seminars in the pharmacology and physiology of commonly used pain control medications. ORAL & MAX SURG.

Weisman

The rotations are supervised by a dental anesthesiologist and provide general dental services in the operating room for patients requiring general anesthesia. ORAL & MAX SURG.

199. Risk Management in Oral and Maxillofacial Surgery. (1) Prerequisite: Enrollment in the Oral and Maxillofacial postgraduate training program. Lecture 2 hours.
Pogrel & Staff

Course reviews malpractice risk, medical negligence, and oral and maxillofacial procedures that are at high risk for litigation. ORAL & MAX SURG.

199.01 Applied Surgical Anatomy. (1-5) F.W., Sp. Prerequisite: Limited to intern and resident. Lab 3 hours.
Pogrel, Perrot

Relationships of gross anatomical structures of the head and neck are studied during laboratory dissections. Emphasis is placed on the correlation of cadaver dissection findings to diagnosis and operating room surgery. ORAL & MAX SURG.

199.02 Orthognathic Surgery Seminar. (1) F.W., Sp. Prerequisite: Enrollment in oral and max. surgery residency or general practice residency program. Seminar 1 hour.
Kaban, Pogrel, Perrot

Residents will participate in evaluation and defining treatment options for patients with facial and dental deformities. ORAL & MAX SURG.

199.03 Maxillofacial Surgery Seminar. (1) F.W., Sp. Prerequisite: Limited to intern and resident. Seminar 1 hour.
Perrot, Pogrel, R. Smith, Gordon, Dodson, Kaban

Seminar includes presentation of case studies, literature review, clinical pathology presentations, and occasional guest lectures. ORAL & MAX SURG.

199.04 Adv Clin Oral & Max Surgery. (1.5 per week) Su, F.W., Sp. Prerequisite: Limited to oral & max. surgery residents. Hospital and clinic 40 hours.
Kaban & Staff

Intensive and supervised, under supervision, are responsible for preparation of case records, laboratory work, preoperative patient preparation, attendance at surgery postoperative care, and attendance at follow-up clinics. In addition, senior residents have administrative, teaching and clinical responsibilities. ORAL & MAX SURG.

199.05 Oral & Maxillofacial Surgery

676. Clinical Methods. (4) Su. Prerequisite: Enrollment in a postgraduate specialty program or consent of instructor. Lecture 2 hours. Patient contact 2 hours.
Pogrel & Staff

A history, physical, and diagnosis course for patients admitted to a hospital or surgical center. Module 1 will consist of a didactic course, and module 2 will be a lab session where students master the techniques of clinical examination on each other. ORAL & MAX SURG.

199.06 Clinical Methods II. (1-2) F. Prerequisite: Completion of OMFS 476 and approval of course director. Restricted to students enrolled in a postgraduate specialty program. Lecture 2 hours, patient contact 4 hours, for 4-6 weeks.
Pogrel, Perrot

Physical examination of hospitalized patients demonstrating a wide range of physical signs and symptoms. ORAL & MAX SURG.

199.07 Oral & Maxillofacial Surg Practice Mgmt. (1) F. Prerequisite: Enrollment in a postgraduate specialty program or consent of instructor. Lecture 2 hours.
Pogrel, Staff

Provides OMFS residents a broad spectrum of practice management information such as association memberships, disability insurance, loans, OSHA requirements, computers, and billing. ORAL & MAX SURG.

Pogrel, Grimaldi, and Staff

Under direct faculty supervision, the trainee will provide dental consultation to hospitalized patients, treat medically compromised patients in the operating room, provide routine and complex oral surgery services utilizing conscious sedation and other pain control techniques. ORAL & MAX SURG.

199.01. Clinical Oral Surgery. (1) F.W., Sp. Prerequisite: Enrollment in general practice residency or advanced education program in general dentistry. Clinic 3 hours.
R. Smith

Course is designed to teach dental-surgical procedures, surgery, and intravenous sedation to residents in the oral surgery clinic. The trainee takes responsibility for care of the oral surgery patient including preoperative evaluation, surgery planning, postoperative care. ORAL & MAX SURG.

199.09. Advanced General Dental Care in the Hospital. (11) Su, F.W., Sp. Restriction: EEDG students enrolled in the second-year program.
Pogrel, Grimaldi, and Staff

This course will provide supervision of the trainee in the evaluation and care of the dental patient on the consultation, postoperative services of the hospital. ORAL & MAX SURG.
Oral Medicine

D. Greenspan
Introduction to recognition, diagnosis and treatment of oral manifestations of systemic diseases, and principles of clinical medicine through presentation of the mechanisms, diagnosis and treatment of common organ system diseases. Will present modifications necessary for the dental treatment of patients with these diseases. STOMATOL.

Silverman
History, differential diagnosis, and therapeutic. Signs, symptoms, diagnosis, and treatment of oral mucosal diseases with emphasis on oncology management problems and solutions. STOMATOL.

Chinn, Zier and Staff
Group rotation through a five-week section: clinical diagnosis–patient presentation; entailing history-taking, examination, diagnosis, treatment, and follow-up and medicine—introduction to internal medicine and physical diagnosis. STOMATOL.

Lozada-Nur, Silverman and Staff
Clinical pathology conference; biology, diagnosis, and treatment of various oral lesions and associated patient problems. Some oral conditions are critically re-evaluated in the light of current research advances. Specific medical knowledge is related to patient care. STOMATOL.

Staff
Participation in the Oral Medicine Clinic: apply knowledge of history-taking and differential diagnosis; utilize various diagnostic techniques such as biopsy, cytology, and certain clinical pathology laboratory tests; interpret results, prescribe treatment and follow-up hospital rounds and weekly seminars. STOMATOL.

Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the division. STOMATOL.

199 Laboratory Project. (1–5) F.W. Sp. Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department. STOMATOL.

Oral Radiology

110.01. Oral Radiographic Imaging. (2) F. Lecture 2 hours.
Otis, Angin, Danford
This course presents radiologic theory and physical properties of ionizing radiation. The application of radiographic methods in dental practice, radiation safety, and normal radiographic anatomy are described. STOMATOL.

110.02. Advanced Oral Radiographic Imaging. (2) F. Lecture 2 hours.
Otis, Angin, Danford
Advanced oral and maxillofacial imaging techniques and interpretation emphasizing deviations from the normal are presented in this course. STOMATOL.

Otis
Course is a continuation of Oral Radiology 121 and is intended to broaden the scope of radiographic interpretation. Additional aspects concerning radiation biology are also included. STOMATOL.

186.01. Advanced Oral Radiology. (0–3) F.W. Prerequisite: Oral Radiology 121. Approval of Clinic Review Committee. Seminar 1–2 hours; Clinic 0–6 hours. Staff
Continuation of Oral Radiology 121 and 131 in a seminar teaching format. STOMATOL.

Otis, Taylor, Angin
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the division. STOMATOL.

199 Laboratory Project. (1–5) F.W. Sp. Otis
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department. STOMATOL.

Oral Radiology/Orthodontics

Varvarik
Course describes the mode of growth of the craniofacial complex. General aspects of growth with clinical implications for the growing child are discussed, including the eruption of teeth and their correlation with facial growth. GR. DEVEL.

131.01. Orthodontics in General Practice. (2) Su. Prerequisite: Orthodontics 121. Lecture 2 hours.
R. Boyd, Nielsen, G. Young
Recognition and treatment of orthodontic problems most commonly seen by the general practitioner. GR. DEVEL.

131.02. Orthodontics in General Practice. (2) F. Prerequisite: Orthodontics 121. Lecture 2 hours.
R. Boyd, Nielsen, G. Young
Recognition and treatment of orthodontic problems most commonly seen by the general practitioner. GR. DEVEL.

139. Clinical Orthodontics. (0–1) Su, F.W. Sp. Prerequisite: Orthodontics 121, 131-01 and 131-02. Orthodontics 131-01 or 131-02 may be taken concurrently. Clinic 3 hours.
R. Boyd, G. Young
Evaluation and treatment of clinical orthodontic problems as experienced in general dental practice. Students will treat problems and refer others to specialists. GR. DEVEL.

R. Lee
A discussion of recognition, etiology, and principles of orthodontics for the dental hygienist. GR. DEVEL.

170A-B-D-E. Orthodontic Diagnosis. (1–1–1–3) SS1, SS2, F.W. Prerequisite: Enrollment in postdoctoral orthodontic or pediatric dentistry program or consent of instructor. Lecture 1 hour.
R. Boyd
Classification, etiology, and diagnosis of malocclusion. The various diagnostic modalities used in patient evaluation and treatment planning will be presented. GR. DEVEL.

170A-01A-B-C. Journal Club. (1–1–1) F.W. Sp. Prerequisite: Enrollment in postdoctoral orthodontic or pediatric dentistry program or consent of instructor. Seminar 1 hour.
Nielsen
A participation course in the review, analysis, and critical evaluation of the professional literature dealing with orthodontics and its related fields. GR. DEVEL.

171. Orthodontics in Periodontic Pract. (1) W. Prerequisite: Consent of instructor and enrollment in a postdoctoral specialty program. Lecture 1 hour.
E. West
Orthodontics

Course includes orthodontic principles and techniques that are applicable in a periodic practice. GR. DEV.

171.01D. Concepts of Occlusion. (1) SS1. Prerequisite: Enrollment in postdoctoral orthodontic or pediatric dentistry program or consent of instructor. Lecture 1 hour.

I. Nielsen
Various concepts of occlusion and in biological determinants will be discussed as they affect functional problems of the temporomandibular joint. GR. DEV.

171.02A-B. Practice Management. (2-2-2) F. W. Sp. Prerequisite: Enrollment in postgraduate orthodontics or pediatric dentistry program or consent of instructor. Lecture 2 hours.

D. Johnson
A survey course intended to prepare the student to deal with the realities of managing an orthodontic practice. Thirty-six topics are explored and discussed by students and faculty. Several visitors representing different areas are invited to present seminars. GR. DEV.

171.03. Functional Appliance Therapy. (2) SS1, SS2. Prerequisite: Enrollment in postgraduate orthodontics or pediatric dentistry program or consent of instructor. Lecture 2 hours.

Scholl
This course is designed to provide the skills necessary to select and use the appropriate functional appliances. Emphasis is on the appliance, instruct the laboratory in the making of the appliance, and manage the patient’s treatment to a successful conclusion. GR. DEV.

171.05A-B-C-D-E. Growth & Development. (1-1-1-1-1) F.W., Sp. SS1, SS2. Lecture 1 hour.

Nielsen
Orthodontic applications and implications of basic craniofacial growth and development. GR. DEV.

172A-B-C-D-E. Evaluation of Facial Form I. (2-2-2-2-2) F.W. SS1, SS2, SS2. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Lecture 2 hours.

Nielsen
Use of diagnostic radiography in the evaluation of craniofacial facial morphology is presented. Evaluation of morphological relationships: facial growth and development, skeletal maturation, the biological response to treatment modalities, and the complex interrelationship of these factors will be discussed. GR. DEV.

172A-B-C-D-E. Research. Design. (1-1-1-1) F.W. Sp. Prerequisite: Enrollment in postgraduate orthodontics or pediatric dentistry program or consent of instructor. Lecture 1 hour.

Bassindale
Principles of statistics and research design will be explored. Topics include statistical inference, hypothesis testing, analysis of variance, correlation, and multiple regression. The design of experimental and quasi-experimental research will be discussed and experienced in computer software usage provided. GR. DEV.

172.02. Independent Research. (0-3) SS1, SS2. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Lecture 1 hour.

Lutj, Baumrind
Independent research experience. GR. DEV.

172.03A-B-C. Evaluation of Facial Form II. (2-2-2) F.W. Sp. Prerequisite: Enrollment in postgraduate orthodontics or pediatric dentistry program or consent of instructor. Lecture 2 hours.

Nielsen
Course teaches diagnosis, treatment planning, and treatment of all types of malocclusions on a systematic basis. The biological basis for orthodontic treatment with respect to facial growth and development and the application of differential diagnosis is presented. GR. DEV.

173A-B-C. Orthognathic Surgery Conference. (1-1-1) F.W. Sp. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Lecture 1 hour.

R. Boyd
Post-doctoral students in orthodontics, prosthodontics, and oral and maxillofacial surgery will participate in evaluating and planning treatment for patients with craniofacial and occlusal deformities requiring multidisciplinary therapy. Periodic review and presentation of previously treated patients will be included. GR. DEV.

173A-B-C-D-E. Orthodontic Seminar. (3.5-3.5-3.5-3-3.5) F.W. Sp. SS1, SS2, SS2. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Seminar 3.5 hours.

R. Boyd
Evaluation and treatment planning of various types of malocclusion will be presented. The seminars will include discussions of various basic sciences, clinical science, and general biological principles, as they apply to the field of orthodontics. GR. DEV.

173.02. Private Practice Seminar. (0-3) F.W. Sp. Prerequisite: First-year postgraduate Orthodontic Program. Seminar 1 hour.

Righellis
The seminar is designed to integrate the second-year residents’ postgraduate orthodontic education with the private practice of orthodontics. GR.

174. Biomechanics & Tooth Movement. (2) W. SS1, SS2. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Lecture 2 hours.

R. Boyd
Fundamental concepts of force systems will be presented. Included are equilibrium, force equilibrium, and free-body analysis. Concepts will be related to orthodontic tooth movement, appliance design, and biological response to force applications. GR. DEV.

174.01. Periodontics & Orthodontics. (1) Su. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Lecture 1–2 hours.

R. Boyd
Current literature in periodontics and orthodontics is reviewed and discussed. Case presentations involving treatment protocols between the two specialties are discussed and evaluated by students and faculty. Emphasis is placed on the advances in preventive procedures and their impact on orthodontic practices. GR. DEV.

174.02. Orthodontic Techniques. (1) SS1, SS2. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Lecture 1 hour.

Nielsen
A lecture and participation course designed to familiarize the post-doctoral student with orthodontic appliances, their fabrication, and adjustment. GR. DEV.

174A-B-C. TMJ Pain & Dysfunction Seminar. (0-3) F.W. Sp. Prerequisite: Resident standing in Orthodontics. Seminar 1 hour.

R. Lee
This course will provide the resident with the basic cognitive skills for recognizing, diagnosing, and treating patients with TMJ pain, TMJ dysfunction, and craniofacial pain in a “team environment” (i.e., prosthodontist, orthodontist, oral surgeons, psychologist, neurologist, ENT, physical therapist, etc.). GR. DEV.

174A-B-C-TMJ Pain & Dysfunction Clinic. (0-3) F.W. Sp. Prerequisite: Resident standing in Orthodontics. Clinic 3 hours.

R. Lee
This course will provide the resident with the basic clinical skills for recognizing, diagnosing, and treating patients with TMJ pain, TMJ dysfunction, and craniofacial pain in a “team environment” (i.e., prosthodontist, orthodontist, oral surgeons, psychologist, neurologist, ENT, physical therapist, etc.). GR. DEV.

179A-B-C-D-E. Clinical Orthodontics I. (0-7) SS1, SS2, F.W. Sp. Prerequisite: Enrollment in postgraduate orthodontics or pediatric dentistry program or consent of instructor. Lab variable. Clinic 0–7 hours.

R. Boyd
Diagnosis, treatment, and evaluation of clinical post-doctoral orthodontic problems as experienced in modern orthodontic practice. Students will treat patients with a broad spectrum of orthodontic problems. Students will work with other specialists in the management of complex orthodontic problems. GR. DEV.

179A-B-C-D-E. Clinical Orthodontics II. (0-7) SS1, SS2, F.W. Sp. Prerequisite: Enrollment in postdoctoral orthodontic or pediatric dentistry program or consent of instructor. Lab variable. Clinic 0–21 hours.

R. Boyd
Diagnosis, treatment, and evaluation of clinical post-doctoral orthodontic problems as experienced in modern orthodontic practice. Students will treat patients with a broad spectrum of orthodontic problems. Students will work with other specialists in the management of complex orthodontic problems. GR. DEV.

179A-B-C-D-E. Orthodontic Surgery. (0-7) SS1, SS2, F.W. Sp. Prerequisite: Enrollment in postdoctoral orthodontic or pediatric dentistry program or consent of instructor. Lab variable. Clinic 0–21 hours.

R. Boyd
Diagnosis, treatment, and evaluation of clinical post-doctoral orthodontic problems as experienced in modern orthodontic practice. Students will treat patients with a broad spectrum of orthodontic problems. Students will work with other specialists in the management of complex orthodontic problems. GR. DEV.

Orthodontics / Orthopedic Surgery

179A-B-C-D-E. Ortho General I. (1-1-1-1) F.W., SS1, SS2, SS2. Prerequisite: Enrollment in postgraduate orthodontic or pediatric dentistry program or consent of instructor. Clinic 3 hours.

R. Boyd
Evaluation and treatment of clinical orthodontic problems, as experienced in general dental practice. Post-doctoral students will assist and supervise general dental students in the diagnosis, evaluation, and treatment of orthodontic problems. Emphasis is on the relationship between generalist and specialist. GR. DEV.


R. Boyd
Fourth-year dental students will work closely with second-year orthodontic residents in the clinical management of patients requiring comprehensive orthodontic treatment delivered by the orthodontic specialist. GR. DEV.

410. Orthodontics for the Generalist. (1) E Lecture 1 hour.

Leeman
Lectures will emphasize diagnosis and treatment planning for patterns requiring minor tooth movement. GR. DEV.

Orthopedic Surgery

First-Year Coordinated Instruction-Medicine

131A-B-C. Lecture-demonstrations and section work devoted to the supervised examination of patients.

Core Clerkship-Surgery 110 and 111 include seven to eight orthopaedic lectures, case presentations, and outpatient clinic assignments. Students are given instruction in methods of examination patients with musculoskeletal disorders, with emphasis on diagnosis and principles of treatment.

140A-B-C-D-E-F. Orthopedic Surgery.


Students receive instruction and experience in examination and treatment of patients. Assistance in surgery.
and in use of treatment modalities is required. Clinical demonstrations, seminars, and conferences form the basis for didactic instruction. ORTHO SURG

140.02.2 Off-Campus Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111.
D. Bradford
Orthopaedic surgery clinical clerkships are offered in off-campus hospitals approved by the chairperson of the department and the dean. ORTHO SURG

140.03. Rehabilitation Medicine-S & V/A. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or Pediatrics 110.
Carpendale
Course will provide knowledge and skills in electrodiagnostic, neurologic rehabilitation, spinal cord injury, closed head trauma, the rheumatoid patient, orthopaedic rehabilitation, hazards of bed rest, and acute and chronic low back pain. ORTHO SURG

150.01 Research in Orthopaedic Surgery. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111 and permission of instructor.
Singer
Research project under direction of a member of the faculty. ORTHO SURG

Singer
This conference on patients admitted to the emergency room, with emphasis on X-ray findings and treatment modalities. ORTHO SURG

Singer
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. ORTHO SURG

401. Orthopaedic Pathology. (1) W, Sp. Prerequisite: Third- and fourth-year resident. UC. J. Johnston
A lecture series covering tumors and infections of the musculoskeletal system, illustrated by microscopic slides and photographs of gross specimens. ORTHO SURG

Seminar cover connective tissue metabolism, muscle, bone, and joint physiology; preoperative and postoperative management of patients; wound infections; microbiology; and surgical principles. ORTHO SURG

403. Gross & Functional Anatomy. (1) Su. Staff
Course includes lectures by students and faculty on gross and functional anatomy, laboratory dissections of cadaver material, and demonstrations of surgical approaches. ORTHO SURG

Staff
Students attend student presentations of selected orthopaedic surgery subjects featuring historical review complete with bibliography. They are moderated by an assigned faculty member. ORTHO SURG

406. Orthopaedic Medical Staff Conf. (1) Su, F, W, Sp. UC. D. Bradford
Clinical conferences in the care and management of orthopaedic problems in rheumatoid arthritis and allied diseases. Cases are presented by residents and rheumatology consultants. ORTHO SURG

Seminars include presentation of problems cases by residents for consideration of diagnosis, treatment, and discussion by the attending staff. ORTHO SURG

408. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. SFGH Staff
Selected problems are presented or cases treated or under treatment. Cases are presented by the resident staff and discussed by members of the attending staff. ORTHO SURG

Conference with emphasis on children’s problems in which residents make case presentations of patients for review and of new patients for consideration of diagnosis and therapeutic plan. ORTHO SURG

411. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. VA Mauer
Conference includes review of admissions and discharges of hospitalized patients by the attending and consulting staffs. Cases are presented by the resident. ORTHO SURG

Seminars are held in rotation at each of these hospitals with residents from all three hospitals attending. They include literature review and demonstrations related to surgical approaches, anatomical dissections, diagnosis, and treatment. ORTHO SURG

Conference includes presentation of case studies in hand surgery with central subject for each session. ORTHO SURG

C. L. Larsen, NJHC Debrahman, SF Ashley
Residents are responsible for patient care in the wards and outpatient clinics including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatments, plaster techniques and consultations. ORTHO SURG

452. Traumatic & Adult Orthopaedics. (1.5 per week) Su, F, W, Sp.
SFGH L. Dey, SM Jensen, VA Mauer, H. Slabaugh
Residents are responsible for patient care in the wards and outpatient clinics including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations. ORTHO SURG

Clinical instruction in the care and management of orthopaedic problems in athletic injuries. Course consists of clinical practice under supervision as well as didactic lectures every third week. ORTHO SURG

490. Clinical Orthopaedics–SFGH. (1.5 per week) Su, F, W, Sp. Staff
Residents–I rotate through orthopaedic wards and follow-up clinic. They are responsible for patient care under the direction of the attending staff, including history-taking, physical examinations, X-ray conferences, and consultations. ORTHO SURG

Otolaryngology
First-Year Coordinated Instruction—Medicine 131A–B–C. Lecture-demonstrations and section work devoted to the supervised examination of patients.

Core Clerkship—Surgery 110 and 111 include lectures and case demonstrations on the examination and diagnosis of otolaryngological diseases, particularly those related to trauma and infection. Instruction is given in the examination and diagnosis of ear and clinic patients with otolaryngological surgical diseases.

140.01.1 Adv Otolaryngology Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 131A–B–C and Surgery 110.
Lee
A practical course in general otolaryngology including diagnosis and treatment of common ear, nose, and throat problems; both inpatient and outpatient experiences will be offered. OTOLARYN

140.01C. Adv Otolaryngology Clerkship–SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 131A–B–C and Surgery 110.
Lee
A practical course in general otolaryngology including diagnosis and treatment of common ear, nose, and throat problems; both inpatient and outpatient experiences will be offered. OTOLARYN

140.01F. Clinical Clerkship—MZ. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110.
Singer
This clerkship is in general otolaryngology and includes the diagnosis and treatment of common ear, nose, and throat problems. Both inpatient and outpatient experiences will be offered. OTOLARYN

140.02. Off-Campus Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 131A–B–C and Surgery 110.
Schindler
Clincial clerkships in off-campus hospitals approved by the chairperson of the department and the dean. OTOLARYN

140.03. Otolaryngology and Neurotology. (1.5 per week) Su, F, W, Sp. Prerequisite: Third- or fourth-year (fourth preferred).
Jackler, Schindler
A course in basic audiometric and vestibular testing; diagnosis and management of diseases of the ear and skull base; and experience with surgery for hearing restoration, treatment of vertigo, and for removal of ear and skull base neoplasms. OTOLARYN

150.01. Research in Otolaryngology. (1.5 per week) Su, F, W, Sp. Prerequisite: Must be third- or fourth-year medical student. Must have approval of Chairman, Dean, and research faculty involved.
Jackler
Research project under the direction of a member (or members) of the Department of Otolaryngology. OTOLARYN

R. Schindler
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. OTOLARYN

Merzenich
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. OTOLARYN

Boles
Lectures cover the anatomical, physiological, and clinical aspects of otolaryngology. OTOLARYN
Kaplan
Dedicated sessions in the surgical anatomy of the head and neck. Supplementary dissections included. OTOLARYN

Boles
Weekly seminars are held with discussion of current problems concerning diagnosis and management of patients with references to current literature, modern theories, and controversial aspects. OTOLARYN

UC Kaplan
Conference includes presentations of patients, study of histories, and discussion of the treatment of the patient in light of modern progress in the field. OTOLARYN

Seminar 2 hours.
Mass
Basic science and clinical aspects of cosmetic facial surgery and reconstructive surgery of the head and neck are covered in a weekly one-hour seminar. Slide presentations, videotape movies, didactic lectures, and anatomic dissections constitute the curriculum. OTOLARYN

410. Temporal Bone Anat & Pathology. (0.5-0.5) F Laboratory 2 hours.
Jacker
A laboratory course conducted in the ear, nose, and throat pathology laboratory. All resident staff members are required to familiarize themselves thoroughly with the microscopic anatomy of the temporal bone under formal instruction. OTOLARYN

VA Kaplan
Tumor cases are presented for diagnosis and recommendations for treatment. OTOLARYN

VA Kaplan
Combined Audiology and Otolaryngology Staff Conference where all patients evaluated for hearing problems are presented, and diagnosis and treatment recommendations are made. OTOLARYN

415. Otolaryngology Fundamentals Course. (1) W. Seminar 2 hours.
Jacker, Kaplan, Sooy
A review of fundamental principles of otolaryngology, head and neck surgery, encompassing both the basic and clinical sciences. This course is intended as a comprehensive review for the yearly "in service" training examination as well as preparation for board certification. OTOLARYN

UC Boles, SFCH Wilder, VA Kaplan, C. P.
Bartlett
Resident, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, preoperative and postoperative care, minor surgery, audiology, vestibular testing, and consultations. Senior resident has certain administrative, teaching, and clinical responsibilities. OTOLARYN

490. Clinical Otolaryngology-SFCH. (1.5 per week) Su, F, W, Sp.
Lee
Interns, under supervision of the attending staff, are responsible for patient care on wards and in the follow-up clinic, including history-taking, examination, and consultation. This rotation is combined with patient-care assignments in the Ophthalmology Service. OTOLARYN

Parasitology

135. Medical Parasitology. (2) W. Lecture 2 hours.
Heyneman, Lim
An introduction to the protozoa, helminths, and arthropods that parasitize man. Parasite ecology and disease epidemiology, clinical and diagnostic aspects of parasitic diseases and their treatment are considered. EPID & BIOSTAT

Pathology

101. General & Systemic Pathology. (4) F. Prerequisite: Substantive courses in anatomy, biochemistry, physiology, histology, microbiology (or concurrent enrollment). Lecture 12 hours. Lab 2 hours. F.
Sweeney
Mechanisms of disease are discussed, with emphasis on cell injury, inflammation, infectious agents, repair, regeneration, neoplasia, metastasis, and organ replacement. Recent advances and classical concepts of diseases as they affect the heart and blood vessels, lungs, gastrointestinal tract are presented. PATHOLOGY

102. Systemic Pathology. (3) W. Prerequisite: Pathology 101. Lecture 3 hours. Lab 2 hours. F.
Kellerman
Recent advances and classical concepts of diseases as they affect the following organ systems are presented: pancreas, liver, central nervous system, kidney, endocrine system, skin. Emphasis will be on correlation of histologic and functional manifestations and characterization of diseases of organ systems. PATHOLOGY

103. Systemic Pathology. (3) Sp. Prerequisite: Pathology 102. Lecture 3 hours. Lab 2 hours. F.
Kellerman
Recent advances and classical concepts of diseases as they affect the following organ systems are presented: reproductive systems, skeletal system, hematopoietic system, and lymph nodes. Emphasis will be on correlation of histologic and morphologic characteristics of diseases of organ systems. PATHOLOGY

126. General Pathology. (4) F. Prerequisite: Substantive courses in biochemistry, physiology, histology, microbiology, and a first course in clinical and immunologic pathology. Lecture 3 hours. Lab 2 hours.
Lee
Mechanisms and mechanisms of disease are discussed, with emphasis on the dynamic nature of disease processes: cell injury, immune response, inflammation, response to infectious agents, repair, regeneration, neoplasia, metastasis, and organ replacement. Recent advances and classical concepts of diseases as they affect the following organ systems are presented: reproductive systems, skeletal system, hematopoietic system, and lymph nodes. Emphasis will be on correlation of histologic and morphologic characteristics of diseases of organ systems. PATHOLOGY

Pathology

150.06. Surgical Pathology-VMMC. (1.5 per week) F, W, Sp. Prerequisite: Pathology 102 and consent of instructor.
H. M. Price, Bezmalinovic
Clerkship is designed to acquaint students with available techniques of tissue analysis, from light microscopic to microscopic level, and their application in diagnosis and surgical care. Experience includes postoperative examination, review of surgical biopsies and frozen sections, electron microscopy. PATHOLOGY

150.07. Pathology Research/Service. (1) Sp. Prerequisite: Pathology 101, 102, 103 and consent of dean of the department. Third-year standing. One-year program starting in the summer quarter.
Ferrell
This one-year course, with stipend (starting in the summer quarter), acquaints students with techniques in autopsy and surgical pathology and their application to diagnosis and patient care, as well as research. The training and responsibilities are similar to residents. PATHOLOGY

160. General Pathology. (1) F. Prerequisite: Courses in biochemistry, physiology, histology, microbiology, and an introduction to immunology. Lecture 1 hour for ten weeks.
Lee
Mechanisms and mechanisms of disease are discussed, with emphasis on the dynamic nature of disease processes: cell injury, immune response, inflammation, response to infectious agents, repair, regeneration, neoplasia, metastasis, and organ replacement. Recent advances and classical concepts of diseases as they affect the following organ systems are presented: reproductive systems, skeletal system, hematopoietic system, and lymph nodes. Emphasis will be on correlation of histologic and morphologic characteristics of diseases of organ systems. PATHOLOGY

150.01. Surgery and Autopsy Pathology. (1.5 per week) Su, F, W, Sp. Prerequisite: Pathology 101. Consent of instructor. Enrollment limited.
Ferrell
This clerkship is designed to acquaint students in the available techniques of tissue analysis and their application to diagnosis and patient care. The student is given training and responsibilities in surgical and autopsy pathology similar to those of first-year residents. PATHOLOGY

150.02. Off-Campus Pathology Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Pathology 101 and 102.
Bainton
Clinical clerkships in off-campus hospitals approved by the chairperson of the department and the dean. PATHOLOGY

150.05. Research. (1.5 per week) Su, F, W, Sp.
Mickiewicz, Purdie, Ven}

The staff of the Pathology Department have various ongoing research interests and have a number of projects for students to work on. Requires approval of the Dean and the Department. Obtain necessary forms from the Office of Curricular Affairs. PATHOLOGY

150.06. Surgical Pathology-VMMC. (1.5 per week) F, W, Sp. Prerequisite: Pathology 102 and consent of instructor.
H. M. Price, Bezmalinovic
Clerkship is designed to acquaint students with available techniques of tissue analysis, from light microscopic to microscopic level, and their application in diagnosis and surgical care. Experience includes postoperative examination, review of surgical biopsies and frozen sections, electron microscopy. PATHOLOGY

150.07. Pathology Research/Service. (1) Sp. Prerequisite: Pathology 101, 102, 103 and consent of dean of the department. Third-year standing. One-year program starting in the summer quarter.
Ferrell
This one-year course, with stipend (starting in the summer quarter), acquaints students with techniques in autopsy and surgical pathology and their application to diagnosis and patient care, as well as research. The training and responsibilities are similar to residents. PATHOLOGY

160. General Pathology. (1) F. Prerequisite: Courses in biochemistry, physiology, histology, microbiology, and an introduction to immunology. Lecture 1 hour for ten weeks.
Lee
Mechanisms and mechanisms of disease are discussed, with emphasis on the dynamic nature of disease processes: cell injury, immune response, inflammation, response to infectious agents, repair, regeneration, neoplasia, metastasis, and organ replacement. Recent advances and classical concepts of diseases as they affect the following organ systems are presented: reproductive systems, skeletal system, hematopoietic system, and lymph nodes. Emphasis will be on correlation of histologic and morphologic characteristics of diseases of organ systems. PATHOLOGY

150.01. Surgery and Autopsy Pathology. (1.5 per week) Su, F, W, Sp. Prerequisite: Pathology 101. Consent of instructor. Enrollment limited.
Ferrell
This clerkship is designed to acquaint students in the available techniques of tissue analysis and their application to diagnosis and patient care. The student is given training and responsibilities in surgical and autopsy pathology similar to those of first-year residents. PATHOLOGY

150.02. Off-Campus Pathology Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Pathology 101 and 102.
Bainton
Clinical clerkships in off-campus hospitals approved by the chairperson of the department and the dean. PATHOLOGY

150.05. Research. (1.5 per week) Su, F, W, Sp.
Mickiewicz, Purdie, Ven
170.05. Neuropathology. (2) W. Prerequisite: Pathology 102. Third- or fourth-year standing. Lecture and seminar 2 hours.
D. Davis, DeArmond Emphasis is placed on clinicopathological correlation of neurological diseases by means of study of gross and microscopic material and participation in conferences. PATHOLOGY

170.08. Studies in Pathology. (1-5) Su, EW, Sp. Prerequisite: Consent of instructor and chairperson of the department.
Staff Students in pathology at other institutions with the approval of the chairperson of the department. PATHOLOGY

Margaretten, Isenberg. A weekly case discussion conference at which students will generate a differential diagnosis, examine gross and microscopic pathologic specimens, and discuss the pathophysiology of the case. PATHOLOGY

170.10. Immunological Mechanisms in Human Disease. (1.5) F. Prerequisite: one year basic science courses (graduate, medical, or dental) or consent of instructor. Lecture 1 hour. Seminar 0.5 hour. McKeown
An introductory course in immunopathology and clinical immunology that will review how basic immunological research is applied to diagnosing and understanding human disease. Topics will include: transplant immunology, immunopathology, immune deficiency diseases, tolerance, and autoimmune diseases. PATHOLOGY

170.11. Problems of Medical Delivery in White Androcentric Society. (1) W. Seminar 1 hour. Stern Feminist readings: how language can be a tool of oppression; how power structure of society maintains hegemony by defining “pathology” as how women, people of color, and gay/lesbians are marginalized in this context. Explores: how doctor-patient dialogue interferes with medical care. PATHOLOGY

180.01. General Pathology. (3) F. Prerequisite: Anatomy 118; Lecture 3 hours. Stern
This course is identical to the lecture portion of Pathology 126. Elective in the dental hygiene curricula. PATHOLOGY

198. Supervised Study. (1-5) F, W, Sp. Prerequisite: Consent of instructor.
Staff Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PATHOLOGY

199. Laboratory Project. (1-5) F, W, Sp. Prerequisite: Consent of instructor.
Staff A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. PATHOLOGY

209. Applied Pathology. (3) F. Prerequisite: Microbiology 126A-B and Pathology 126 or equivalents. J. Greenspan
Weekly seminars are designed to provide students with an understanding of the basic principles of pathology. Emphasis is placed on research; students will critically review current literature in the field, under faculty supervision. PATHOLOGY

215. Laboratory Rotation. (3) F, W, Sp. Prerequisite: Consent of instructor. Lab 6 hours.
Parlow A laboratory rotation course, to familiarize students with various approaches to experimental pathology and research in the basic medical sciences, particularly in relationship to human disease processes. Intended primarily for new graduate students. PATHOLOGY

R. Stern Students and faculty review literature and discuss current concepts and experiments in connective tissue research. Included are role of structural proteins, such as collagen and elastin in pathology; cell matrix, interactions in developmental biology and morphogenesis. PATHOLOGY

Parlow Presentations of current research by graduate students. Topics in pathology and disease mechanisms. Faculty from basic and clinical sciences will discuss current research in a disease process. Advanced research in that disease will be assigned before class. There will be formalization of test-hypotheses and discussion of an experimental design led by a student leader at each session. PATHOLOGY

Bostom, Sakanani, Deneris. This course is for students interested in learning current issues on parasitic diseases (drug design, public health aspects, biochemical parasitology). Invited speakers give seminars on their area of expertise. Students evaluate papers relevant to concepts presented by the speakers. PATHOLOGY

Staff PATHOLOGY

297. Molecular Biology of Human Disease. (3) F. Prerequisite: Open to graduate students, house- staff, and MSTP students. Lecture 1 hour, seminar 2 hours.
McKerron The course is designed to provide students with an up-to-date summary of our knowledge of atherosclerosis with particular emphasis on application of techniques of molecular and cellular biology to understand both the pathogenesis and genetics of the disease. PATHOLOGY

298. Thesis. (0-6) F, W, Sp. Prerequisite: Advance- ment to candidacy and permission of the graduate adviser.
Staff For graduate students engaged in writing the thesis for the master’s degree. PATHOLOGY

299. Dissertation. (0-6) F, W, Sp. Prerequisite: Advance- ment to candidacy and permission of the gradu- ate adviser.
Staff For graduate students engaged in writing the dissertation for the Ph.D. degree. PATHOLOGY

301. Teaching Practicum. (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Lab 2 hours.
Ferrell Practice in teaching pathology under faculty supervision. Students supervise laboratory work, conduct conferences, and assist in preparing and grading examinations. Responsibilities are assigned according to the individual’s stage of development. PATHOLOGY

400. Pathology & Lab Med Seminar. (1) F, W, Sp. Prerequisite: Medicine 110 and Surgery 110 or consent of instructor. Seminar 1 hour.
Staff Recent developments in diagnosis and research in pathology and laboratory medicine are discussed by faculty and guest speakers. PATHOLOGY

Staff Seminars focusing upon the pathology of specific organ systems are conducted by specialists. Emphasis is on the correlation between clinical manifestations of the disease and pathologic findings. PATHOLOGY

Staff Students, under supervision, pursue original investigation in pathology and allied subjects. Investigators review the literature, make observations, and correlate pathologic with physiological concepts. PATHOLOGY

405. Dermatopathology. (2) F, W, Sp. Prerequisite: Pathology 101 or equivalent by consent of instructor. Lab 2 hours. Seminar 1 hour.
Sagebiel Survey of inflammatory and neoplastic skin diseases by study of histopathological changes and discussion with emphasis on clinical-pathologic correlations. PATHOLOGY

Staff Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature. PATHOLOGY

455. Electron Microscopy Seminar. (1) W. Prerequisite: Medicine 110 and Surgery 110 and consent of instructor. Lecture 1 hour. Elective for interns and residents.
Staff Course covers basic electron microscopic techniques, indications for use of electron microscopy in pathologic diagnosis, and the specific ultrastructural features of normal and diseased tissue. Emphasis is placed on renal biopsy and tumor diagnosis. Documented attendance is required. PATHOLOGY

Staff Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature. PATHOLOGY

Pediatric Dentistry
1300-B. Pedodontic Procedures-UC. (1-2) W. Prerequisite: Satisfactory completion of Operative Dentistry 125 A-B-C. Lecture 1 hour; Sp. 2 hours.
Brahnam Lecture course presenting dental procedures unique to, or modified to meet, the needs of the child. Examination, diagnosis, treatment planning, pain control and management, restorative procedures, preventive orthodontics, diet analysis, and caries control are stressed. GR DEVEL

139. Clinical Rotation. (0-1) Su, F, W, Sp. Prerequisite: Third-year standing. Clinical 3 hours per week.
Brahnam and Staff This clinic rotation will introduce students to examination of the child patient, treatment planning, prevention instruction, dietary analysis and counseling, and performing operative procedures. Proper management of the child patient will be stressed. GR DEVEL

149. Advanced Clinical Rotation-UC & CHMC. (0-2) Su, F, W, Sp. Prerequisite: Fourth-year standing and satisfactory completion of Restorative Dentistry 139. Clinic 6 hours per week.
Brahnam, and Staff Oral examination, treatment planning, and treatment of children, including behavioral management. Time will be spent at Pediatric Dental Clinics at UCSF and Children’s Hospital Medical Center, Oakland. Course will involve clinic, seminar, and treatment in hospital operating room with general anesthetics. GR DEVEL
Pediatric Dentistry

170E. Intro to Ped Dent. (2-2) SS1, SS2. Prerequisite: Enrollment in postdoctoral pediatric dentistry program or consent of instructor. Lecture 2 hours.

Rothman and Staff
Course is offered to the incoming postdoctoral student as an introduction to the philosophies and techniques of rendering clinical treatment to patients in pediatric dentistry as a career choice. GR. DEVEL.

171A-B-C-D-E. Advanced Ped Dent Sem. (5-5-5-5-5) F,W,S,P,S1, SS2. Prerequisite: Enrollment in postgraduate pediatric dentistry or orthodontic program or consent of instructor. Seminar 5 hours. M. Morris and Staff

Course reviews the latest issues of pediatric dentistry and related journals and critically evaluates the philosophies, clinical treatment, and applications to the practice of dentistry for the child patient. GR. DEVEL.

176A-B-C-D-E. Practice Teaching. (1.5-1.5-1.5-1.5) F,W,S,P,S1, SS2. Prerequisite: Enrollment in postdoctoral pediatric dentist or orthodontic program or consent of instructor. Seminar 1 hour. Clinic 1.5 hours.

Morris and Staff
Student practices junior and senior dental students in the pediatric dentistry clinics. In addition, the student will teach selected topics in a seminar format. GR. DEVEL.

177A-B-C-D-E. Hospital Dentistry. (3-3-3-3-3) F,W,S,P,S1, SS2. Prerequisite: Enrollment in postdoctoral pediatric dentistry program or consent of instructor. Seminar 1 hour. Clinic 6 hours.

M. Morris and Staff
Course is specifically designed to provide the student with a working knowledge of dental rehabilitation procedures in a hospital setting under general anesthesia and the associated hospital protocol. G. DEVEL.

178A-B-C-D-E. Pediatric Medicine. (1-1-1) F,W,S. Prerequisite: Enrollment in postgraduate pediatric dentistry program or consent of instructor. Seminar 1 hour. M. Morris

Course will provide information on various topics of health care of children. Emphasis will be placed on the clinical diagnosis, procedures, prognosis, and management of common pediatric conditions. GR. DEVEL.

179A-B-C-D-E. Research Seminar. (2-2-2-2-2) F,W,S,P,S1, SS2. Prerequisite: Enrollment in postdoctoral pediatric dentistry or orthodontic program or consent of instructor. Lab 3 hours. Seminar 1 hour.

M. Morris and Staff
Course will cover how to critically review research literature and to do a term paper on a selected subject. It will discuss research methodologies and the development of a protocol and completion of a research project. GR. DEVEL.

179B-C-D-E. Advanced Clinical Ped Dent. (1-10) F,W,S,P,S1, SS2. Prerequisite: Enrollment in postdoctoral pediatric dentistry program or consent of instructor. Clinic 3-30 hours.

M. Morris and Staff
Course provides the clinical activities of the student and has the broad objective of providing a wide experience in all phases of contemporary pediatric dentistry. Students maintain independent clinical competence in the care of the child patient. GR. DEVEL.

179A-B-C-D-E. Lit Survey in Ped Dent. (1-1-1-1-1) F,W,S,P,S1, SS2. Prerequisite: Enrollment in postdoctoral pediatric dentistry or orthodontic program or consent of instructor. M. Morris and Staff

Course covers the clinical activities of the student and has the broad objective of providing a wide experience in all phases of contemporary pediatric dentistry. Students maintain independent clinical competence in the care of the child patient. GR. DEVEL.

Pediatrics

179D-E. General Anesthesia Rotation-ChMC. (4-4) SS1, SS2. Prerequisite: Enrollment in postgraduate pediatric medicine or orthodontic program or consent of instructor. Clinic 30 hours.

Rothman and Staff
A practical rotation to the operating room of the Children's Hospital Medical Center of Northern California is provided under the supervision of senior staff pediatricians. GR. DEVEL.

180A-B-C-D-E. Pediatric Hospital Dentistry. (3-3) F,W,S. Prerequisite: Satisfactory progress in all previous pediatric dental courses. Seminar 3-5 hours per week in Hospital O.R.

Brahms
Experience is provided in history-taking, admissions procedures, hospital dental protocol, laboratory tests, and chart documentation. Opportunity to work with the instructor in the operating room, providing care for the handicapped and other refractory management cases, using a general anesthetic. GR. DEVEL.

186. Adv Pediatric Dent Seminars (1) F,W,S. Prerequisite: Completion of third-year Pediatric Dentistry Lecture Course. 1 hour per week. M. Morris

Course will cover topics related to management of children in the outpatient and inpatient settings. GR. DEVEL.

190A-B-C-D-E. Pediatric Clerkship-ChMC. (1-5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190B. Ped Core Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190C-D-E. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190D. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190E. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190F. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190G. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190H. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190I. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190J. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190K. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.

190L. Pediatric Clerkship-UC-SFGH-L-C. (1.5) F,

Course will cover the role of genetic factors in the causation of human diseases, particularly those genetically influenced disorders which are most frequent in occurrence, and approaches to the diagnosis, management, and counseling of genetic disorders. PEDIATRICS.
Experience in clinical evaluation of children with cardiac abnormalities is emphasized. Daily ward rounds on pediatric cardiac patients, attendance at designated cardiac surgical procedures, catheterization, weekly catheterization conference, extensive reading assignments, and daily attendance in private office setting are included. PEDIATRICS

140.05. Pediatric Private Practice. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Open to UCSF students only. PEDIATRICS

140.07. Developmental Pediatrics in Fresno. (1.5 per week) W, Sp. Prerequisite: Pediatrics 110. D. M. Snyder. Students learn to identify children with developmental disabilities and direct their remedial action to allow for achievement of their greatest potential. Various settings are used in acquiring skills in developmental assessment. PEDIATRICS

140.08. Ambulatory Pediatrics. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. J. E. Anderson. Clinical experience in leading hospital/day pediatric clinic, working as member of health care team. Supervision from attending physicians with emphasis on developmental/behavioral approach to pediatric practice. Continuity of care is encouraged and opportunity exists for patients admitted to ward. PEDIATRICS

140.09. Pediatric Hematology/Oncology—UC—SF Virtual-CHMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Open to UCSF students only. PEDIATRICS

140.10. Cardiology—CHMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Gerdsen, Handy. Students participate in clinical experience including outpatient evaluation, instruction in the noninvasive methods of diagnosis of cardiac and surgical heart disease, and diagnostic and cardiovascular conferences. Experience is on the physiologic principles of diagnosis and management. PEDIATRICS

140.13. Endocrinology—UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Grumbach, S. L., Kaplan, F. Conte. Participation in the clinical and investigative aspects of endocrine and metabolic problems in children. Student spend time in the laboratory, on the ward, and in the clinic. PEDIATRICS

140.14. Juvenile Diabetes—VCF. (1.5 per week) Su. Prerequisite: Medicine 110, Pediatrics 110, and consent of instructor. Simon. Students work in a Diabetes Summer Camp learning the clinical management of diabetes. Students have an opportunity to participate in the operation of the camp program and in the treatment of diabetes in children, adolescents, and young adults. PEDIATRICS

140.15. Oncology—UC. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Ablin, K. Matthias, Zeger. Participation in management of patients with solid tumors and leukemia; attendance at pediatric tumor board, ward rounds, and outpatient clinic. Special emphasis on psychosocial problems; supervised reading and discussion with preceptor. PEDIATRICS

140.16. Pediatric Nephrology—UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. D. E. Potter. Introduction to general nephrology with children having nephrotic syndrome, renal failure, endstage renal failure, and chronic renal failure. Post- transplant and dialysis consultations, new cases from the nursery, and cases requiring TPN. Research projects may be arranged with instructors. PEDIATRICS

140.17. Genetics—UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatric 110. Consent of instructor. C. Epstein, M., Golabi, S. Zuckerman. Evaluation and management of children and adults with hereditary (including cystic fibrosis), diseases, with particular emphasis on genetic counseling, patterns of human malformation, and the biochemical and genetic mechanisms involved in the pathogenesis and transmission of these conditions. PEDIATRICS

140.19. Pediatric Pulmonary & Allergy. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Gropp, Shames. Students participate in the activities of the pediatric allergy service, in the outpatient and inpatient settings: ward rounds, conferences, journal clubs, etc. The course will emphasize clinical experience with common pediatric pulmonary problems, e.g., asthma, cystic fibrosis. PEDIATRICS

140.26. Comprehensive Pediatric Care—KID. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Shum. Within the country's largest prepaid health care program, students will participate in office visits, urgent ambulatory care, health education, and inpatient care. They will work with staff and resident physicians, nurse practitioners and health educators. PEDIATRICS

140.27. Inpatient Pediatrics—KP. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Shum. Students will perform histories and physical examinations on the pediatric ward under supervision of residents and attending physicians. They will attend resident conferences, see urgent clinical cases with resident and participate in outpatient clinic for discharged patients. PEDIATRICS

140.30. Gastroenterology & Nutrition. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Heyman, T. Students participate with fellows and staff in the diagnosis and treatment of gastrointestinal and hepatic disease in infants and c children. They present patients on wards and in the outpatient clinic, assist with procedures, and attend specialty conferences. PEDIATRICS

140.31. Inpatient Pediatrics—KID. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Baytopour. Opportunity to develop and perfect skills in history-taking, physical examination, case write-ups, presentations, and procedures. Supervised problem-oriented learning/teaching environment fosters basic diagnostic and management skills. Conferences, case write-ups and presentations, eight calls with resident, and assigned reading. PEDIATRICS

140.33. Pediatric Immunology/Rheumatology. (1.5 per week) Su, F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110, and consent of instructor. Wara, Cowan. Evaluation and care of children with primary immune-deficiency diseases and rheumatologic disorders. Emphasis on ontogeny of immune response as it relates to immunodeficiency, immunologic dysfunction involved in pathogenesis of the disorders; laboratory studies required for diagnosis, and care of children with chronic disease. PEDIATRICS

140.34. Medical Genetics. (1.5 per week) Su, F, W, Sp. Prerequisite: 40-year-old students. Currie. Experience will be gained in medical genetics, including chromosomal, biomedicical genetics and prenatal diagnosis. Rotation will provide general exposure to all these areas and give a basic understanding of methods used to reach specific genetic diagnoses and exact prenatal detection course for future pregnancies. PEDIATRICS

140.35. Infectious Diseases—UC & SFVH. (1.5 per week) Su, F, W, Sp. Prerequisite: Pediatrics 110. S. Kohl.
Students learn principles of diagnosis and management of common infectious conditions, infections complications in the immunocompromised host, and physical infections. Clinical experience will include general adolescent clinic, adolescent gynecology clinic, inpatient consultation on adolescent medical and psychiatric ward.

140.37. Clinical Clerkship in Adolescent Medicine. (1.5 per week) Su, F, W. Prerequisite: Completion of basic clinical clerkships. Open to fourth-year medical students only.

Irwin, S.热播
Clinical rotation on outpatient/patient adolescent medical service. Clinical experience will include general adolescent clinic, adolescent gynecology clinic, and inpatient consultation on adolescent medical and psychiatric ward.

140.38. Behavioral & Developmental Pediatrics. (1.5 per week) Su, F, W. Prerequisite: Pediatrics 110 and consent of instructor. Lecture 1 hour, Conference 10 hours, clinic 4 hours.

Tanner
Students are included in all phases of a comprehensive evaluation for a child with school and learning problems. Physical, neurodevelopmental, psychological, speech, language, and educational assessments as well as child and family interviews provide a truly biopsychosocial perspective.


Shapiro and Staff
Student research projects under guidance of faculty members. Programs must be approved by instructors. Students may initiate or continue research programs perceived by the department. PEDIATRICS.

Shapiro
Students prepare case presentations weekly from patients on the pediatric wards. Course correlates patients' problems with work in the required curricula. Experience on the ward in the clinical setting.

170.01. Peds Devel Resource Overview. (1.5 per week) Su, F, W. Sp. Prerequisite: Consent of instructor.

L. Crain
Weekly seminar and reading assignment correlated with observation of the spectrum of community and institutional services; diagnostic, preventive, and program services for individuals with developmental disabilities included.

PEDIATRICS.

180.01A-B-C-D. Adolescent Development. (2-3-2-2) F, W. Sp. Prerequisite: Consent of instructor. Seminar 2 hours.

Irwin
A four-quarter course covering the physiologic, psychological, cognitive and social development of adolescence. Also included is material on sexuality, nutrition, family interaction, cultural differences, legal issues, school behavior, substance abuse and psychiatric problems, and common medical problems.

189. Supervised Study. (1-5) F, W. Sp. Prerequisite: Consent of instructor.

Greenbach and Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

199. Laboratory Project. (1-5) Su, F, W, Sp. Prerequisite: Consent of instructor.

Greenbach
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

400. Staff Conference. (1.5) Su, F, W. Sp. Interns and residents.

UC. R. C. d. E. l. O p. d. c. h. i. n.
Conferences include house staff preparation and presentation of patient case histories with reference to the literature, laboratory work, and special studies. Faculty members and consultants from other departments as well as other universities discuss recent developments in their respective fields.


UC. Gooding
Conferences include review and discussion of recent X-ray studies of pediatric cases in the wards and outpatient service.


UC. R. C. d. E. l. O p. d. c. h. i. n.
Seminar includes review and discussion of selected cases of unusual interest, reports on special topics with review of recent literature, and clinical-pathologic conferences on pediatric cases.

403. Family Interviewing Seminar. (1) Su, F, W. Sp. Prerequisite: Graduate-level student in health sciences. Consent of instructor only. Seminar 2 hours.

Baum and Staff
Seminars include family system, communication patterns, family interviewing, presentation of a difficult diagnosis, psychosomatic illness, chronic illness, and common behavioral problems. Teaching methods include group discussion, role play, and video taping. Emphasis is placed on learning through experience.

PEDIATRICS.


Boye and Staff
A survey of basic principles in epidemiologic research, with special emphasis on issues relevant to behavioral pediatrics.

422. Behavioral/Developmental Core Curriculum. (1.5) F, W. Sp. Prerequisite: Post-M.D. or graduate nursing students and consent of instructor.

P. Kaiser and Staff
Lectures and discussion of child development theory, clinically relevant research, and related common behavioral issues. Emphasis is on applicability of behavioral pediatrics in clinical practice. Includes screening, temperament, discipline, attachment, and development. Supervised experiences at daycare centers and schools.

423. Child Developmental Literature Seminar. (1) F, W. Sp. Prerequisite: Graduate-level student in health sciences and consent of instructor. Seminar 1.5 hours alternate weeks.

Tanner and Staff
This seminar presents classical theoretical and current research-based formulations of child development. Assigned literature readings are essential to seminar participation. Material covering pregnancy through school age years is presented over two-year cycle.

424. Neurodevelopmental Assessment and Therapy. (1) W. Prerequisite: By instructor approval; pediatric residents and fellows in behavioral developmental pediatrics. Lecture 1 hour. Lab 1 hour.

Tanner and Staff
Overview of theories and principles of neuromotor development and treatment modalities available for children with developmental disabilities. Includes assessing normal and abnormal sensory-motor development, neurodevelopmental therapy, sensory integration, pre-speech, and feeding therapy. Lecture, discussion, audiovisual aids, and patient demonstration.

PEDIATRICS.


UC. R. C. d. E. l. O p. d. c. h. i. n.
Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, diagnosis and treatment.


M. Grossman
Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, diagnosis and treatment.

PEDIATRICS.

Periodontology

130. Periodontal Therapy. (3) F. Prerequisite: Periodontics 129. Lecture 1 hour.

Levine
Introduction to the diagnosis and treatment of periodontal diseases. Emphasis will be placed on examination of the patient, diagnosis and classification of diseases of the periodontium, and treatment planning. The rationale and techniques for treatment of gingivitis and early chronic periodontitis will be discussed.

STMOTOL.

131. Periodontal Therapy. (1) F. Prerequisite: Periodontics 130. Consent of instructor. Lecture 1 hour.

Levine
Diagnosis and treatment of periodontal diseases, acute lesions, less common disease of the periodontium, and moderate to advanced periodontitis. Emphasis on diagnosis and treatment planning, considerations for specialty referral when appropriate. Rationale and techniques for treatment of moderate to advanced chronic periodontitis.

STMOTOL.

132. Periodontal Therapy. (2) W. Prerequisite: Periodontics 131. Lecture 2 hours.

Levine
Surgical periodontics and rationale for periodontal surgery. Emphasis will be placed on the rationale for various surgical modalities of treatment for periodontal disease. Other rotations include those common to the regular Pediatrics Internship Program as well as related clinical services such as dermatology, ophthalmology, and pediatrics.

PEDIATRICS.

463. Clinical Primary Care. (1.5 per week) Su, F, W, Sp.

R. d. o. d. u. p. h.
Residents in the Primary Care Track of Pediatrics are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Pediatrics Internship Program as well as related clinical services such as dermatology, ophthalmology, and pediatrics.

PEDIATRICS.


M. Grossman
Interns rotate through newborn nursery, pediatric wards and clinic, communicable diseases ward, and emergency room. They are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examination, laboratory tests, and consultation.

PEDIATRICS.


UC. R. C. d. E. l. O p. d. c. h. i. n.
Interns, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, diagnosis, and treatment.

PEDIATRICS.
180. Periodontics in General Practice. (1) W. Lecture 3 hours.
Nathan
Implementation of the skills and knowledge of periodontology in the private practice environment. STOMATOL

180.01. Advanced Perio Lit. (1) F. Prerequisite: Perio 130 and consent of instructor. Seminar 1 hour. Abe
Study in depth, with literature review and seminar discussions of areas of periodontology having major clinical significance. STOMATOL

180.02. Advanced Perio Lit. (1) W. Prerequisite: Perio 131 and consent of instructor. Seminar 1 hour. Abe
Study in depth, with literature review and seminar discussions of areas of periodontology having major clinical significance. STOMATOL

180.03. Advanced Perio Lit. (1) Sp. Prerequisite: Perio 132 and consent of instructor. Seminar 1 hour. Abe
Study in depth, with literature review and seminar discussions of areas of periodontology having major clinical significance. STOMATOL

181. Perio Surgical Techniques. (1) F. Prerequisite: Perio 130 or 131. 2 hours. Lecture 1 hour. Levine
Surgical techniques are presented which may be used to treat lesions occurring in the hard and soft tissues of the periodontium. STOMATOL

182. Multidisciplinary Case Management. (1) W. Prerequisite: Periodontology 132. 2 hours/week over 5 sessions. Engert, Pasquinelli
An introduction to the concept of comprehensive dental care through the integration of the clinical disciplines. The relationship between periododontics, orthodontics, and restorative dentistry will be emphasized. Predictable long-term results are the therapeutic objective of this approach. STOMATOL

189.01. Clinical Periodontics. (0-9) E. W. Prerequisite: Periodontology 109. Clinic variable. Levine
Comprehensive clinical experience beyond the level of Periodontology 109. STOMATOL

Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the division. STOMATOL

199. Laboratory Project. (1-3) Su. E. W. Sp. Armitage
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the division. STOMATOL

202-A. B. Mole & Biochem Basis of Disease. (2-2) $E. W. Prerequisite: Biochemistry 100-A or equivalent introduction to biochemistry. Lecture 2 hours. Seminar 1 hour. Bhansagyi
Course introduces students to the principles of biochemistry and molecular biology in relation to current concepts in the molecular basis of major disease entities including cancer, metabolic disorders, fibrogenic and degenerative disorders of connective tissues, inflammation, and wound healing. STOMATOL

209. Literature Review. (2) J. W. Sp. Seminar 2 hours. Staff
Seminar designed to correlate basic science with problems in periodontology and evaluate concepts in the direction of research, clinical application, and teaching. Selected papers in the literature are reviewed and evaluated. Other instructors are invited to participate. STOMATOL

401. Examination & Treatment Planning. (1) F. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Taggart
Lectures on examination and treatment planning. STOMATOL

401.01 Structure and Physiology of the Periodontium. (2) F. Prerequisite: Enrollment in postgraduate specialty program. Lecture 2 hours. Ryder
Advanced study in the oral tissues, with emphasis on their histophysiologic aspects. STOMATOL

Course covers anatomy as it relates to anesthesia and periodontal surgery. STOMATOL

406.01. Hospital Anesthesiology. (6) Su. Prerequisite: Consent of instructor. Seminar 1 hour. Clinic 16 hours. Taggart
Practical course in operating room anesthesia. Instruction in hospital administration, physical and psychiatric evaluation of the patient, monitoring of vital signs, administration of intravenous psychotropics, general anesthesia, and handling of resultant medical emergencies. Clinical instruction is supplemented by seminars. STOMATOL

406.02. Hospital Periodontics. (4) F Prerequisite: Perio 419.01. Lecture 4 hours. Taggart
Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive dentistry, and concept of total health care. Students are exposed to various medical conditions. STOMATOL

406.03. Hospital Periodontics. (4) W. Prerequisite: Perio 419.02. Lecture 4 hours. Taggart
Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive dentistry, and concept of total health care. Students are exposed to various medical conditions. STOMATOL

406.04. Hospital Periodontics. (4) Sp. Prerequisite: Perio 419.03. Lecture 4 hours. Taggart
Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive dentistry, and concept of total health care. Students are exposed to various medical conditions. STOMATOL

413.01. Treatment Planning & Surgery. (1) F. Seminar 1 hour. Taggart
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They are expected to defend their treatment plan and therapeutic procedure based on relevant literature and clinical experience. STOMATOL

413.02. Treatment Planning & Surgery. (1) W. Seminar 1 hour. Taggart
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They are expected to defend their treatment plan and therapeutic procedure based on relevant literature and clinical experience. STOMATOL

413.03. Treatment Planning & Surgery. (1) Sp. Seminar 1 hour. Taggart
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They are expected to defend their treatment plan and therapeutic procedure based on relevant literature and clinical experience. STOMATOL

413.04. Treatment Planning & Surgery. (1) SS1. Seminar 1 hour. Taggart
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They are expected to defend their treatment plan and therapeutic procedure based on relevant literature and clinical experience. STOMATOL

Each student will attend 20 literature-review review sessions on topical issues in periodontology. STOMATOL

416.01. Original Investigation. (1-5) F. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lab. 3-15 hours. Armitage
Original research under the supervision of a mentor. STOMATOL

416.02. Original Investigation. (1-5) W. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lab. 3-15 hours. Armitage
Original research under the supervision of a mentor. STOMATOL

416.03. Original Investigation. (1-5) Sp. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lab. 3-15 hours. Armitage
Original research under the supervision of a mentor. STOMATOL

150
419.01. Clinical Periodontics. (5) F Prerequisite: Enrollment in postgraduate specialty program. Clinic 15 hours.
Taggart Clinical procedures in periodontology. STOMATOL

419.02. Clinical Periodontics. (5) W Prerequisite: Enrollment in postgraduate specialty program. Clinic 15 hours.
Taggart Clinical procedures in periodontology. STOMATOL

419.03. Clinical Periodontics. (5) Sp Prerequisite: Enrollment in postgraduate specialty program. Clinic 15 hours.
Taggart Clinical procedures in periodontology. STOMATOL

419.04. Clinical Periodontics. (5) SS1 Prerequisite: Enrollment in postgraduate specialty program. Clinic 15 hours.
Taggart Clinical procedures in periodontology. STOMATOL

423.01. Adv Treatment Planning & Surgery. (1) F Seminar 1 hour.
Taggart Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They will be responsible for defending their treatment plan and therapeutic procedures based on relevant literature and clinical experience. STOMATOL

Taggart Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They will be responsible for defending their treatment plan and therapeutic procedures based on relevant literature and clinical experience. STOMATOL

423.03. Adv Treatment Planning & Surgery. (1) Sp Seminar 1 hour.
Taggart Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They will be responsible for defending their treatment plan and therapeutic procedures based on relevant literature and clinical experience. STOMATOL

423.04. Adv Treatment Planning & Surgery. (1) SS1 Seminar 1 hour.
Taggart Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They will be responsible for defending their treatment plan and therapeutic procedures based on relevant literature and clinical experience. STOMATOL

111. Organic Chemistry. (2) F Lecture 2 hours.
Ketcham Survey of basic concepts and topics in pharmaceutical chemistry, including acid-base behavior, stereochemistry, reaction mechanisms, carbohydrates, amino acids, and peptides. PHARM CHEM

112. Organic Chemistry. (2) W Prerequisite: PC 111. Lecture 2 hours.
Miller A continuation of PC 111 with emphasis on oxidation/reduction reactions, lipids, heterocyclic compounds, molecules containing sulfur and phosphorus and biopolymers. PHARM CHEM

120. Principles of Pharm Chem. (3) F Prerequisite: Chemistry 113. Lecture 3 hours.
Ortez de Montellano A study of pharmacological and biochemical factors which contribute to drug action; in vivo and in vitro biotransformation of drugs and related organic compounds. PHARM CHEM

121. Principles of Pharmaceutical Chemistry. (2) W Prerequisite: Pharmaceutical Chemistry 120 and concurrent enrollment in Pharmacology 121. Lecture 2 hours.
Kalt A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on steroids, prostaglandins, peptide hormones, and drugs for metabolic disorders. PHARM CHEM

122. Autonomic & Cardiovascular Drugs. (3) Sp Prerequisite: Pharmaceutical Chemistry 120. Lecture 3 hours.
C. R. Wang A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the autonomic nervous and cardiovascular systems as well as a renal function. PHARM CHEM

132. Drugs Acting on CNS. (3) W Prerequisite: Pharmaceutical Chemistry 120. Lecture 3 hours.
Gibson A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the central nervous system. PHARM CHEM

134. Antibiotics/Antimicrobial Drugs. (2) F Prerequisite: Pharmaceutical Chemistry 120 and concurrent enrollment in Pharmacology 134. Lecture 2 hours.
Oppenheimer A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on antiinfective and anti-neoplastic drugs. PHARM CHEM

157. Biopharmaceutical Theory & Technique. (3) W Lecture 2 hours. Lab 3 hours.
E. Lin Analytical theory and techniques for determining drug and metabolites in biological fluids. PHARM CHEM

176. Group Studies. (1-4) F W Prerequisite: Consent of instructor and advisor. Aagard Group studies of selected topics in pharmaceutical chemistry. PHARM CHEM

188. Supervised Study. (1-5) F W Pr. Staff Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PHARM CHEM

199. Laboratory Project. (1-5) F W Pr. Staff A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. PHARM CHEM

201A. Basic Principles of Medicinal Chemistry. (3) F Lecture 3 hours.
Wong Introduction to basic principles of medicinal chemistry, with focus on physicochemical aspects of drug-target interactions, structure and biology of drug receptors, drug metabolism and disposition, and pharmacokinetics and drug targeting. PHARM CHEM

201B. Medicinal Chemistry & Pharmacology of Major Drug Classes. (2) F Lecture 2 hours.
Sadee A review of major drug classes with application of the basic principles of medicinal chemistry and pharmacology. PHARM CHEM

202A. Topics in Protein Structure. (2) F W Prerequisite: Consent of instructor. Offered in alternate years (alternates with 202B). Not offered 1992-94. Lecture 2 hours.
Kimura, Cohen Principles and recent advances in protein structure, including experimental and theoretical approaches. PHARM CHEM

202B. Topics in Nucleic Acid Structure. (2) W Prerequisite: Consent of instructor. Offered in alternate years (alternates with 202A). Offered 1993-94. Lecture 2 hours.
Shafier, Shepherd Principles and recent advances in nucleic acid structure, including experimental and theoretical approaches. PHARM CHEM

204. Introduction to Computer Programming. (3) F W Prerequisite: Consent of Instructor. Lecture 3 hours.
Ferrin An introduction to computer programming using the C language and the UNIX operating system. During the course, students learn to write, test, and debug programs of increasing complexity. Emphasis is on the basic principles in writing well-structured and modular code. PHARM CHEM

205. Molecular Biochemistry. (3) F W Pr. Lecture 3 hours.
Craig, Hawkes, Brodsky The emphasis of the course will be on modern principles covering structural and functional aspects of nucleic acid and proteins; molecular biochemistry methodologies that focus on topics of pharmaceutical interest: basic theories of molecular biology, plasmids, bacteriophages, nucleic acid and protein characterization, site-directed mutagenesis, hybridization and automated microchemical methods for protein and nucleic acid sequence determination. PHARM CHEM

206. Laboratory Rotation in Pharmaceutical Chemistry. (1-5) F W Prerequisite: Consent of instructor. Lab 3-15 hours.
Staff A laboratory rotation course to familiarize new departmental graduate students with various approaches to research in the pharmaceutical sciences. PHARM CHEM

Olo A basic study of the concentration-time course of drugs in the body, methods of pharmacokinetic analysis and modeling, and discussion of pharmacokinetics/physiologic interrelationships. Conference/Workshop emphasis problem-solving in pharmacokinetics. PHARM CHEM
214. Adv Kinetics of Absorp & Diags. (3) W. Prerequisite: Pharmacological Chemistry 213 and Biochemistry 202 or equivalent. Lecture 2 hours. Lab 3 hours.

Bennet

Advanced consideration of pharmacokinetics including multicompartiment models, assessment of intrinsic absorption and disposition parameters, nonlinear kinetics, and correlation of pharmacological response with the concentration-time course of a drug. Conference involves problem-solving exercises. PHARM CHEM

217. Fundamentals of Targeted Drug Delivery. (2) 3 W. Prerequisite: One quarter of physical chemical kinetics, pharmacology, or consent of instructor.

Hunt

The physical, chemical, biotechnological, and other techniques that are proposed to deliver active molecules to specific target sites in vivo are selectively explored in conjunction with toxicological motivations for achieving targeted drug delivery. Feasibility and optimization are discussed. PHARM CHEM


Santi, Kenyon

Selected topics on enzyme mechanisms. General survey of enzyme catalysis; general acid-base catalysis, propertiy effects, strain and conformational change. Covalent intermediates in enzyme catalysis. The role of cofactors in enzyme catalysis. Phosphatase transfer reactions. PHARM CHEM

219B. Enzyme Mechanisms. (3) 3 W. Lecture 3 hours.

Santi, Kenyon

In-depth examination of specific enzyme reactions or systems, with emphasis on structure-function. PHARM CHEM

220. Research Conf in Pharmaceutics. (1) 3 W. Lecture 1 hour.

Upton, Hunt

A program involving the presentation of core material in pharmaceutical chemistry in the pharmacodynamics pathway. The presentations are made by graduate students and faculty by a series of cumulative examinations. PHARM CHEM

221. Research Conf in Pharm. Chem. (1) 3 W. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry Lecture 1 hour.

Kenyon

A series of weekly research conferences in medicinal chemistry given by visiting lecturers, faculty, and advanced graduate students. PHARM CHEM

222. Physical Chemistry Seminar. (1) 3 W. Prerequisite: Consent of instructor. Lecture 1 hour.

Kunze and Staff

Topics of current research interest in physical and biophysical chemistry. PHARM CHEM

225A-B. Graduate Research Opportunities. (1-3) 3 W. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry Lecture 1 hour.

Brodky, Meng

A series of weekly presentations of the research interests of the basic science faculty. The purpose is to acquaint new graduate students with the research in the Department of Pharmaceutical and Pharmacological Chemistry. PHARM CHEM

230A. Spectroscopy. (3) 3 W. Prerequisite: Chemistry 162 or equivalent. Lecture 3 hours.

Kutz

The theory and application of molecular electronic and vibrational spectroscopy; optical rotatory dispersion and circular dichroism. PHARM CHEM

230B. Spectroscopy. (3) 3 W. or 3 W. Prerequisite: Lecture 3 hours. Offered in alternate years. Offered 1993-94.

T. James

Theory and application of nuclear magnetic resonance and electron spin resonance. PHARM CHEM

230C. Spectroscopy. (2) 3 W. Lecture 3 hours. Lab 2 hours.

Basus

Laboratory work in nuclear magnetic resonance. PHARM CHEM

231. Nuclear Magnetic Resonance. (3-4) 3 W. Prerequisite: Undergraduate physics or physical chemistry Chemistry 262 is recommended. Lecture 3-4 hours.

T. James

Theory and application of nuclear magnetic resonance. Following a basic core of lectures, lecture modules may be selected covering high-resolution two-dimensional NMR, magnetic resonance imaging, and in vivo magnetic resonance spectroscopy. PHARM CHEM

235. Mass Spectrometry in Life Sci. (2) 3 W. Prerequisite: Consent of instructor. Lecture 2 hours.

Burlington

Elucidation of molecular structure, characterization of mixtures, and quantitative measurements. Presentation of basic tools, concepts, and strategies in the complementary usage of currently available techniques in present biochemical and biomedical research. PHARM CHEM

236. Transport & Reaction Processes. (3) 3 W. Prerequisite: Chemistry 260. Lecture 3 hours.

Guy, Siegel

Basic principles applicable to transport and reaction processes in model membrane and biological systems. PHARM CHEM

237. Membrane Transport & Biophysics. (2-3) 3 W. Prerequisite: Physics 236, Chemistry 260. Lecture 2-3 hours.

Sokol, Guy

Biophysical consideration of membrane structure, passive and active transport mechanisms and implications for targeted and controlled drug delivery. PHARM CHEM

238. Chemistry of Polymers of Polymeric Systems. (2-3) 3 W. Prerequisite: Physics 236, Chemistry 260. Lecture 2-3 hours.

Siegel

Chemistry and physics of polymers relevant to the design and function of programmable drug delivery systems. PHARM CHEM

250. Research. (1-4) 3 W. Staff

PHARM CHEM

260. Computer Graphics. (3) 3 W. Prerequisite: Experience in programming and consent of instructor. Lecture 2 hours. Lab 3 hours. Offered in alternate years. Offered 1996-91.

Langridge, Ferrin

Application of interactive three-dimensional computer graphics to modeling complex biological systems, particularly large molecules and their interactions. Elements of hardware and a detailed discussion of software. Demonstration and self-scheduled projects using the computer graphics laboratory. PHARM CHEM

266. Research Planning Conference. (1) 3 W. Prerequisite: Consent of instructor. Lecture 1 hour.

Staff

Discussion and practice in research problem formulation and design selection. Core classes and small group sessions are organized around students' interests by faculty within the area of specialization. PHARM CHEM

298. Thesis. (0) 3 W. Prerequisite: Advance to candidacy and permission of the graduate adviser.

Staff

For graduate students engaged in writing the thesis for the master's degree. PHARM CHEM

299. Dissertation. (0) 3 W. Prerequisite: Advance to candidacy and permission of the graduate adviser.

Staff

For graduate students engaged in writing the dissertation for the Ph.D. degree. PHARM CHEM

Pharmacology

100A-B. Medical Pharmacology. (4-4) 3 W. Prerequisite: Biochemistry 100A-B or equivalent; Physiology 120 and 125 or equivalent. Lecture 3 hours. Conference 2 hours.

Katzung

Systematic presentation of pharmacologic agents based on drug group classifications. Major emphasis is on mechanism of action of clinically important agents. PHARMACOL

112. Pharmacology. (1) W. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 121. Lecture 1 hour.

Burkhart

Systematic survey of action and uses of drugs with emphasis on steroids, hormones, and drugs for metabolic disorders. PHARMACOL

123. Pharmacology & Toxicology. (4) 3 W. Prerequisite: Biochemistry 120A-B and Physiology 120 and 125. Lecture 3 hours. Conference 2 hours.

Burkhart

Systematic survey of action and uses of drugs acting on autonomic nervous and cardiovascular systems and the kidneys. PHARMACOL

128C-D. Dental Pharmacology. (2-4) 3 W. Prerequisite: Physiology 110. Lecture 2 hours W; 3 hours Sp. Lab 3 hours Sp.

Trevor

Objective of the course is to acquaint dental and dental hygiene students with the fundamentals of pharmacology. Various classes of drugs are examined in regard to actions, absorption, fate, excretion, and toxicity. Agents useful in dentistry are emphasized. PHARMACOL

130. Clinical Pharmacology. (2) 3 W. Prerequisite: Pharmacology 125 and 136. Lecture 2 hours.

Burkhart

The occurrence, mode of action, recognition, and treatment of poisoning by environmental and therapeutic agents. PHARMACOL

134. Pharmacology. (2) F. Prerequisite: Pharmacology 125 and concurrent enrollment in Pharmacological Chemistry 134. Lecture 2 hours.

Burkhart, Guggino

Systematic survey of action and uses of anti-infective and anti-neoplastic drugs. PHARMACOL

136. Pharmacology & Toxicology. (6) W. Prerequisite: Pharmacology 125 and concurrent enrollment in Pharmaceutical Chemistry 136. Lecture 3 hours. Conference 2 hours.

Burkhart

Systematic survey of action and uses of drugs acting on the central nervous system. PHARMACOL

150.01. Pharmacology Research. (1.5 per week) 3 W. Prerequisite: Consent of instructor. Lecture and lab to be arranged.

Staff

Students perform individual research in a field of their choice under the guidance and supervision of a member of the faculty. PHARMACOL

170. Group Studies. (1-4) 3 W. Prerequisite: Consent of instructor.

Staff

Group studies of selected topics in pharmacology. PHARMACOL

189. Supervised Study. (1-5) 3 W. Staff

PHARMACOL
119. Pharmacokinetcs. (3-3-5) Sp. Prerequisite: Pharmacy 128. Lecture 3 hours. Conference 1-2 hours.

120. Community Health Education. (2) Sp. Lecture and discussion 2 hours. Participation in at least four community health education programs.

121. Special Topics in Pharmacoeconomics. (2) Sp. Prerequisite: Pharmacy 116 or concurrent enrollment. Lecture 2 hours.

122. Biopharmaceutics & Phys Pharmacology. (3) F Prerequisite: Concurrent enrollment in Chemistry 115. Lecture 3 hours.

123. Non-Prescription Drugs. (3) F Prerequisite: Pharmacy 112. Conference 2 hours.

124. Biopharmaceutics & Dispensing. (4) F Prerequisite: Pharmacy 116 and Pharmacy Administration 112. Lecture 2 hours. Lab 6 hours.

125. Selected Topics in Clinical Pharmacokinetics. (2) W. Prerequisite: Pharmacy 128 and 129. Lecture 2 hours.

126. Molec & Cell Biology in Drug Design. (2) Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Enos
Course is designed to familiarize the student with common ailments of domestic animals and livestock, products used for the prevention and treatment of such diseases, the interrelationship of pharmacist, veterinarian, and animal owner, and legal limitations on veterinary product dispensing. PHARMACY

165. Pharmaceutical Technology. (3) F Prerequisite: Pharmacy 118. Lecture 1 hour. Lab 6 hours.

166. Pharmaceutical Technology. (3) W Prerequisite: Pharmacy 165. Lecture 1 hour. Lab 6 hours.

167. Pharmaceutical Technology. (3) Sp. Prerequisite: Pharmacy 166. Lecture 1 hour. Lab 6 hours.

168. Clinical Pharmacokinetics-UC. (2) F,W. Sp. Prerequisite: Fourth-year standing or consent of instructor. Reports and conferences 6 hours. Enrollment limited.

169. Upton, Torer, Winter, Salazar
Discussion and review of the literature in the clinical application of pharmacokinetic principles in drug therapy. PHARMACY


172. Molec & Cell Biology in Drug Design. (2) Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Schroeder
Introduction to the role of cellular and molecular biology in developing new drugs, hormones, or therapeutic agents. PHARMACY
170. Communication Skills. (1.5) Sp. Prerequisite: First-year standing; Lab 2 hours; Seminar 1 hour. Enrollment limited. Lern
Aspects of communication which focus on skills pertinent to contemporary pharmacy settings. Discussion of principles of communication and practice of specific techniques in simulated practice scenarios. PHARMACY

198. Supervised Study. (1-3) F.W. Sp. Staff
Lab research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PHARMACY

199. Laboratory Project. (1-5) F.W. Sp. Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. PHARMACY

Pharmacy Administration

111. Pharmacy Laws. (2) W. Lecture 2 hours. J. R. Nielsen
Introduction to court systems and administration boards and their relationship to the health professions. Discussion of basic principles of criminal law, negligence, and business law with particular emphasis on the legal relationship and responsibility of the practitioners to the patient. PHARMACY

112. Pharmacy Laws. (2) Sp. Lecture 2 hours. J. R. Nielsen
A detailed examination of federal and state drug, cosmetic, and narcotic laws; their promulgation, enforcement, and effect on the practice of pharmacy. Course involves some administrative work. PHARMACY

150. Marketing. (4) W. Lecture 4 hours. Locasci
An analysis of the marketing functions that facilitate the flow of pharmaceutical products from production to consumption, and of the decision-making processes of marketing institutions. Emphasis is given to the environmental factors affecting marketing decisions. PHARMACY

154. Community Pharmacy Management. (4) Sp. Prerequisite: Basic economics or consent of instructor. Lecture 4 hours. Locasci
Principles of management, specially directed toward developing familiarity with current problems peculiar to community pharmacy operation. Emphasis is given to elements in locating, organizing, operating, and adapting a pharmacy. PHARMACY

155. Accounting. (3) F. Lecture 1 hour. Discussion 2 hours. Lucacini
Consideration of the fundamental concepts of accounting, with special emphasis on the accounting requirements of the community pharmacy. Problems and case studies are presented. PHARMACY

A survey of laws relating to landlord-tenant dissolution, property division, support payments, probate and decedent's estates, with particular emphasis on how pharmacies may expect their practice to be affected by these laws, and some practical preventive legal techniques. PHARMACY

170. Group Studies. (1-4) F.W. Sp. Prerequisite: Consent of instructor. Staff
Group studies of selected topics in pharmacy administration. PHARMACY

180.A-B-C. Legal Problems in Health Care. (2-2-2) F.W. Sp. Prerequisite: Third-year standing and consent of instructor. J. R. Nielsen
Selected problems with directed readings and library research on current legal (statutory and case law) issues affecting the delivery of pharmacy services. Discussion and paper. PHARMACY

198. Supervised Study. (1-5) F.W. Sp. Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PHARMACY

Physical Therapy

110. Ortho & Rehab Diag./Treatment. (2) F. Prerequisite: Completion of PT 200, PT 201, PT 202 and concurrent enrollment in Pathology 135.01. Open only to students enrolled in the Curriculum, or by consent of program director. Lecture 2 hours. Hoagland
Course presents the diagnostic, medical, and surgical principles and techniques which guide decision making and management by the orthopedic surgeon. Contraindications, precautions, and prognosis are discussed to guide the decision making of the physical therapist. PHYS THER.

111. Neurology & Rehab Diag./Treatment. (3) W. Prerequisite: Completion of PT 100, Anatomy 103.01, and Pathology 135.01. Open only to students enrolled in the Curriculum, or by consent of program director. Lecture 2 hours. Lowenstein
Course presents the diagnostic and medical principles which guide decision making and clinical management by the neurologist. Contraindications, precautions, and diagnosis of the different neurological disorders are discussed to guide decision making by the physical therapist. PHYS THER.

112. Pediatrics: Diagnosis & Treatment. (3) W. Prerequisite: Upper division coursework in human development and Pathology 135.01. Open only to students enrolled in the Curriculum, or by consent of program director. Lecture 1 hour. Kaufman
Course presents the diagnostic, developmental, behavioral, and medical principles of clinical management for normal newborns and those with acute/chronic diseases. Contraindications, precautions, and prognosis are discussed to impact physical therapy management. PHYS THER.

198. Supervised Study. (1-5) F.W. Sp. Prerequisite: Enrollment in the Curriculum and approval by instructor. Open only to students enrolled in the Curriculum in Physical Therapy. Staff
This course is designed to permit physical therapy students to do independent clinical research under the supervision of faculty. This course can be repeated as approved by faculty. It cannot be used as a substitute for core curriculum coursework. PHYS THER.

199. Laboratory Project. (1-5) F.W. Sp. Prerequisite: Enrollment in UCSF/SFSPH program in Physical Therapy and approval of student faculty advisor and project faculty. Open only to students enrolled in the Curriculum in Physical Therapy, or by consent of program director. Staff
Student conducts a laboratory research project under direction of a faculty member with the approval of the chairperson of the department. PHYS THER.

200. Neuroanatomy. (6) First-year students only; consent of instructor. Lecture 3 hours. Lab 9 hours. McKenzie
Dissection and functional anatomy of the neuroanatomical systems from a developmental and biomechanical perspective, with an emphasis on vascular and lymphatic systems related in a three-dimensional perspective. Principles and relationships reinforced through lecture, discussion, and laboratory study of gross and histological sections and weekly integrative clinics. PHYS THER.

201. Kinesiology & PT Assessment. (3) F. Prerequisite: Completion of prerequisite coursework in kinesiology, exercise physiology, anatomy, and physiology. Open only to students enrolled in the Curriculum, or by consent of program director. Lecture 3 hours. McKenzie
Richards, Byl
Application of surface anatomy, structural and biomechanical principles to normal trunk and extremity motion within the physical therapy assessment. Principles of measurement, instrumentation, administration, and interpretation of standardized and clinical evaluation techniques reviewed in a lecture and lab setting. PHYS THER.

202. Therapeutic Exer. and Modalities. (2) 1st-year students only. Prerequisite: Completion of prerequisite coursework in exercise physiology and human physiology. Open only to students enrolled in the Curriculum or by consent of program director. Lecture 1 hour. Lab 3 hours. Richards
In lecture and laboratory setting, physiological, theoretical, and administrative principles are applied to the application of therapeutic modalities and the design and implementation of therapeutic exercise programs to prevent disability, maintain positive health, and restore function. PHYS THER.

203. Advanced PT Practice & Theory I. (4) F. Prerequisite: PT 701 and PT 702 or their equivalent and concurrent enrollment in the Kaiser Orthopedic Physical Therapy and Clinical Residency Program. Open only to students enrolled as a graduate student at UCSF or SFSPH by consent of program director. Lecture 2 hours. Lab 6 hours. Staff
This course includes intensive, advanced analysis of the Australian manual therapy theory, objective and subjective assessment techniques, as well as treatment techniques for the cervical, thoracic, and lumbar spine and the shoulder and hip joints. PHYS THER.

204. Advanced PT Practice & Theory II. (5) W. Prerequisite: PT 203 and concurrent enrollment in the Kaiser Orthopedic Physical Therapy and Clinical Residency Program. Open only to students enrolled as a graduate student at UCSF or SFSPH by consent of program director. Lecture 3 hours. Lab 6 hours. Staff
A continuation of PT 203 and includes prioritizing patient complaints, progressing patients at optimal rates, discharging planning, home exercise programs, ergonomic analysis, function assessment and advanced treatment techniques for the neck, thoracic, and lumbar spine, foot/ankle, wrist/hand, shoulder, sacroiliac, and lower extremity joints. PHYS THER.

205. Functional Anatomy Review. (1.5) F. Prerequisite: PT 200 or equivalent. Open only to students enrolled in the graduate program in physical therapy. Lecture 1 hour. Lab 1.5 hours. McKenzie
This course is designed for physical therapists. Using projected (and/or dislocated) cadaver, the student is expected to relate the structures to clinical kinesiology, biomechanics, and the pathological state. Students are expected to critically review research in applied anatomy. PHYS THER.

206. PT Diagnosis of Phys Dysfunction. (2) 1st-year students only. Prerequisite: Enrollment in UCSF/SFSPH physical therapy program or by consent of program director. Seminar 2 hours. Byl and Staff
Using clinical case examples, this seminar focuses on history-taking, clinical assessment, clinical measurement, and signs and symptoms as they apply to mak-
Physical Therapy

253. Research Seminar: Proposal Writing. (1) § F Prerequisite: grade of B or better in PT 252. Open only to students enrolled in the Curriculum or by consent of program director. Seminar 3 hours. Byl

254. Research Seminar: Data Analysis. (1) § Prerequisite: Completion of PT research seminars 720, 722, and 253. Enrolled in UCFSF/SPSU Physical Therapy Program or by consent of program director. Seminar 1 hour. Byl

256. Practicum in Teaching. (1-4) § FW, Sp, SS. Prerequisite: Enrolled in Graduate Program in Physical Therapy and satisfactory completion of PT 200. Consent of instructor. Staff

257. Clinical Clerkship. (1) § Prerequisite: Completion of academic coursework with overall B average. Open only to students enrolled in the Curriculum, or by consent of program director. Clinic 1 day/week.

259. Clinical Clerkship. (1) § Prerequisite: Enrolled in Graduate Program in Physical Therapy and satisfactory completion of academic coursework with overall B average to enter the clinical clerkships. Open only to students enrolled in the Curriculum, or by consent of program director. Clinic 1 day/week.

260. Clinical Clerkship. (1) § Prerequisite: Demonstrate satisfactory completion of clinical clerkship before progressing to the next clerkship. PHYS THER.

261. Clinical Clerkship. (1) § Prerequisite: PT 412. Open only to students enrolled in the Curriculum, or by consent of program director. 40 hours/week. 5 days/week.

262. Clinical Clerkship. (1) § Prerequisite: PT 412. Open only to students enrolled in the Curriculum, or by consent of program director. 40 hours/week. 5 days/week.

263. Clinical Clerkship. (1) § Prerequisite: PT 412. Open only to students enrolled in the Curriculum, or by consent of program director. 40 hours/week. 5 days/week.

264. Clinical Clerkship. (1) § SS3, FW, Sp, Prereq uisite: PT 410, PT 411. Open only to students enrolled in the Curriculum. Forty hours/week for 6-12 weeks.

265. Clinical Clerkship. (1) § SS3. Prerequisite: Enrolled in UCFSF/SPSU Physical Therapy Program and satisfactory completion of PT 412 and 413.

266. Advanced Clinical Clerkship. (1) § F, FW, Sp. Prerequisite: Enrolled in UCFSF/SPSU Physical Therapy Program.

267. This advanced clinical clerkship is specifically arranged to enable the student to develop advanced clinical skills under the supervision of a clinical preceptor in one clinical setting. Setting and emphasis will vary. PHYS THER.

268. Organ System Physiology. (6) § S. Prerequisites: Anatomy and Histology and 100 and concurrent enrollment in Biochemistry 100; or by consent of instructor. Lecture 4 hours. Lab 4 hours. Conference 2 hours. Wright

269. Normal function of the cardiovascular, respiratory, and renal systems and the metabolic functions of the body as a whole are studied in lectures, conferences, laboratory exercises, demonstrations, and clinical illustrate PHYSIOLOGY.

270. Endocrinology & Gastroenterology. (5) § Prerequisite: Anatomy 105A-B, Biochemistry 100, Physiology 100, Interdepartmental Studies 100, or consent of instructor. Lecture 1 hour. Conference 4 hours.

271. Lippincott

Within the framework of endocrine and gastrointestinal physiology, the course will strive to teach the information necessary to achieve an understanding of key physiological principles. PHYSIOLOGY.

272. Integrative & Nutritional Studies. (6) § Prerequisite: College-level biology, physics, and chemistry, or consent of instructor. Lecture 4 hours. Lab 1 hour. Conference 1 hour.

273. A. Miller

To provide understanding of the mechanisms and processes in various organ systems. Provide necessary background for learning about human disease and its treatment. Enhance understanding of the function of organs and cells. Provide knowledge for realization that organ functions and diseases exactly the same process as other human functions and disease. Help prepare skills necessary to understand and evaluate clinical literature. PHYSIOLOGY.

274. Mantralun Physiology. (2.5) § W. Prerequisite: Physiology 125 required for students in School of Pharmacy; may be taken separately by graduate students with consent of instructor only. Lecture 2 hours. Conference 0.5 hour. Reid and Staff

Study of the integrative systems of the mammalian organism, particularly the gastrointestinal and endocrine systems. PHYSIOLOGY.

275. Mantralun Physiology. (2.5) § W. Prerequisite: Physiology 125:01 required for students in Curriculum in Physical Therapy. Open only to students enrolled in the Curriculum in Physical Therapy, or by consent of instructor. Lecture 2 hours. Conference 1 hour. Ganong

Study of the integrative systems of the mammalian organism, particularly the gastrointestinal and endocrine systems. PHYSIOLOGY.

276. Mantralun Physiology. (6) § Prerequisite: Consent of instructor. Lecture 4 hours. Lab 4 hours. Conference 2 hours. Mines

Physiology of the human cardiovascular, respiratory and renal systems is stressed, with special attention to developing problem solving skills using the material. PHYSIOLOGY.

277. Mantralun Physiology. (5) § Prerequisite: Completion of course work in summer term. Open only to students enrolled in the Curriculum in Physical Therapy, or by consent of instructor. Lecture 4 hours. Conference 2 hours. Mines

Physiology of the human cardiovascular, respiratory and renal systems is stressed, with special attention to developing problem solving skills using the material. PHYSIOLOGY.
Staff 
Library research and directed reading under supervi- sion of a member of the faculty with the approval of the chair- person of the department. 

Staff 
A laboratory research project under direction of a member of the faculty with the approval of the chair- person of the department. 

Korenblum, Verkman 
Study of cellular and molecular mechanisms of mem- brane transport. Course will be based on lectures and discussions of current literature on both active and passive transport of electrolytes and nonelectrolytes across biological cell membranes. 

204. Topics in Physiology. (2-3) § Sp. Prerequisite: Physiology 125 or consent of instructor. Lecture 3 hours. Lab 1.5 hours. Conference 1 hour. 
Korenblum and Staff 
Course is designed primarily for students in the School of Pharmacy. The course will present an integrated approach to the physiological operations of the nervous system and the morphological or anatomical substrates in which they occur. PHYSIOLOGY 

221. Molecular & Cellular Approaches to Cardio- vascular Disease. (1-3) § W. Sp. Prerequisite: Physiology 100 or equivalent. Lecture 1 hour. Conference 0.5 hour. 
Coughlin, Williams 
Lectures will emphasize understanding of mechanisms of disease at the molecular level. Focus will be on vascular biology and pathology of the arteries and on molecular targets for therapeutics. PHYSIOLOGY 

223. Physiology Research Seminar. (1) § F-W. Prerequisite: Consent of instructor. Seminar 1 hour. 
Hall 
Seminar presentations by guest speakers, alternating with discussions by Physiology staff members of their current research. Each quarter, a different topic of physiological interest is the subject of guest presenta- tions. Students may enroll for any number of quarters. 

224. Molec Biol of Lipid Metabolism. (2) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Offered in alternate years. Not offered 1993-94. 
Taylor, Fielding 
The structure and regulation of the genes and proteins that control lipid metabolism, including plasma apol- lipoproteins, receptors, and enzymes. Molecular and cellular biology of mammalian lipid metabolism exam- ined with respect to regulation of various proteins involved in transport, binding, and utilization of lip- ids. PHYSIOLOGY 

227. The Scientific Method. (2) § W. Prerequisite: Graduate or professional education in at least two of the following: biochemistry, microscopic anatomy, cellular physiology or biophysics, systems physiology, microbiology, or equivalent, or by permission of in- structor. Seminar 2 hours. 
Rothman 
Focus on the evaluation of modern research in the biological sciences, in terms of the coherence of particular experimental efforts with the historical and philosophical basis of scientific investigation. STOMATOLOGY 

228. Secrecy. (2) § W. Lecture 1 hour. 
Rothman 
Origins and experimental basis of vesicular and non- vesicular theories for secretion of organic cell products. Goodness of fit of data to theoretical models and the role of scientific test in evaluating hypothetical constructs will be emphasized. STOMATOLOGY 

230. Research. (1-4) § F-W. Sp. Prerequisite: Consent of instructor. Lab variable time. 
Staff 
PHYSIOLOGY 

298. Thesis. (0) 0-1.5 Sp. Prerequisite: Achievement of satisfactory status as a candidate and permission of the graduate advisor. Staff 
For graduate students engaged in writing the thesis for the master's degree. PHYSIOLOGY 

299. Dissertation. (0) 0-1.5 Sp. Prerequisite: Advanced to candidacy and permission of the graduate advisor. Staff 
For graduate students engaged in writing the dissertation for the Ph.D. degree. PHYSIOLOGY 

300. Teaching Practicum. (0) 0-1.5 Sp. Prerequisite: Previous training in physiology and consent of instructor. Lecture and lab variable. Staff 
Practice in teaching physiology under faculty supervision. Students supervise laboratory work, conduct conferences, deliver lectures, and assist in preparing and grading examinations. Responsibilities are as- signed according to the individual's stage of development. 

301. Scientific Writing. (0) 0-1.5 Sp. Prerequisite: Consent of instructor. Seminar 2 hours. 
Corderoge, Zeiger 
A seminar designed to teach postdoctoral fellows and graduate students how to best put into words, tables and figures work done in the laboratory, and how to do so clearly and concisely, effectively, and briefly, so that others may understand PHYSIOLOGY 

302. Teaching Techniques. (0) 0-1.5 Sp. Prerequisite: Consent of instructor. Lecture 1.5 hours. Enrollment limited. 
Staub 
A course in teaching techniques. Students present short lectures, and videotapes of these presentations are analyzed by self- and group critiques. PHYSIOLOGY 

Psychiatry 
First-Year Coordinated Instruction—This course provides a first opportunity to interview medical students in small group settings, guided by experi- enced clinicians. Useful medical information is gathered in a comfortable, professional interchange, and one's identity as a physician also begins emerging in the process. 

PGY 1 Courses—The Department of Psychiatry is currently developing new courses for PGY 1 residents. Please refer to the quarterly Schedule of Courses for a listing of those courses in the PGY 1 series. 

190A. Patients and Doctors I. (2) F Lecture 2 hours. Seminar 1 hour. 
Kaltreider, F. Cohen 
Introduction to psychological principles influencing health behaviors and the physician-patient relation- ship. Cross-cultural factors are explored as is the re- sponse to the stress of illness with emphasis on defense and coping, character style and the dying process. 

100B. Patients and Doctors II. (1) W. Prerequisite: Psychiatry 100A. Two hours per week total will vary with lectures, panels, and seminars. 
Kaltreider, F. Cohen 
The life cycle in health and illness, personality style, emotions and psychotherapy will be covered. 

110. Psychiatry Core Clerkship. (1.5 per week) 
Su, F-W. Sp. Prerequisite: Medicine 131A-B-C, Psychi- atrist 100A, 100B and 131A-B. Open to UCSF students only. 
Kaltreider Six-week assignment to a psychiatric service at UC or VA. Students, under supervision, are responsible for patient evaluation and participation in treatment plan- ning for inpatients, outpatients, and consultation/ liaison. They attend seminars related to clinical work, and make field visits to other types of psychiatric facili- ties. \n
121A-B. Intro to Clinical Psychiatry. (2-2) W. Lecture 1 hour. Seminar 2-3 hours. 
Elkin (A), Marbor (B) 
Introduction to clinical psychiatry with particular emphasis upon knowledge important in general medical practice. Course formats include lectures, small group teaching, interviewing patients, critical reading, and the use of clinical videotapes and film. 

140. Advanced Psychiatry Clerkship. (1.5 per week) Su, F-W. Sp. Prerequisite: Psychiatry 110 and consent of instructor. 
P. Martin 
Participation in psychiatric assessment and treatment, with supervision of attending and resident staff. Op- tions include consultation-liaison service, or resident adult or child service. Other special focus experiences such as outpatient, AIDS, geriatrics, may be arranged with instructor. 

140. Off-Campus Clerkship. (1.5 per week) Su, F-W. Sp. Prerequisite: Consent of Department of Psychiatry. 
P. Martin 
Clinical clerkship in off-campus hospitals, approved by the chairmen of the department and the dean. 

140. Behavioral Medicine: Biopsychosocial Approach to Patients—VAF (1.5 per week) Su, F-W. Sp. Prerequisite: Psychology 110. 
Leigh, Jannier, Hirscholt 
A 4-6 week elective rotation at the Behavioral Medi- cine Center and the Psychiatric Consult Service. Students given opportunity for comprehensive patient evaluation using the biopsychosocial treatment plan, participation in psychiatric medicine research, work with interdisciplinary team. Housing provided by UCSF. 

143. Psychiatry/Psychology 

162

163
14.07. Advanced Adult Inpatient Forensic Psychiatry AS. (1.5 per week). Su, F. W. Sp. Prerequisite: Completion of core curriculum in Psychiatry and approval of Dean's Office. Restriction: Must be by prior arrangement only. Make arrangements with Department of Psychiatry, UCSF Fresno, 2615 E. Children's Avenue, Fresno, CA 93702. Lecturer 5 hours. Seminar 2 hours. Library research 8 hours. Sanders, Kiersch, Slater

In world's largest forensic hospital, students will observe admissions, evaluations, interviews of patients with a wide spectrum of psychopathology. Will participate in treatment planning and forensic seminars. Emphasis on legal aspects of psychiatry. Room and board provided through Atascadero State Hospital. PSYCHIATRY

140.08 Consultation Clerkship-VMC. (1.5 wks) Su, F.W. Sp. Prerequisite: Psychiatry 110 and consent of Department of Psychiatry. Aches Supervised evaluation and treatment of patients on the Psychiatry Consultation Service, Lassen Union, Psychosomatic Clinic, and Emergency Room. Learning opportunities include teaching rounds, consultation seminar, biopsychosocial rounds, and consultation syllabus. PSYCHIATRY

140.09 Combined Family Practice/Psychiatry Elective-VAF. (1.5 wks) F.W. Sp. Prerequisite: Psychiatry 110. Blossom, Leigh, Aches, Schott, Newlin Integrated hands-on Family Practice and Psychiatric evaluation and treatment of patients in both Family Practice and Psychiatric Services. Geared to a comprehensive evaluation and treatment of patients. PSYCHIATRY

150.01. Psychiatric Research. (1.5 per week) Su, F. W. Sp. Prerequisite: Consent of Department of Psychiatry. Kalteider, Jones Participation according to student level of experience in experimental work in areas such as neurophysiology, operant conditioning, psychophysiology, immunoneurochemistry, and noninvasive communication. All work is under the close supervision of members of the faculty. PSYCHIATRY

170.01. Intro to Study of Suicide. (5) F.W. Or Sp. Prerequisite: Consent of Department of Psychiatry. Lecture 2 hours. Moteo Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field PSYCHIATRY

170.02. Alcoholism. (1) F. Lecture 1 hour. P. Steuer General issues in substance abuse as well as the pharmacologic, medical, and neurologic aspects of alcohol abuse. Treatment issues will be considered with emphasis on Alcoholism Anonymous. Family issues arising from alcohol abuse and special concerns for the health professional. PSYCHIATRY

170.17A. Issues in Psychiatry. (1-3) F.W. Sp. Prerequisite: Consent of Department of Psychiatry. Seminar 1-3 hours. Kalteider Explores local psychiatric issues in systematic format. Current electives include substance abuse, women's psychological health, the development of physician identity, cross-cultural issues. New topics are designed according to faculty/student interests. PSYCHIATRY

170.17B. Issues in Psychiatry. (1-3) F.W. Sp. Prerequisite: Consent of Department of Psychiatry. Seminar 1-3 hours. Kalteider Explores local psychiatric issues in systematic format. Current electives include substance abuse, women's psychological health, the development of physician identity, cross-cultural issues. New topics are designed according to faculty/student interests. PSYCHIATRY

170.17C. Issues in Psychiatry. (1-3) F.W. Sp. Prerequisite: Consent of Department of Psychiatry. Seminar 1-3 hours. Kalteider Explores local psychiatric issues in systematic format. Current electives include substance abuse, women's psychological health, the development of physician identity, cross-cultural issues. New topics are designed according to faculty/student interests. PSYCHIATRY

170.18. Psychotherapy Research. (2) Sp. Prerequisite: Course in statistics and consent of Department of Psychiatry. M. Horowitz Participation in research activities at the Center for the Study of Neuroses. Lectures, laboratory, individual guidance to research; patient observation are included. PSYCHIATRY

170.19. Cultural Considerations in Health Care. (1) Sp. Lecture 1 hour. Lee Introduction to the values and beliefs of various minority cultures regarding health and illness, with an emphasis on practical clinical skills in working with a diverse patient population, understanding particular cultural assuassess relevant to minority patients, and an understanding of the historical factors which impinge on the health of minority populations. PSYCHIATRY

170.20. Topics in the Psychology of Women: Feminist Persp. (1) F.W. Or Sp. Prerequisite: Open to medicial students and graduate nursing students. Seminar 1 hour. Garrett, Johnson In this seminar, there are small group discussions based on readings from feminist perspectives on the following topics: women's mental development, dominance/ordination; eating disorders/body image; multiple discriminations against women. PSYCHIATRY

180. Sexual Issues in Medical Practice. (2) W. Lecture 2 hours. Prerequisite: Psychiatry 100 A-B. Medical students only. Bullard, Alperstein Introduces sexual health as an integral part of general medical care. Course (2 hours) mandated by California legislature. Interdepartmental teaching. PSYCHIATRY

198. Supervised Study. (1-5) F.W. Sp. Prerequisite: Consent of Department of Psychiatry. N. Kalteider and Staff Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. PSYCHIATRY

214. Practice of Clinical Social Work. (1.5) F.W. Sp. Prerequisite: 1 year of clinical social work. Restricted to intern in clinical social work. Lecture 1.5 hours. J. Roth This course aims at integrating developmental and clinical theories with clinical social work practice toward enhancing clinical, conceptual, and consultative knowledge and skills. PSYCHIATRY

400. Com Mental Health Systems. (1) Su, W. Required for first-year residents in Psychiatry. Seminar 1 hour. Surber Focus is on special treatment issues involved in the care of the chronically disabled patient and of patients of various ethnic and minority backgrounds. PSYCHIATRY

401. Intro. to Clinical Interviewing. (1) Su, W. Prerequisite: Required for first-year residents in Psychiatry. Seminar 1 hour. Jacobs, Goldfinger Course teaches the rudiments of interviewing psychiatric inpatients. PSYCHIATRY

402. Introduction to Psychopharmacology. (1) Su, W. Required for first-year residents in Psychiatry. Seminar 1 hour. Lai Course provides a grounding in phenomenology and descriptive diagnostic features of the major psychopharmacology, including the following types of disorders: schizophrenia, affective, organic mental, severe personality, and substance abuse. PSYCHIATRY

403. Intro to Psychopharmacology. (1) Su, W. Required for first-year residents in Psychiatry. Seminar 1 hour. Batki Course addresses basic issues in prescribing, including patient compliance, the placebo effect, and the dynamic significance of medications. Also includes a review of basic neurochemical processes. PSYCHIATRY

404. Intro to Child Development. (1) Su. W. Required for first-year residents in Psychiatry Seminar 1 hour. Hanson An introduction to developmental framework, with emphasis on age 0-3 years. PSYCHIATRY

411. Forensic Psychiatry. (1.5) W. Required for second-year residents in Psychiatry. Seminar 1.5 hours. Tarr An elective seminar discussing the major aspects of forensic psychiatry relevant to the practice of the clinician. Topics covered include competency, com- mitment, and criminal responsibility. PSYCHIATRY

413. Psychos Aspects of Psycho. (1) F.W. Prerequisite: Required for second-year residents in Psychiatry. Seminar 1 hour. Marmar Examination of neuropsychologic and character disorders from a psychodynamic perspective. PSYCHIATRY

415. Intro. to Clinical Research. (1) F.W. Prerequisite: Psychiatry Resident II standing. Seminar 1 hour. Zegna, Temoshok Course will introduce residents to clinical research as an essential body of knowledge and skills which can be integrated into present and future clinical work. Consideration of research within four broad paradigms: intrapsychic, sociocultural, behavioral, psychoanalytic, and psychoprophylactic. PSYCHIATRY

417. Child Psychopath/Psychopharmacotherapy. (1) Su, W. Prerequisite: Required for second-year residents in Psychiatry. Seminar 1 hour. Binget, J. Phillips Seminar covers the theory and implementation of the technique of psychotherapy with children. Emphasis is placed on play therapy. The seminar will also cover psychopathology as manifested in children, including descriptions and possible ideologies. PSYCHIATRY

421. Psychoanalytic Psychotherapy. (1) F.W. Sp. Required for third-year residents in Psychiatry. Seminar 1 hour. Amini, Baumbacker Course explores the application of psychoanalytic theory to psychotherapy. PSYCHIATRY

422. Social Psychiatry. (1.5) F.W. Sp. Prerequisite: Required for third-year residents in Psychiatry, or consent of instructor. Seminar 1.5 hours. F. A. Johnson, Pearlz Course introduces residents to various aspects of social and community psychiatry. Topics include social psychiatry prior to 1950, development of community mental health programs in the U.S., related social sciences, and current developments in the field. PSYCHIATRY

423. Group Therapy. (1) F.W. Required for third-year residents in Psychiatry. Zeltlin Course provides a didactic introduction to the practice of computer group psychotherapy. PSYCHIATRY

431. Neuropsychology. (1) W. Prerequisite: Required for fourth-year residents in Psychiatry Lecture 1 hour. Paluccari Review of clinical neuropsychology with emphasis on neuropsychological disorders that may have psychiatric implications. PSYCHIATRY
Course consists of supervised clinical and basic research in behavioral abnormalities, psychopathology, and experimental psychiatry. Specific subjects for research are chosen in conjunction with members of the staff. PSYCHIATRY

481. Child Care Observation. (1) Su. Prerequisite: Required for first-year child psychiatry fellows, or consent of instructor. Field work 1.5 hours.

Bence
Participate and observe activities at UCSF Child Care Study Center. Experiences are discussed with supervisor. Experience to be enlarged to include observations at elementary and junior high school. PSYCHIATRY

482. Growth & Development Seminar. (1) F, W. Prerequisite: Required for first-year child psychiatry fellows, or consent of instructor. Seminar 1 hour.

Siegel, Lieberman
Provides theoretical understanding of normal growth and development. Format is primarily presentations and group discussions. PSYCHIATRY

483. Principles of Therapeutic Meth. (1) F, W. Prerequisite: Required for first-year child psychiatry fellows, or consent of instructor. Seminar 1 hour.

J. Phillips
Discussion of philosophy and practice of clinical work with patients. Includes history, principles, and methods of child psychiatry as well as the stages of child development and modalities of treatment. PSYCHIATRY

485. Psychopathology Literature Sem. (1) F, W. Prerequisite: Required for first-year child psychiatry fellows, or consent of instructor for others. Seminar 1 hour. 

Rubenstone and Staff
Extensive review of pertinent readings in child and adolescent psychiatry. PSYCHIATRY

486. Devel Disabilities Seminar. (2) Su. Prerequisite: Required for first-year child psychiatry fellows, or consent of instructor. Seminar 2 hours.

Hanson
Lectures focus on mental retardation, deafness, blindness, and cerebral palsy, with emphasis on the developmental, family, and social aspects. PSYCHIATRY

487. Adolescent Continuous Case Seminar. (1.5) F, W. Prerequisite: Required for second-year child psychiatry fellows, or consent of instructor. Seminar 1.5 hours.

Guller
Participation with senior staff members to discuss ongoing dynamics of psychotherapeutic work with adolescents. PSYCHIATRY

488. Child Psychiatry Clinical Conf. (1.5) F, W. Prerequisite: Required for first- and second-year child psychiatry fellows, or consent of instructor for others. Conference 1.5 hours.

Sikorski
The Child and Adolescent Service has developed a continuing education program of distinguished speakers in the field of child psychiatry and related disciplines. Clinical problems and mini-courses are presented. PSYCHIATRY

492. Ped Consultation Orientation. (1.5) Su. Prerequisite: Required for second-year child psychiatry fellows, or consent of instructor. Seminar 1.5 hours.

Shashkin
Discussion of goals, attitudes, and skills required in child psychiatry consultation/hanover work. PSYCHIATRY

493. Pediatric Consultation Seminar. (1.5) F. Prerequisite: Required for second-year child psychiatry fellows, or consent of instructor. Seminar 1.5 hours.

Shashkin
Discussion of formal consultations of cases requested by the Pediatric Inpatient Service, Child Study Center, Family Medicine Clinic, etc. PSYCHIATRY

494. Com Consultation Literature Sem. (1) Su. Prerequisite: Required for second-year child psychiatry fellows, or consent of instructor. Seminar 1 hour.

Racey
Review of literature and discussions on community consultation. PSYCHIATRY

495. Child Continuous Case Seminar. (1.5) F, W. Prerequisite: Required for second-year child psychiatry fellows, or consent of instructor for others. Seminar 1.5 hours.

496. Behavioral Sciences Research. (1.5) Su, W. Prerequisite: Consent of instructor. Lab 4.5 hours. Callaway, Halliday, and Staff
180.09. Neuropsychology of Dissociation. (3) | F, W. Prerequisite: Consent of instructor. Seminar 3 hours.
Galin
Topics in Neuropsychological Disconnection and Psycholog- 
ical Dissociation: an advanced seminar considering cognitive and neuropsychological aspects of integra-
tion and fragmentation of the whole person. Topics will vary from year to year. Examples are split-brain 
syndromes, hypnosis, and multiple personality disor-
der. PSYCHIATRY

181.02. Cerebral Hemispheric Specialization. (2) | F, W. Prerequisite: Background in neuropsychol-
ogy. An introduction to cognitive and neuropsychological processes for 
advanced students. Requires prior consent of instruc-
tor. Seminar 2 hours.
Galin
Group discussions of readings in seminar format of neuropsychology of hemispheric specialization and 
integration; development, psycholinguistic, and educational 
implication; evaluation of data from study of brain lesions, 
electrophysiological recordings, and behavioral testing. PSYCHIATRY

given to medical students.
Blackwell
Consideration of psychological processes utilized under 
stress and of alternative constructive methods for 
coping, with practice in using these techniques. 
Course is designed to help students handle stress and 
apply such techniques to management of patients. 
PSYCHIATRY

198. Supervised Study. (1-5) | F, W, Sp. Staff
Library research and directed reading under supervi-
sion of a member of the faculty with the approval of 
the chairperson of the department. PSYCHIATRY

202A-B. Computer Simulation of Human In-
teraction. (3-3) | W, Sp. Prerequisite: Psychology 257 or equivalent. Lecture 1 hour. Lab 6 hours.
Stearns/Weather
The development and testing of theoretical models of 
personality are explored by means of computer pro-
grams. Students program the computer for simulations 
and symbol manipulation. PSYCHIATRY

205. Child Development. (3) | W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.
C. Lewis
Course will focus on major issues, theories, and find-
ings in child development. Topics covered will include 
attatchement; Piagetian and other theories of cognitior 
development; language development; moral develop-
ment and pro-social behavior; aggression; and self-
esteem and competence. PSYCHIATRY

212. Psychological Stress & Coping. (4) | F. Prerequisite: Consent of instructor. Seminar 4 hours. 
Offered in alternate years. Not offered 1993-94.
F. Cohen
Course examines stress and coping theory and research 
from clinical, field, and laboratory settings; measures of 
stress; issues in stress research; the nature of coping and 
coping processes. PSYCHIATRY

232. Practicum in Program Evaluation. (2-4) | F, W, Sp. Prerequisite: Graduate standing and some expe-
rience in interviewing. Lab 3 hours. Seminar 6 hours during first 4-6 weeks.
Blackwell
After an intensive seminar introduction to basic con-
cepts of evaluation, students will carry out various 
evaluations on clinical clerkships in the School of 
Medicine. The length of the introductory period will 
depend on previous experience of students. PSYCHIATRY

240. Physiology for Health Psychologists. (4) | F, W. Prerequisite: Graduate standing in Health Psychology 
program or consent of instructor. Lecture 4 hours. 
Offered in alternate years. Not offered 1993-94.
N. Adler
An in-depth study of the research process with em-
phasis on quasi-experimental design, ethics of re-
search and grant writing. PSYCHIATRY

260. The Health System. (4) | F, W. Prerequisite: 
Graduate standing in Health Psychology Program or 
consent of instructor. Lecture 2 hours. Seminar 2 
hours. Offered in alternate years. Offered 1993-94.
Artiksson
Function and tasks of the health system with emphasis 
on the study of health service organizations and health 
services delivery from the perspective of living systems 
theory and organizational psychology. PSYCHIA-
TRY

265. Stress & Bodily Disease. (4) | F, W. Prerequi-
t. Consent of instructor. Seminar 4 hours. Offered in 
alternate years. Offered 1993-94.
F. Cohen
Examination of the psychological and physiological 
models and empirical research linking stress and 
other psychological factors to the development of bodily 
disease. PSYCHIATRY

266. Reproductive Behavior. (3) | F, W. Prerequi-
t. Consent of instructor. Seminar 3 hours. Offered in 
alternate years. Offered 1993-94.
N. Adler
Examination of the role that psychological and social 
factors can play in a variety of reproductive behaviors: 
pregnancy, obstetrical complications, postpartum 
reactions, infertility, contraceptive use and misuse, 
spontaneous and induced abortions. PSYCHIATRY

281A-B-C-D. Clinical Research Seminar. (1.5– 
1.5–1.5–1.5) | F, W, Sp. Prerequisite: Consent of 
Instructor 1.5 hours. Seminar 1.5 hours.
Artiksson
Seminar discussions of contemporary research in clinical 
psychological issues covered include major 
problems in conducting clinical research, skills and 
methods required in clinical research, and career 
development for the clinical psychologist. Course is 
intended primarily for advanced clinical psychology 
students. PSYCHIATRY

285A-B-C-D. Intermediate Family Therapy. 
(1.5–3–3–3) | F, W, Sp. Prerequisite: Consent of 
Instructor. Lecture 2 hours. Lab 3 hours. Four-quarter 
course.
Hatcher
Stages in family development, communications analy-
sis, role definitions, family myths, power and resis-
tance systems, growth models of family therapy, and 
intervention techniques. Emphasis on clinical and 
practical issues, videotape presentations, and families in 
treatment, clinical supervision of ongoing cases. PSY-
CHIATRY

299. Dissertation. (0) | F, W, Sp. Prerequisite: Ad-
vance to candidacy and permission of the gradu-
ate adviser.
Staff
For graduate students engaged in writing the disserta-
tion for the Ph.D. degree. PSYCHIATRY

300. Teaching Practicum. (0) | F, W, or Sp. Prereq-
t. Consent of instructor. Lecture and lab variable. 
Staff
Supervised classroom or tutorial teaching experience. 
PSYCHIATRY

Radiation Oncology

140.01. Radiation Oncology Clerkship—UC. (1.5 per 
week) | Su, F, W, Sp. Prerequisite: Medicine 131A-
B-C
Larson
Participation in examination of cancer patients under 
treatment in radiation oncology. Students participate 
in rounds, conferences, and clinics, and see demonstra-
tions on the use of newer radiotherapeutic tech-
niques. RADIOLOGY

140.06. Radiation Oncology Clerkship—MG. (1.5 
per week) | Su, F, W, Sp. Prerequisite: Medicine 131A-
B-C
Margolis, Meyer
Participation in examination of cancer patients under 
treatment in the Claire Zellerbach Sarcom Tumor In-
stitute at MZ. Students participate in rounds, confer-
ences, and clinics, and see demonstrations on the use 
of newer radiotherapeutic techniques. RADIOLOGY

403. Radiation Oncology Grand Rounds. (1) 
T. Phillips
Round include presentation of problem cases with 
discussions of diagnosis and treatment as well as bio-
logic implications. Frequent guest lecturers are used to 
cover important aspects of oncology. RADIOLOGY

Seminar 3 hours.
T. Phillips
Seminar includes discussion of the diagnostic, treat-
ment, and results of specialty oncology problems, 
including head and neck, gynecologic, otolaryngol-
ogy, pediatric, dermatologic, lymphomatous, and 
general malignancies. RADIOLOGY

423. Therapeutic Treatment Planning. (10) | Su, F, 
W, Sp. Prerequisite: Residents assigned to therapeutic 
radiotherapy. One-month workshop course.
V. Smith
A workshop course to provide residents in therapeutic 
radiotherapy with the elements of treatment planning 
and dose calculations. RADIOLOGY
Weaver
A lecture-seminar course with practical sessions to provide the resident with a basic knowledge of radiological physics with special reference to those aspects relating to therapeutic radiology. RADIOLOGY

454. Clinical Therapeutic Radiology. (1.5 per week) Su, F.W., Sp.
T. Phillips
Residents under supervision, are responsible for diagnosis, treatment, and follow-up of patients referred to radiation therapy from the wards and outpatient clinics. Radiotherapy rounds include discussion of newly referred patients; chart rounds include the discussion of patients under treatment. RADIOLOGY

Radiology

100. Intro to Clinical Radiology. (2) W. Prerequisite: Anatomy 100, 100B, 103, and Pathology 102. Concurrent enrollment in Medicine 131A-B-C. Lecture 2 hours. Lab 1 hour.
J. LaBerge
Course provides instruction in basic aspects of therapeutic and diagnostic radiology and nuclear medicine. Illustration of diagnostic and therapeutic modalities in specific disease states provides instruction in use of radiologic resources. RADIOLOGY

140.01. Advanced Roentgen Diagnosis. (1.5 per week) Su, F.W., Sp. Prerequisite: Radiology 140.03 or 140.04 or 140.17. Consent of instructor.
J. LaBerge
Advanced clinical clerkship for students interested in a career in academic radiology. Students observe clinical work, observe or participate in research, and write a term paper. RADIOLOGY

140.02. Off-Campus Clerkship. (1.5 per week) Su, F.W., Sp. Prerequisite: Medicine 131A-B-C.
J. LaBerge
Clinical clerkship in approved hospital by special arrangement and approval of the chairperson of the department and the dean. RADIOLOGY

140.03. Diagnostic Radiology. (1.5 per week) Su, F.W., Sp. Prerequisite: Third-year Medicine 131A-B-C. Fourth-year Medicine 110 and Surgery 110. J. LaBerge
Clerkship in radiology for third- and fourth-year students. Observation of procedures, review of pathology, pathophysiology, diagnosis, and natural history of selected diseases through study of roentgenograms with case histories. Potential and limitations of radiologic method included. RADIOLOGY

140.04. Nuclear Medicine. (1.5 per week) Su, F.W., Sp. Prerequisite: Medicine 131A-B-C. Hsatter
Observation of basic nuclear medicine procedures and participation in diagnostic tests employing radiotracer tracers.

140.09. Diagnostic Radiology—SFHG. (1.5 per week) Su, F.W., Sp. Prerequisite: Fourth-year standing or consent of instructor.
Minagi
Students serve a clerkship in the Diagnostic Section of the Department of Radiology. They observe performance of radiologic procedures and interpretation of films, attend conferences, and learn basic philosophy of conducting radiologic examinations and the basic rules of interpretation. RADIOLOGY

140.14. Diagnostic Radiology—VAF & VMIC. (1.5 per week) Su, F.W., Sp. Prerequisite: Fourth-year standing, or third-year standing with consent of instructor.
M. Anderson, J. L. Williams, and Staff
Acquaints students with available techniques in diagnostic radiology, including nuclear medicine, ultrasound, computed tomographic scanning, angiography, other special procedures, conventional X-ray examination, fluoroscopy, and provides an introduction to "interest" film interpretation. Students have assignment at VAF, VMIC, community hospitals. RADIOLOGY

140.16. Basic Nuclear Medicine—STA. (1.5 per week) Su, F.W., Sp. Prerequisite: Fourth-year standing.
Corbus, Tousy
Imaging techniques including nuclear radiology, single photo emission tomography, and computerized processing at St. Agnes Medical Center, Fresno. RADIOLOGY

140.17. Clinical Radiology. (1.5 per week) Su, F.W., Sp. Prerequisite: Consent of instructor.
Gooding
Students may be involved in clinical diagnostic procedures such as body and neuro computed tomography, ultrasound, fluoroscopy, chest, bone, and interventional radiology; with concentration on any one of these areas. Clinical or research projects may be undertaken with permission of the instructor. RADIOLOGY

150.01. Research in Radiology. (1.5 per week) Su, F.W., Sp. Prerequisite: Medicine 110 and approval of instructor. For students seriously interested in a career in academic medicine. J. LaBerge
A research project under the direction of a member of the faculty. RADIOLOGY

S. Ross, Colangelo
Course demonstrates anatomy in the living through the use of radiographs. Objectives are to show the usefulness of knowing anatomy, to begin acquiring a medical vocabulary, the elements of clinical thinking, and useful habits in learning. RADIOLOGY

S. Ross, Colangelo
A lecture course limited to small groups, with active participation on selected aspects of pathologic anatomy and its usefulness in understanding disease, in origin, development, and clinical manifestations. RADIOLOGY

170.08. Nuclear Medicine Physics & Imaging. (2) F.W., Sp. Prerequisite: BA or M.33 degrees. Given concurrently with Radiology 170.09. Lecture 2 hours a week for 6 weeks. Independent study 10 hours.
Peraza-Macias
Introduction to the physics of radioactivity, nuclear instrumentation and gamma-ray imaging techniques. RADIOLOGY

170.09. Introduction to Nuclear Medicine. (3-5) Su, F.W., Sp. Prerequisite: Given concurrently with Radiology 170.08. Lecture 5 hours a week for 6 weeks. Independent study 10 hours.
D. Price
Introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radioisotopes. RADIOLOGY

Minagi, Lantzi
Weekly seminar covering the radiologic studies of surgical cases emphasizing indications, risks, and information derived from procedures. Active participation in X-ray interpretation is included. RADIOLOGY

177.11. Emergency Radiology. (1) Su. Lecture 1 hour.
Minagi
An elective course for fourth-year medical students. Consideration of the role of the radiologist as a consultant in the emergency room. Topics covered include head injuries, fractures, dislocations, chest, abdominal and genitourinary trauma, and management of contrast reactions. RADIOLOGY

198. Supervised Study. (1-5) F.W., Sp.
J. LaBerge
Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. RADIOLOGY

199. Laboratory Project. (1-5) F.W., Sp.
J. LaBerge
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. RADIOLOGY

220. Radiol Phys for Physicians. (2) F.W., Sp. Prerequisite: Bachelor's or higher degree in the physical sciences.
Staff
Seminar provides physicists with an in-depth knowledge of radiological physics. RADIOLOGY

Thoeni
Faculty from radiology and other departments lecture and discuss various diseases of all systems of the body. Residents prepare case histories stressing roentgen findings and correlate with clinical and laboratory work, special studies, library and film research. RADIOLOGY

401. Diagnostic Case Rounds. (2) Su, F.W., Sp. Thoeni
Films of interesting cases from the daily work are presented and reviewed. Roentgenograms of surgically and pathologically proved cases are correlated with the gross and microscopic pathology findings. RADIOLOGY

402. Diagnostic Specialty Seminar. (3) F.W., Sp. Required for UC residents in diagnostic radiology. Thoeni
Seminars require preparation and presentation of roentgen findings on patients under discussion at medical, surgical, pediatric, obstetric and gynecologic departmental conferences and seminars on congenital heart disease, disease of the gastrointestinal tract, and orthopedics. RADIOLOGY

Minagi
Role of radiologist as consultant in the emergency room; head injuries, fractures, dislocations, chest, abdominal and genitourinary trauma; management of contrast reactions; indications for, construction of, interpretation of special radiologic procedures. RADIOLOGY

Numerous research projects are conducted in the department and facilities are available for new ones. Residents are encouraged to take advantage of these opportunities. RADIOLOGY

Minagi
Interdepartmental seminars in which the radiological picture of problem cases either diagnostic or therapeutic nature is presented. These include surgical, medical and radiological rounds, nominal care rounds, conferences, seminars, and other department grand rounds. RADIOLOGY

Akin
Interdepartmental seminars in which the radiological picture of problem cases either diagnostic or therapeutic nature is presented. These include medical-surgical, clinico-pathological, chest, medical X-ray,....
Removable Prosthodontics


Sharma
Course is designed to acquaint residents with the physical principles of diagnostic radiology. Topics may include generation and transmission of radiological information, X-ray image conversion, recording methods, and special-purpose equipment. CT and ultrasound physics are discussed. RADIOLOGY

419. Growth Kinetics—Cells & Tumors. (2) Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Chen, Pui An analysis of cell population growth in tissues, tumors, and culture. Emphasis is given to radioactive tracer techniques and in vitro biochemistry and experimental methods for studying cell proliferation in vivo and in vitro. RADIOLOGY

420. Nuclear Medicine Seminars. (1) F, W, Sp. Hartman and Staff Rotating assignments of topics of interest to residents in nuclear medicine training programs in all affiliated hospitals. Critical reviews of available information in limited areas are used to provide a broad review of nuclear medicine for all residents.

Restorative Dentistry


Hauser and Staff
Clinical experience in diagnostic and therapeutic nuclear medicine to satisfy requirements of American Board of Radiology for certification in diagnostic radiology and radiation therapy. RADIOLOGY


J. Allibone
Residents, under supervision, carry out radiological examination and interpretation of X-rays of patients referred from wards and outpatient clinic. The chief resident has certain administrative duties relative to the resident teaching program.


Akin
Residents, under supervision, are responsible for the diagnostic activities of the department, including diagnostic consultations and reports, history-taking, and physical examinations. In addition, the chief resident has certain administrative duties relative to the resident teaching program.


SFOMI Minagi
Residents are responsible for the diagnostic activities of the department under the direction of staff radiologists, including diagnostic consultations and reports, history-taking, and physical examinations.

Removable Prosthodontics


Sharma
Course is designed to acquaint residents with multidisciplinary aspects of maxillofacial prosthodontics. Lectures will be given on maxillofacial prosthetic techniques, oncology head and neck surgery, plastic surgery, oral surgery, therapeutic radiology, psychology and related oral biology.


Sharma
Residents and advanced prosthodontic students will observe and perform maxillofacial prosthetic services for patients in the Maxillofacial Clinic. A detailed case history will be required each quarter. Attendance at related radiology and laboratory classes is a prerequisite. LECTURE DENT

Restorative Dentistry

110A. Introduction to Dental Morphology. (1) F Prerequisite: Concurrent enrollment in RD 110A. Lecture 1 hour.

Birch
Introductory lecture topics include tooth morphology, development and formation, and permanent dentition.

110B. Applied Dental Morphology. (2) W. Prerequisite: RD 110A, RD 110B, RD 110C. Lecture 1 hour.

Birch
Continuation of introductory lecture course. Topics include the application of individual tooth and arch forms to interarch relationships and the instrumentation and procedures in cutting tooth structure.


D. Graham
Courses will be on the fundamentals of preparing teeth to receive amalgam and gold inlay restorations with emphasis on the placement of amalgam restorations.

113B. Occlusion. (3) W. Prerequisite: RD 110A, RD 115A. Lecture 1 hour.

C. Neill
Introductory lecture course. Topics include the application of individual tooth and arch forms to interarch relationships.

113C. Occlusion. (1) Sp. Prerequisite: RD 113B. Lecture 1 hour.

C. Neill
Continuation of introductory lectures on the topics of the application of individual tooth and arch forms to interarch relationships.

115A-B. Dental Morphology. (6-8) F, W. Concurrent enrollment in RD 110A and 111B required. Lab 3 hours, Fall, 9 hours winter.

Hamaguchi
Laboratory course to study tooth morphology, occlusion, and the relationship of tooth form and function. Students will complete a series of wax-ups on casts mounted on the Dentaural articulator.

115C. Dental Morphology. (3) Sp. Concurrent enrollment in RD 113C. Lecture 1 hour.

Hamaguchi
Continuation of RD 115A-B to include laboratory experience in mounting dental casts, centric relation, and adjustments of casts to achieve anatomical relationships.

11510. Operative Dentistry laboratory. (1) Sp. Lab 3 hours.

Graham, Yip
Laboratory course provides the fundamentals of preparation of teeth to receive restorations and the basic principles of cavity design and preparation for amalgam restorations.

120A. Procedures in General Restor Dent. (6) F Prerequisite: RD 111C, RD 113C, RD 113C, RD 113C. Concurrent enrollment in RD 122A required. Lecture 6 hours/week for 4 weeks Pre-E, 2 hours/week for 10 weeks.

Davis, Brady, Kabli, Graham
Lecture course on the materials and procedures used in the dental casting process and how to use the casting process to fabricate high quality cast restorations. Additional lectures will provide information on the materials and procedures for tooth-colored restorations.

120B. Procedures in General Restor Dent. (1) W. Prerequisite: RD 120A, RD 125A. Concurrent enrollment in RD 122B. Lecture 1 hour.

Kahl, Mendoza
Lectures on the indications for and considerations in the use of porcelain veneer crowns as retainers for fixed partial dentures and as single restorations. Lectures will also be presented on the design, material selection, and construction of pontics for fixed partial dentures.

120C. Procedures in General Restor Dent. (1) Sp. Prerequisite: RD 120B, 125B. Concurrent enrollment in RD 125C. Lecture 1 hour.

Kahl, Mendoza
Lectures on the composition, physical properties, and appropriate selection of porcelains used in PBM restoration, the basis for shade selection and control when using PBM porcelains, and esthetic alternatives to PBM restorations.

112B. Intro to Removable Prosthodontics. (3) W. Prerequisite: RD 121A. Concurrent enrollment in RD 125B required. Lecture 1 hour.

Dellings
Introduction to advanced removable prosthodontics. Students will become familiar with alternative modalities of treatment for the partially edentulous patient as well as identifying and managing special situations in complete denture construction and repair.

112C. Intro to Removable Prosthodontics. (3) Sp. Prerequisite: RD 121B. Concurrent enrollment in RD 125, 125C required. Lecture 2 hours.

Trow
Continuation of introductory lectures on the theory and clinical rationale of complete denture prosthodonetics.

123. Occlusion. (3) W. Prerequisite: RD 120B, RD 122B. Concurrent enrollment in RD 125C required. Lecture 1 hour.

Neill
Course goal is to gain knowledge of the field of temporomandibular disorders, and the current state of the art of occlusion and TMJ.


Marshall
Lectures focus on characteristics of the oral environment important to materials, basic concepts relating to the structure, properties, and performance of materials; the arrangement, bonding, composition, and defects found in basic metallic materials, including metals, ceramics, polymers, and composites.

125A. Techniques in General Restorative Dentistry. (3) F. Brady, Kabli, Davis, Graham
Laboratory instruction on preparing teeth to receive restorations; the basic principles of cavity design and preparation for amalgam, tooth-colored , and cast gold inlay and onlay restorations, preparing teeth for single unit partial and full metal crowns, design and fabrication of metal restorations, techniques in assembly and soldering of components of fixed partial dentures.

125B-C. Fixed Prosthodontics Laboratory. (3) W, Sp. Prerequisite: Concurrent enrollment in RD 120B and 120C (Sp). Lab 5 hours spring, 6 hours winter.

Kahl, Mendoza
Laboratory instruction on preparation for and construction of maxillary posterior fixed partial dentures and a provisional bridge; preparing anterior teeth for partial crowns, constructing metal copings for porcelain bonding; applying porcelain to metal copings.

RESTOR.DENT

125.10B. Removable Partial Denture Prosthodontics Lab. (2) W. Prerequisite: R.D 121A, 125.10A. Concurrent enrollment in R.D 121B required. Lab 6 hours.

Definition: Laboratory course introduces second-year dental students to the clinical rationale and laboratory procedures of removable partial denture prosthodontics and prepares the student for the clinical practice of this phase of dentistry. RESTOR.DENT

125.10C. Removable Prosthodontics Lab. Complete Dentures. (2) Sp. Prerequisite: R.D 121B, 125.09B. Concurrent enrollment in R.D 121C required. Lab 6 hours.

Trawek: Continuation of introductory laboratory instruction on the fabrication and repair of complete dentures. RESTOR.DENT

126.01. Introduction to Endodontics. (2) F. Lecture 1 hour. Lab 3 hours.

Goodis: Introductory lectures and laboratory in endodontics. Lectures discuss nonsurgical endodontics and the rationale of endodontic treatment. Laboratory introduces students to the armamentarium and clinical techniques of nonsurgical endodontics. RESTOR.DENT

126.02. Introduction to Endodontics. (2) W. Lecture 1 hour. Lab 3 hours.

Brady, Goodis: Lectures discuss selection of appropriate treatment for the build-up of missing tooth structures in vital and pulpless teeth, identification and removal of caries from infected teeth, and selection of appropriate bases, liners, and interim restorations. Laboratory provides experience with the armamentarium and clinical techniques. RESTOR.DENT

127. Esthetic Dentistry. (2) Sp. Lecture 1 hour. Lab 3 hours.

Brady: Lectures discuss esthetic alternatives in dentistry including the indications and contraindications for various materials and procedures. The course emphasizes porcelain veneers and conservative posterior restorations. Laboratory instruction demonstrates how to prepare teeth for esthetic restorations and familiarizes students with various materials and clinical techniques. RESTOR.DENT

130.01. Clinical Procedures in General Restor Dent. (1) SS1, SS2. Prerequisite: R.D 120C, 121C, 123, and 126C. Lecture 1 hour.

Pelzner: Lecture taken concurrently with R.D 139 intended to supplement the beginning clinician’s knowledge of materials, techniques, and management of the situations most frequently encountered early in the student’s clinical experience. RESTOR.DENT

130.02. Clinical Procedures in General Restor Dent. (1) F. Prerequisite: R.D 130.01, 130.02. Lecture 1 hour.

J. White: Course is designed to provide clinically relevant material in conjunction with clinical practice. Major topics include the biological and mechanical basis of operative dentistry, preparation design, clinical considerations in using composite resins, recurrent caries and bonding to tooth structure, and clinical considerations in using dental amalgam. RESTOR.DENT

130.03. Clinical Procedures in General Restor Dent. (1) W. Prerequisite: R.D 130.02. Lecture 1 hour.

Eagle: Lecture series covering the basic procedures and materials used for single-tooth restorations using direct filling gold and cast gold. RESTOR.DENT

130.04. Clinical Procedures in General Restor Dent. (1) Sp. Lecture 1 hour. Prerequisite: R.D 130.03.

Lacy: Survey of new dental materials and clinical techniques in esthetic restorative dentistry, i.e., esthetic posterior restorations, anterior veneers, bonded bridges, and intraradicular porcelain repair. Discussion includes advantages, disadvantages, indications, and contraindications of treatment options presented. RESTOR.DENT

131. Biomaterials Science. (1) F. Prerequisite: R.D 130.01. Lecture 1 hour.

Goodis: Course will emphasize the applied aspects of dental materials presented in the first and second year. Students are expected to develop a working knowledge of specific products, their name, type, and application. RESTOR.DENT

131.01. Clinical Procedures in Removable Prosthodontics. (1) SS1, SS2. Prerequisite: R.D 121C and 125.09C. Lecture 1 hour.

Finzen: Course begins exposure to the clinical procedures of complete denture diagnosis, treatment planning, and fabrication. It draws background information from concepts presented in the second year preclinical course, but the emphasis is on clinical management of edentulous patients. RESTOR.DENT

131.02. Clinical Procedures in Removable Prosthodontics. (1) F. Prerequisite: R.D 131.01. Lecture 1 hour.

Finzen: Course continues topics pertinent to complete denture fabrication that were started in R.D 131.01. It also begins exposure to the clinical procedures for the diagnosis, treatment planning, and design of removable partial dentures. RESTOR.DENT

131.03. Clinical Procedures in Removable Prosthodontics. (1) W. Prerequisite: R.D 131.02. Lecture 1 hour.

Vinehara: Course describes the clinical procedures involved in removable partial denture fabrication. It reviews and reinforces design concepts previously given during the second and third year. RESTOR.DENT


Curtis: Course presents various topics in the field of prosthodontics. Areas pertinent to removable partial dentures are covered along with the subjects of dental implants, maxillofacial, and geriatric prosthodontics. RESTOR.DENT

132.01. Endodontics: Theory. (1) F. Prerequisite: R.D 130.01. Lecture 1 hour.

Goodis: Course is designed to teach the third-year dental student proper diagnostic procedures for nonsurgical endodontics cases and to instruct in proper methods of emergency treatment. Course includes pulpal and periapical pathological entities, and correlates those entities with diagnostic methods. RESTOR.DENT


Goodis: Course is designed to expose third-year dental students to adjunctive endodontic procedures necessary to supplement their knowledge of endodontic procedures. RESTOR.DENT

133.01. Clinical Procedures in Fixed Prosthodontics. (1) F. Prerequisite: R.D 130.01, 131.01. Lecture 1 hour.

Teusler: Lecture series designed to assist the student in the clinical management of patients undergoing fixed partial denture construction. The lectures will amplify, extend, and update the theoretical and laboratory experience and provide clinical reference to the material covered in the previous two years. RESTOR.DENT

133.02. Clinical Procedures in Fixed Prosthodontics. (1) W. Prerequisite: R.D 133.01. Lecture 1 hour.

Teusler: Lecture series designed to assist the student in the clinical management of patients undergoing fixed prosthodontic treatment. Topics will include technical and biological considerations for completing the clinical and laboratory steps of shade selection, impressions, fabricating provisional restorations, and cast articulation. RESTOR.DENT

133.03. Clinical Procedures in Fixed Prosthodontics. (1) Sp. Prerequisite: R.D 133.02. Lecture 1 hour.

Teusler: Continuation of lecture series to assist the student in the clinical management of newer and more complex fixed prosthodontic techniques. The traditional will be compared to the contemporary and the rationale for specific treatments in specific situations will be discussed. RESTOR.DENT

137. Clinical Endodontics. (0-0-5) Su, F.W. Prerequisite: R.D 120C, 125C, 126C. Concurrent enrollment in R.D 130 lecture series required. Clinic variable

Goodis: Clinical instruction and practice in the discipline of endodontics. Students are expected to pass a qualifying clinical examination by the end of spring quarter of the third year. RESTOR.DENT

138. Prosthodontics Clinic. (0-0-5) Su, F.W. Prerequisite: R.D 120C, 125C, 126C. Concurrent enrollment in R.D 130 lecture series required. Clinic variable

Finzen: Clinical instruction and practice in the discipline of prosthodontics. Students are expected to pass a clinical qualifying examination by the end of spring quarter of the third year. RESTOR.DENT

139. Clinical Restorative Dentistry. (0-0-5) Su, F. W. Prerequisite: R.D 120C, 125C, 126C. Concurrent enrollment in R.D 130 lecture series. Clinic variable

Eagle: Clinical instruction and practice in oral diagnosis and treatment planning, and restorative dentistry. Students are required to pass a series of qualifying examinations by the end of spring quarter of the third year. RESTOR.DENT

147. Clinical Endodontics. (0-2) Su, F.W. Prerequisite: Completion of R.D 130.04, 137, 138, 139. Must be taken concurrently with R.D 149. Clinic variable

Goodis: Continuation of clinical instruction and practice in the discipline of endodontics. Students are expected to pass a clinical qualifying examination by the end of spring quarter of the fourth year. RESTOR.DENT

148. Clinical Prosthodontics. (0-5) Su, F.W. Prerequisite: Concurrent enrollment in R.D 149. Clinic 9 hours.

Finzen: Continuation of clinical instruction and practice in the discipline of prosthodontics. Students are expected to pass a clinical qualifying examination by the end of spring quarter of the fourth year. RESTOR.DENT


Pelzner: Continuing clinical instruction and practice in oral diagnosis, treatment planning, and restorative dentistry. Students are expected to pass a series of qualifying examinations (clinical) before the end of spring quarter. RESTOR.DENT

Finzen

Current and past prosthodontic literature will be studied and discussed. Students will learn to distinguish between appropriate, controversial, and inappropriate prosthodontics literature. RESTOR DENT 171A-B-C-D-E-F-G-H. Prosthodontic Treatment Planning. (0-2) A; E: Su, B; F: C, G: W-D, H: Sp. Prerequisite: Enrollment in Postgraduate Prosthodontics Program. Lecture 1 hour. Seminar 1 hour. Two-year course.

Finzen

A treatment plan will be developed and refined for each patient after all diagnostic aids have been gathered. Students will be responsible for establishing an initial treatment plan prior to the seminar and for justifying it before the group. RESTOR DENT 172A-B-C-D-E-F-G-H. Prosthodontic Procedures. (0-2) A; E: Su, B; F: C, G: W-D, H: Sp. Prerequisite: Enrollment in Postgraduate Prosthodontics Program. Lecture 1 hour. Seminar 1 hour. Two-year course.

Finzen

Staff training programs consultants will present lectures on various aspects of fixed and removable prosthodontics and related subjects on a graduate level. RESTOR DENT 174. Nutrition. (3) SS1. Prerequisite: D.D.S., D.M.D. or equivalent degree. Enrollment in a post-doctoral specialty program. Seminar 1 hour. M. Wilkins

Course will emphasize the dietary requirements for the geriatric prosthodontic patient. A dietary analysis of the student and a prosthodontic patient currently under treatment will be required. RESTOR DENT 175B-C. Biomaterials Science. (2-2) W: Sp. Prerequisite: D.D.S. degree. Open to dental residents, postdoctoral and postgraduate students only Seminar 2 hours. J. Levenson

Course covers biomaterials science as applied to clinical restorative dentistry with emphasis on restorative material selection and use based on acceptable physical and biological properties. Current research and new restorative materials will be discussed. RESTOR DENT 176. Craniofacial Pain-TMJ Seminar. (0-8) Su, E, W. Sp. Prerequisite: Enrolled postdoctoral specialty students. Four-year dental students may take this course on an elective basis with the permission of the instructor Seminar 2 hours.

McNeill

Allows residents to finish their training with a basic ability to recognize, diagnose, and treat craniofacial pain and TMJ dysfunction in an interdisciplinary envi-

ment. The treatment team will include medical and dental specialists. RESTOR DENT 179.03. Temporomandibular Joint Clinic. (0-4) Su, E, W. Sp. Prerequisite: D.D.S. degree. With consent of instructor, fourth-year students may take this course as an elective. Clinic 3 hours per week.

McNeill

Participation in the Temporomandibular Joint Clinic applying knowledge of history-taking and differential diagnosis using diagnostic and treatment techniques. RESTOR DENT 180. New Approaches in Removable Prosthodontics. (1) F, W. Prerequisite: Lecture 1 hour.

Lacy

Survey of new materials and clinical techniques used in contemporary dental practice with particular emphasis on cosmetic dentistry. Topics may include, but are not limited to, dentin-bonding systems, etched porcelain restorations, methods of internal repair of fixed restorations, esthetic posterior restorations, alternative designs for fixed bridgework, and newly introduced products. RESTOR DENT 180.05. Prosthodontic Procedures. (1) W: Sp. Lecture 1 hour.

Brigante

An elective course offering instruction in procedures and materials other than those normally used in the clinic. RESTOR DENT 181. Scientific Writing in Dentistry. (2) W. Prerequisite: Registered dental student in good standing. Limited to 20 students. Conference 2 hours.

White

Students will produce student research journal containing literature reviews and overview of research done by dental and dental hygiene students. Topics include writing review articles, word processing techniques, communication skills, and the steps involved in the production of a journal. RESTOR DENT 181.02. Advanced Endodontics Concepts. (1) W: Sp. Lecture 1 hour.

Berkdard

Course will examine endodontic treatment with emphasis on endodontic rehabilitation of anterior teeth, advanced techniques for use in the management of root canal treatment plan. RESTOR DENT 182. Implant Prosthodontics. (1) F, E, W: Sp. Prerequisite: Lecture 1 hour. Finzen, Smith

An elective lecture course on the rehabilitative aspects of dental implants. Topics include the types of dental implants, diagnostic evaluation, placement techniques, and the applications and uses for the various types of dental implants. RESTOR DENT 182.03. Senior Restorative Elective. (1) F. Prerequisite: Lecture 1 hour. Mali

Advanced clinical restorative elective. Lectures describe the restorative general practice. Topics include office layout, laboratory relations, treatment limitations, financial arrangements, scheduling, and treatment failures. RESTOR DENT 182.05. Advanced Partial Denture Design. (3) Sp. Prerequisite: Completion of three removable partial denture courses. Consent of instructor. Enrollment limited to 5 students. Seminar 1 hour.

Finzen and Mali

Seminar to discuss current concepts of removable partial denture design. The emphasis will be on designing RPD’s for extreme situations, but more complex designs will also be presented. Students will be assigned casts to design and articles to review. RESTOR DENT 183. Lasers in Dentistry. (1) SS1, SS2. Prerequisite: Third- or fourth-year standing and satisfactory progress in all required Restorative Dentistry courses. Lecture 1 hour or lab 3 hours.

J. White, Goodis

Course will cover an understanding of laser physics, tissue interaction, safety considerations, clinical research methodology, and applications of the Ne:YAG laser for nonsurgical hard and soft tissue. Laboratory exercise provides hands-on experience. RESTOR DENT 183.05. Advanced Complete Prosthodontics. (1) F. Prerequisite: Fourth-year standing. Seminar 1 hour. Finzen

Seminar to discuss concepts of complete denture fabrication and maintenance reviewing the rationale for procedures normally used in the clinic, and the selection of the appropriate alternative procedures where indicated. RESTOR DENT 186. CAD/CAM: Application to Dentistry. (1) W. Sp. Prerequisite: Second-, third-, or fourth-year dental student. Limited to 20 students. Lecture 2 hours for 4 weeks, Lab 1 hour for 3 weeks.

Fett, Setcoe

Course will concentrate on the use of computer-aided fabrication of dental restorations. RESTOR DENT 186.04. Restorative Materials Procedures. (1) E, W. Sp. Prerequisite: Open to fourth-year students with the approval of the chairperson of the division. Enrollment limited to 3 students. Birtell

Techniques and procedures for use in fabrication of dental restorations using a variety of materials. RESTOR DENT 187. Implant Prosthodontics Clinic. (0.5-3) Su, E, W. Prerequisite: Fourth-year standing. Must be concurrently taken with RD 182 and the Oral & Maxillofacial Surgery Clerkship (OMMS 189.04). Lab 1-3 hours. Clinic 1-6 hours.

Finzen, Smith

An elective course that provides clinical and laboratory experience in the restorative aspects of dental implantology. RESTOR DENT 187.04. Adv Clinical Operative Dentistry. (0-4) Su, E, W. Sp. Prerequisite: Fourth-year standing and permission of instructor. Clinic 3-12 hours.

Birtell

Advanced instruction in clinical operative dentistry with emphasis on quadrant dentistry and complex restorative procedures. RESTOR DENT 188.02. Advanced Clinical Endodontics. (0-4) W. Prerequisite: Fourth-year standing. Clinical variable.

Birkhoard

Advanced instruction in the field of clinical endodon-

tics. RESTOR DENT 199.01. Biomaterials Laboratory Project. (1-5) F, W. Sp. Prerequisite: Consent of instructor and approval of the chairperson of the department. Lab 3-15 hours.

W. Marshall, S. Marshall, Lacy

A laboratory research project under direction of a member of the faculty with the approval of the instructor of the laboratory. RESTOR DENT 199.02. Endodontics Laboratory Project. (1-5) F, W. Sp. Prerequisite: Consent of instructor and approval of the chairperson of the department. Lab 3-15 hours.

Goodis, Birkhoard, Srinivasan

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. RESTOR DENT 199.03. Fixed Pros Laboratory Project. (1-5) F, W. Sp. Prerequisite: Consent of instructor and approval of the chairperson of the department. Lab 3-15 hours.

Tielker, Davis

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. RESTOR DENT 199.04. Oper Dent Laboratory Project. (1-5) F, W. Sp. Prerequisite: Consent of instructor and approval of the chairperson of the department. Lab 3-15 hours.

White, Lacy

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. RESTOR DENT 199.05. Remov Pros Laboratory Project. (1-5) F, W. Sp. Prerequisite: Consent of instructor and approval of the chairperson of the department. Lab 3-15 hours.

Finzen, Hinton

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. RESTOR DENT
210. Advanced Concepts in Biomaterials. (1) Sp. Prerequisite: DDS, DMD, or equivalent degree. Must be enrolled in a postdoctoral specialty program. Lecture 3 hours. Marshall

This graduate core course in biomaterials science introduces the student to the broad scope of the biomaterials field. The basic knowledge of dental material lab is assumed and biomaterials principles are emphasized during discussion of current methods and problems in the field as related to dentistry. RESTOR DENT.

401. Concepts of Occlusion. (2.5) Su. Must be enrolled in postdoctoral prosthodontics program. Lecture 2 hours. Clinic 2 hours. Hong

A review of various concepts of occlusion. Clinical diagnostic procedures and treatment modalities will be reviewed and demonstrated. RESTOR DENT.


The lectures will present the rationale and methodology in the use of fixed appliances to restore the dentition of patients with missing teeth or malocclusion. RESTOR DENT.

411. Advanced Endodontics Seminar. (1) F Lecture 1 hour. Barkhoor, Casanova

The lecture series will focus on the diagnosis and management of complex endodontic problems. RESTOR DENT.

412. Advanced Removable Prosthodontics. (0.5) Su, F, W, Sp. Green

The series will cover the rationale and methodology in using removable prosthetics in the care of patients with complex oral problems. RESTOR DENT.

416. Emergency Dental Care. (0.2) Su, F, W, Sp. Must be first-year student in the AEGD program. Nakahara, Kirkland

A seminar series will provide information on the diagnosis and management of dental and medical emergencies. The trainer will provide consultations and care for patients presenting at the Emergency Room in the Dental Clinic Building. RESTOR DENT.

418. Prosthodontics Clinic. (0.40) Su, F, W, Sp. Must be student in the AEGD program. Clinic rotation 300-1200 hours. Finzen

Advanced prosthodontic clinical treatment utilizing a variety of treatment philosophies, articulating instruments, and techniques. RESTOR DENT.

419. Advanced Compressive Dental Care. (0.45) Su, F, W, Sp. Must be enrolled in the AEGD program. Clinic 24 hours/week for 50 weeks. Kirkland, Nakahara, Chin

Residents will provide advanced compressive dental care. RESTOR DENT.

426. Advanced Endodontics for the Generalist. (2.5) Su. Must be second-year student in the AEGD program. Seminar 1.5 hours. Clinic 4 hours. Casanova

This seminar and clinical course will focus on the diagnosis and management of advanced endodontic problems. RESTOR DENT.

427. Advanced Restorative Dentistry for the Generalist. (0.5) F, W, Sp. Must be second-year student in the AEGD program. Seminar 1 hour. Clinic 2 hours. Lucy

This seminar and clinical demonstration course will provide instruction and supervision in the most recent advances in the management of restorative dental problems. RESTOR DENT.

428. Prosthodontics Clinic. (0.40) Su, F, W, Sp. Clinic 300-1200 hours. Finzen

Advanced prosthodontic clinical treatment utilizing a variety of treatment philosophies, articulating instruments, and techniques. RESTOR DENT.

429. Complex Comprehensive Dental Care. (0.15) Su, F, W, Sp. Must be second-year student in the AEGD program. Clinic 10 hours. Nakahara, Kirkland

 Provision of comprehensive dental care for patients with complex medical and dental needs. RESTOR DENT.

438. Prosthodontics Clinic. (0.40) Su, F, W, Sp. Clinic 300-1200 hours. Finzen

Advanced prosthodontic clinical treatment utilizing a variety of treatment philosophies, articulating instruments, and techniques. RESTOR DENT.

466. TMD & Facial Pain. (0.15) Su, F, W, Sp. Must be first-year student in the AEGD program. McNell, Beckner

The seminar will focus on the rationale and techniques used in the diagnosis and treatment of patients with TMD and facial pain. This will include history-taking, imaging techniques, and behavioral modification. RESTOR, DENT.

489. Advanced TMD for the Generalist. (0.12) Su, F, W, Sp. Must be second-year student in the AEGD program. McNell

This experience will allow the second-year AEGD trainee to provide direct services to patients with temporomandibular dysfuction (TMD). RESTOR DENT.

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Sociology

198. Supervised Study. (1-5) F, W, Sp. Staff

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. SOC BEH SC.

203. Social Psychology of Chronic Illness. (2-3) Sp. Prerequisite: Consent of instructor. Seminar 2 hours. Field work 6-3 hours. Geiger

Course provides discussion of problems faced by chronically ill persons and their families including crisis management, handling symptoms, managing regimen, social isolation, phases of disease, emotional difficulties, patientization, dying, as well as policy issues confronting health care personnel and the general public. SOC BEH SC.

205. Health Professions, Occupations, and Work. (3) F, W, lecture 2 hours. Lab 3 hours. Harrington

Course examines the nature of occupations and professions, their constellation in hospitals and clinics, the medical division of labor, specialties and specialization, professional and occupational ideologies, the sociology of work relationships, careers. SOC BEH SC.


Course introduces students to classical perspectives in medical sociology and development of a critical perspective in the field to serve as a foundation for independent and advanced study in medical sociology. SOC BEH SC.

208. Social Psychol of Health & Illness. (3) F, W, Sp. Prerequisite: Required for doctoral students in sociology. Restriction: Doctoral-level students in nursing or sociology. Lecture 2 hours. Lab 3 hours. Staff

Course examines the relationship of social class, ethnic identification, group membership, family structure, occupation, and life style to health and illness, and therapeutic interactions of lay persons and health professionals. SOC BEH SC.


Course surveys the classical and contemporary sociological issues in theoretical and empirical work on power; explores underlying assumptions and paradigms emerging and reflecting a sociopolitical milieu. The student will analyze literature and debates on power structure research and theory. SOC BEH SC.

212A. Sociological Theory. (3) F Lecture 2 hours. Work 3 hours. A. Szasz

Course examines and evaluates classical and recent contributions to sociological theory. The main objective is the generation of a critical capacity with respect to recovered theory in both its formal and substantive varieties. SOC BEH SC.

212B. Sociological Theory: Contemporary. (3) F, W. Prerequisites: 212A and must be a doctoral student. Lecture 2 hours. Lab 3 hours. Estes

Course examines and evaluates contemporary contributions to sociological theory. The main objective is the generation of a critical capacity with respect to recovered theory in both its formal and substantive varieties. SOC BEH SC.

212C. Sociological Theory. (3) F, W. Prerequisites: 212A and must be a doctoral student. Lecture 2 hours. Lab 3 hours. A. Clarke

Course consists of readings and discussions on interactionist theory in sociology, with emphasis on the origins and development of the Chicago School of Sociology, as well as an examination of the link between philosophy of pragmatism and interactionism. SOC BEH SC.

214A. Field Research. (5) F, W. Prerequisite: Doctoral-level. Lecture 2 hours. Field work 9 hours. Clarke, V. Olsen

Course offers sociological perspectives on the dimensions and properties of research in natural, social settings. Focus is upon developing skills in negotiating ethics, watching, listening, and recording of data. Emphasis is upon developing a conceptual framework in preparation for analysis. SOC BEH SC.

214B. Qualitative Analysis. (5) F, W. Prerequisite: Doctoral level. Sociology 214A. Lecture 2 hours. Field work 9 hours. Clarke, V. Olsen

Course examines modes of analysis applicable to qualitative data; emphasis on methods and procedures exhibited in student-presented data. SOC BEH SC.

214C. Qualitative Analysis. (5) F, W. Prerequisite: Doctoral-level. Sociology 214A and 214B. Lecture 2 hours. Lab 3 hours. Strauss

Course provides qualitative analysis and the development of substantive and formal sociological theory. Emphasis is on student present data and their conceptualization. SOC BEH SC.

215. Organizational Research. (2-4) F, W. Prerequisite: Sociology 216 encouraged but not required. Consent of instructor. Lab 3-9 hours. Conference 1 hour. Lurie

Course will place students in organizations to provide opportunities to conduct research; apply and develop organizational theory; develop applied sociological, practical, and administrative skills and experience for students; and make sociologists attractive and salient to organizations outside academic settings. SOC BEH SC.
216. Comp Origs: National & Intl Perspec. (3) § F Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

Staff
Course is a comparative review of contributions to the sociology of formal organizations of health care. A variety of organizational forms will be considered with special emphasis on national and international health care comparisons. SOC BEH SC


R. Staples
Course explores changing family roles and family relationships in the United States. Discussion of futurist models of family life at risk from sociocultural forces. Special emphasis given to changing sex-role behavior as affecting male-female relationships. SOC BEH SC

218. Adv Topics in the Socio-Analysis of Aging. (2-4) § W,S,Prerequisite: Consent of instructor. Lecture 2 hours. Lab 0-6 hours.

C. Estes
Course is designed for doctoral students investigating advanced research issues preparatory to qualifying examinations. Topics to be analyzed will vary each year, but will be focused upon a specific area. Laboratory assignments are for research activities on special topics in the area of aging. SOC BEH SC

219. Social Policy & Aging. (2-4) § W,S,Prerequisite: Consent of instructor. Lecture 2 hours. Lab 0-6 hours.

C. Estes
Course will provide a critical analysis of major social, economic and political issues of growing old in America; will examine social policy in the public and private sectors including health, income, and social services; and consider prospects for social change and policy in the coming years. SOC BEH SC

220. Sociology Seminar. (2-4) § F,W,S,Prerequisite: Consent of instructor. Required for graduate students in Sociology Seminar 2 hours. Lab 0-6 hours.

C. Estes
Doctoral students discuss methods and problems in current research. Course may be repeated for credit. SOC BEH SC

221A-B-C. Qualifying Examinations. (4-4-4) § A: F,W,S,Br. § F,W,S,Pr. § F,W,S,Prerequisite: Preparation for qualifying examinations. Open to graduate students only. Staff
Qualifying examinations for graduate students in sociology are given in three areas: sociological theory, medical sociology, and special interests. The course will provide for preparation in each area. SOC BEH SC

222. Perspectives on Public Policy. (3) § W,S,Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

R. Newcomer
Course offers systematic overview of health policy in American government—including, dynamics, and conceptual and practical dilemmas. Students will become acquainted with major issues involved in formulating, financing, implementing, and assessing patterns of decision (i.e. policy) established by government. SOC BEH SC

225. Policy & Health Care Institutions. (3) § F,W,S,Prerequisite: N287A or consent of instructor. Lecture 2 hours. Lab 3 hours.

R. Newcomer
Course describes and analyzes approaches to understanding the development of health policy and relationships between health policy and decision making within health care institutions. SOC BEH SCI

226. Families of the Third World. (3) § F,W,S,Prerequisite: Lecture 2 hours. Lab 3 hours.

R. Staples
Course examines family structures and dynamics among Third World peoples. Families to be discussed include Africans and Afro-Americans, Asians, Native Americans, and Latinos. Emphasis is on continuities in the family life of groups of races in their native land and in the United States. SOC BEH SCI

230. Socio-cultural Issues in AIDS. (3) § W,S,Prerequisite: Lecture 2 hours. Lab 3 hours.

C. Harrington
Course examines the history and social psychology of AIDS in relation to health, illness, disease, and death. Includes demographical, institutional, economic, behavioral, and special problems of minorities, women, and caregivers, among policy issues. SOC BEH SCI

232. Adv Problems in Soc Psychology. (2-6) § F,W,S,Prerequisite: Consent of instructor. Seminar 2 hours. Field work 0-6 hours.

V. Olesen
An advanced seminar dealing with theoretical and conceptual problems in various areas of social psychology. Recent developments in theory and concept will be reviewed. SOC BEH SC

233. Sociology of Aging. (3) § W,S,Prerequisite: Lecture 2 hours. Lab 3 hours.

P. Fox, S. Kaufman
Course reviews theories of aging including a review of theories of aging, current and historical trends in aging, factors related to aging, effects of aging on individuals and families, and formal and informal service systems for an aging population. SOC BEH SC

234. Health & Aging. (2-3) § F,W,S,Prerequisite: Consent of instructor. Lecture 2 hours. Lab 0-3 hours.

G. Becker, S. Kaufman
Course examines the health status of the aged in the United States related to biological, behavioral, social, cultural, and environmental factors. Social, cultural, and economic factors affecting organization, financing, and delivery of health care to the aging population will be examined. SOC BEH SC

235. Health Factors in Marriage & Family Behavior. (3) § F,W,S,Prerequisite: Consent of instructor. Graduate standing. Lecture 2 hours. Lab 3 hours.

R. Staples
Course will explore how marital and family behavior generate physical and mental health problems. Topics are family violence, child abuse, sexually transmitted diseases, suicide, psychological problems, and the relationship of marital status to morbidity and mortality. SOC BEH SCI

236. Race/Class/Factors in Hcalth Care Delivery. (3) § W,S,Prerequisite: Consent of instructor. Graduate standing. Lecture 2 hours. Lab 3 hours.

R. Staples
Course examines racial and class membership impact on access to health care services; variations in the quality of those services, and how professional and subspecialty roles in the health care system are organized along racial and class lines. SOC BEH SCI


Staff
Graduate introduction to history of sociological thought. Provides perspective and vocabulary for examining major schools of thought which constitute sociological tradition. Discussion of conceptual paradigms and their relationship to theory will provide understanding of sociological work. SOC BEH SC

238. Advanced Studies in Women's Health. (2-4) § F,W,S,Prerequisite: Seminar 2 hours. Lab 0-6 hours.

Staff
Course offers students opportunity to work with both theoretical and research questions on the subject of women's participation in health and healing systems. Critical questions on appropriate method, relationship to theory, and formulation of questions will be considered. SOC BEH SC

239. Evaluation Research Methods. (3) § F,W,S,Prerequisite: Sociology 214A and 214B. Non-doctoral students may enroll with approval of instructor. Lecture 2 hours. Lab 3 hours.

R. Newcomer
Course analyzes field work as evaluation method, as applied to health care settings and programs, contrasting this approach with quantitative methods predicated on analysis of outcomes. Conduct of such evaluative research, and relationship with audiences, such as policymakers, analyzed. SOC BEH SCI

240. Older Women and Their Health. (2-4) § F, Seminar 2 hours. Optional project for additional units.

C. Estes
Course analyzes postmenopausal women's changing social roles and the interaction of actual and perceived power differences. Topics include demographic issues, economic trends, individual social and health status, policy implications for individuals and society. SOC BEH SCI

241. Women, Work & Health. (2-4) § F,W,S,Prerequisite: Seminar 2 hours. Optional project for additional units.

Staff
How sociocultural systems place women in work roles, the implications for their health, their part in illness prevention and cure of the sick. Analyzes "hidden careers," work and health in developing societies, relationship between work and morbidity-mortality patterns. SOC BEH SC

242. Women's Health: Res. (2-4) § F,W,S,Prerequisite: One or more women's health courses and one survey course in social research methods or social epidemiology Seminar 2 hours. Optional project for additional units.

Staff
An advanced survey of quantitative research methods in analysis of women's health issues. Will focus on data sources, design types, evaluation methods, data analysis, and proposal and report writing. Exploration of current research controversies. SOC BEH SCI

243. Qualitative Research in Women's Health. (2-4) § W,S,Prerequisite: One or more women's health courses and one course in qualitative methods. Doctoral students only. Seminar 2 hours. Optional project for additional units.

Staff
An advanced survey of qualitative research methods in analysis of women's participation in health and healing systems. Will review epistemological assumptions, analytic strategies, design and modes to assure credibility, plausibility. Will focus on data sources and analysis of data. SOC BEH SCI

245. Gender and Science. (3) § F,W,S,Prerequisite: Consent of instructor. Lecture 2 hours. Field work 3 hours.

A. Clarke
Course is a study of historical and contemporary issues in the social construction of biological and medical sciences, epistemological foundations, and implications for feminist perspectives. Focus is on impact of gender on scientific work and includes scientific constructions of gender and women's careers in science. SOC BEH SCI

247. Policy Issues & Political Processes. (3) § F,W,S,Prerequisite: S219, or S260, or equivalent and/or consent of instructor. Lecture 2 hours. Field work 3 hours.

C. Harrington, C. Estes
Course analyzes issues and trends in legislation and politics of health and examines health professions' roles in developing strategies to influence legislative and political processes that affect planning and delivery of care. SOC BEH SC

248. Group Independent Study. (1-4) § F,W,S,Prerequisite: Consent of instructor. Seminar 1-4 hours.

Staff
Groups of two or more students select special problem to investigate on a collaborative basis. These studies may be conducted through readings, the collection or analysis of empirical data, or the development of conceptual analysis or of methodologies. SOC BEH SCI
249. Special Studies. (1-6) § F.E. Sp. Prerequisite: Consent of instructor.
Staff
Students select special problems to investigate on an individual or collaborative basis. These studies may be conducted through readings, the collection or analysis of empirical data, or the development of conceptual analysis or of methodologies. SOC BEH SC

251. Women's Health: Socio-Cultural. (2-4) § W. Prerequisite: Consent of instructor. Lab 0-6 hours. Seminar 2 hours.
Staff
Exploration of relationships between culture and health for women in non-Western societies. Effects of modernization and migration on utilization of traditional and conventional health care and on women's roles as providers will be discussed, and contemporary controversies will be analyzed. SOC BEH SC

252. Women's Health: Socio-Historical. (2-4) § W. Prerequisite: Consent of instructor. Lab 6-6 hours. Seminar 2 hours.
A. Clarke
Sociological analysis of women's health status, roles as providers and patients, and the development of medical ideas about women from a historical perspective. Emphasis on 20th- and 21st-century developments in industrialized societies. SOC BEH SC

A. Clarke
Course focuses on recent theoretical and substantive developments concerning fertility, sexuality, birth control, populations control, abortion, reproductive rights, and pregnancy/childbirth. Examines race and class relations and concerns of the state, science, and medicine. SOC BEH SC

254. Women's Health: Policy Issues. (2-4) § W. Prerequisite: Consent of instructor. Lab 0-6 hours. Seminar 2 hours.
Staff
Consideration of factors in the emergence of issues in women's health and related policy. Perspectives on women as policymakers and the implementation of policy on women's health, participation in care and healing systems and access to training. SOC BEH SC

Staff
Course analyzes social, psychological, and biological perspectives about environmental influences on health. Reviews institutionalization, housing, and potentially sources of environmental stress and their effects on adaptation across the life cycle. SOC BEH SC

256. Introduction to Survey Research. (3) § W. Prerequisites: PSY 180 and PSY 185 or equiv. Restriction: Doctoral level; non-doctoral stu-
dents may enroll upon consent of instructor. Lecture 2 hours. Lab 3 hours.
R. Newcomer
Course introduces sample theory, sample development, and methods of survey research. Course provides rudimentary skills for those conducting their own research and large field surveys. SOC BEH SC

V. Jones
Course explores the diversity of racial and ethnic variation and examines the health and aging experience of minority elderly within the context of families, communities, and the nation. SOC BEH SC

260. Policy and Politics of Health. (3) § W. Prerequisite: Consent of instructor. Lab 2 hours. Field work 3 hours.
C. Harrington
Course examines health care policy and politics in terms of historical and contemporary issues related to access, quality, and cost. Organizational, financing, and labor market issues are included, along with strategies for social change. SOC BEH SC

262. Health Care Economics. (3) § F. Lecture 2 hours. Lab 3 hours.
C. Harrington
Course is an in-depth analysis of economic theories and public and private financing of health care. Focuses on the effects of financing and reimbursement on health care delivery systems, provider behavior, and individuals and families. SOC BEH SC

266. Leadership in Long-Term Care. (3) § W. Prerequisite: Consent of instructor. Seminar 2 hours. Lab 3 hours.
C. Harrington
Seminar examines leadership and administration in long-term care settings. Focuses on organization, budgeting, program planning, management, educational programs, and service delivery with emphasis on creative approaches and testing new models and theories. SOC BEH SC

270A. Quantitative Methods I. (3) § F. Restriction: Doctoral students in Sociology or consent of instructor. Lecture 2 hours. Lab 3 hours.
R. Newcomer
Course examines quantitative research methods used in sociological inquiry. The focus is on scientific models, problem formulation, use of theoretical frameworks, levels of analysis, settings and strategies, specification of constructs, and selection of indices. SOC BEH SC

270B. Quantitative Methods II. (3) § W. Prerequisite: S270A (Quantitative Methods I). Restriction: Doctoral students in Sociology or consent of instructor. Lecture 2 hours. Lab 3 hours.
R. Newcomer
Course examines quantitative research methods including issues of sampling, reliability and validity, data collection, analysis, and inference. The course exami-

270C. Research Methods Seminar. (3) § Sp. Prerequisites: S270A and S270B (Quantitative Methods in Sociological Inquiry I & II). Restriction: Doctoral students in Sociology or consent of instructor. Seminar 3 hours.
Staff
Advanced seminar in research methods. Students will be able to appreciate the complexity of issues and challenges in integrating qualitative and quantitative research traditions through discussion and exercises which formulate alternate research approaches. SOC BEH SC

271. Professional Issues Seminar. (2) § W. Prerequisite: Consent of doctor in Sociology or consent of instructor. Seminar 2 hours.
Staff
Seminar addresses professional and career issues for sociologists, including teaching, research, writing for publication, and presentation of papers at professional meetings. Focuses on career and educational planning, resume development, internships, mentorships, and job interviews. SOC BEH SC

272. Dissertation Research Seminar. (3) § F. Prerequisite: Doctoral student in Sociology or consent of instructor. Seminar 2 hours. Lab 3 hours.
Staff
Course introduces students to research design and execution for the dissertation. Clarification of research question, delineation of work plan, and orientation to relevant theoretical literature and empirical data available. SOC BEH SC

273. Demography of Health and Aging. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.
M. LaPlante
Course provides an overview of demographic studies of morbidity, disability, and mortality. Sociodemographic variations and changes over time in health and mortality profiles of populations and the relationship of morbidity, disability, and mortality trends will be covered. SOC BEH SC

274. Sociology of Human Sexual Behavior. (3) § W. Prerequisite: Doctoral students in Sociology or consent of instructor. Seminar 2 hours. Lab 3 hours.
R. Newcomer
Course examines contemporary sexual problems from a sociological perspective focusing on issues and their relationship to social structure. Topics will include sexually transmitted diseases, teenage pregnancy, sexual violence, sexual harassment, and incest. SOC BEH SC

E. Lurie
Course considers current research, policy, and funding issues with respect to the mentally ill elderly, within the context of the epidemiology of treatment options, utilization patterns, formal and informal treatment systems, and special issues of the mentally ill elderly. SOC BEH SC

276. Multidisciplinary Geriatric Assessment. (1-3) § W. Sp. Lab 3-9 hours.
G. Becker, S. Kaufman
Course provides clinical experience in multidisciplinary assessment for sociologists, nurses, physicians, and other clinicians. Course involves applications of social, psychological, economic, and other factors in assessment. SOC BEH SC

277. Sociology of Disability. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.
M. LaPlante
Course covers sociological models and theories of disability and handicap. Areas to be covered include definitions, utility of role theory, models of identification and causation, and sociological perspectives on disability policy. SOC BEH SC

R. C. Fillmore
Course examines alcohol and drug use from multiple theoretical perspectives in various historical and cultural contexts. Examines the distribution of alcohol and drug use across and within societies and various political and their consequences for the counselor and management. SOC BEH SC

B. Johnstone
Course introduces social and biological perspectives on nutrition and chronic illness. Examines interactions between nutritional factors, chronic illness, the aging process, alcohol and substance abuse, and other such factors. Emphasizes a concise of empirical re-

280. Meta-Analyses in Health Research. (3) § W. Prerequisite: Consent of instructor. Seminar 2 hours. Lab 0-3 hours. Seminar 2 hours. Offered in alternate years. Not offered 1993-94.
R. C. Fillmore
Course introduces meta-analysis techniques and applications in health research, including research design, sampling and data collection, and analytical techniques and software. Uses examples from drug and alcohol studies, and other health care evaluation studies. SOC BEH SC

Staff
Course examines how health care, a scarce resource, is divided among the members of society, including theories from philosophy, medical ethics, economics, public policy, sociology, and psychology. Examines justice and fairness issues for different groups and among different health policies. SOC BEH SC

A. Clarke
Course examines early functionalist and Marxist theories, Kuhn's work, social constructionism, ethnomethodological, interactionist, neo-functionalist, critical, and neo-Marxist perspectives. Focuses on laboratory, sociocultural, and representational studies and organization and funding. Links history and philosophy. SOC BEH SC

283. Selected Topics/Health Economics. (2-3) W, Prerequisite: S262 (Health Care Economics). Lab 0-0: hours, Seminar 2 hours.
R. Miller
Course examines selected topics in health care economics, with attention to basic economic theory of supply and demand for health care services and health insurance. Includes national health insurance proposal and the Canadian health care system. SOC BEH SC

C. Harrington, W. Holzemer
Course examines research in social and behavioral aspects of AIDS/HIV-related illnesses and critiques methods, data collection, and analyses aspects of the research as well as the theoretical bases for the SOC BEH SC

285. Sociocultural Variations in Health. (3) S, Prerequisite: Lecture 2 hours. Field work 3 hours.
R. Stappes
Course addresses variations in health attitudes and practices among diverse groups in the United States, with implications for nursing practice. SOC BEH SC

286. Women, Health, and Healing. (2-4) S, Prerequisite: Lecture 2 hours. Field work 0-0: hours.
A. Clarke
Course examines women's participation in formal and informal health and healing systems, with emphasis on health problems, recruitment to health professions, images of women in health and illness, and women as providers. Issues for minority women of color are highlighted. SOC BEH SC

287. Black Families in America. (2-3) W, Prerequisite: Lecture 2 hours. Lab 0:0-0:30 hours.
R. Stappes
Course provides a sociological interpretation of the black family institution in the United States of America. It examines black family culture, values, roles, socialization processes and class and gender variations. Emphasis is on changes in the last thirty years. SOC BEH SC

289. Dissertation. (0) W, S, Prerequisite: Advancement to candidacy and permission of the gradu- ate advisor.
Staff
For graduate students engaged in writing the dissertation for the Ph.D. degree. SOC BEH SC

Speech and Hearing Science

290. Basic Hearing Mechanisms. (4) S, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 1 hour. Offered in alternate years. Offered 1993-94.
Staff
Lectures and laboratory demonstrations reviewing surgical and comparative anatomy of the ear, cochlear development and mechanisms, hair cell transduction, comparative physiology of hearing, bases of hearing loss, and strategies for objective evaluation of inner ear function in animals and man. OTOLARYN

291. Auditory Coding. (4) S, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 1 hour. Offered in alternate years. Offered 1993-94.
Staff
Lectures and laboratory demonstrations covering such topics as the auditory system, hearing, and psychoacoustics of speech coding; cochlear prostheses; central auditory system organization; biofeedback and behavioral aspects of auditory brainstem function in animals and man. OTOLARYN

292. Forebrain Mechanisms. (4) W, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 1 hour. Offered in alternate years. Offered 1993-94.
Staff
Topics include forebrain representation of complex stimuli (including speech) and of sound localization (including echolocation in bats and whales); cognitive development related to hearing; auditory consequences of such pathologies as brain lesions and au- tomn; and objective assessment of forebrain mecha- nisms. OTOLARYN

Turner
This course is part of a two-year core curriculum covering the communicative neurosciences. It is the first course in the sequence which considers speech and language. It will cover basic acoustics, phonetics, the anatomy and physiology of speech production, and theories of speech perception. OTOLARYN

294. Language Science. (3) S, Prerequisite: Lecture 2.5 hours. Lab 2 hours. Offered in alternate years. Not offered 1993-94.
Turner
This is the final course in a 2-year sequence (201, 202, 203, 205). The objective of the core curriculum is to provide students with a fundamental knowledge of the speech and hearing sciences. This course covers basic language science with emphasis on the cortical processing of language. OTOLARYN

295. Fundamentals of Auditory Neurobiology. (1) W, S, Prerequisite: Consent of instructor. Lecture 1-3 hours.
Schreiner
Reading and critical discussion of selected original research papers on the anatomy and physiology of the auditory system. Each level of the auditory nervous system from the periphery to the cortex will be con- sidered in turn. OTOLARYN

296. Sound and Sound Analysis. (4) S, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 2 hours. Offered in alternate years. Offered 1993-94.
Staff
Review of the physics of sound as it applies to the study of speech and hearing. Theoretical and practical approaches to the analysis of signals and the funda- mental systems of analysis. Practical application of acoustic research equipment. OTOLARYN

297. Laboratory Rotations. (1-4) W, S, Prerequisite: Consent of instructor. Lecture 3-12 hours.
Staff
For students who arrange a rotation in the research laboratory of a faculty member. Students will participate in an ongoing research project and review relevant literature. OTOLARYN

298. Speech and Hearing Science. (1) W, S, Prerequisite: Seminar 1 hour.
Staff
This seminar series will consist of weekly presenta- tions by the faculty, students, research personnel in the department, and visiting scientists. Topics will cover the range of speech and hearing sciences, including anatony, physiology, psychoacoustics, speech, clinical diagnosis, and therapy. OTOLARYN

299. Electrophysiology and Audiology. (4) S, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 3 hours.
Gard and Staff
Review of the development of electrophysiological approaches to studying auditory functions with particular emphasis on auditory-evoked response measurements. Lectures and laboratory exercises will stress equipment design and calibration, data collection, analysis, and interpretation. OTOLARYN

299. Auditory Psychophysiology. (3) S, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 3 hours.
Staff
A coordinated coverage of basic auditory functions. The physiological of the peripheral auditory system and basic perceptual correlates. Physics of sound, cochlear mechanics and microphonics, VIII nerve physiology,thresholds, masking, pitch, loudness, temporal adapta- tion, frequency analysis, binaural perception, and processing are included. OTOLARYN

299. Animal Psychophysics. (3) S, Prerequisite: Seminar 3 hours.
Jenkins
Speech and Hearing Science/Stomatology

Reading and discussion of selected papers on modern behavioral methods for obtaining information on the sensory capacities of animals. Students will have access to equipment and a microcomputer so that one or more behavioral methods can be implemented. OTOLARYN

225. Inner Ear Forms and Function. (3) S, Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.
Lasko
This course will consider the gross morphology, histology, biochemistry, and function of the mammalian cochlea and vestibular sensory organs. Instruction will include lectures, demonstrations, discussions, and student presentations. OTOLARYN

226. Special Studies. (1-5) W, S, Prerequisite: Consent of instructor.
Staff
Directed reading and laboratory work in the auditory process and its disorders. OTOLARYN

229. Independent Study. (1-5) W, S, Prerequisite: Consent of instructor.
Staff
Students and instructor develop jointly a study plan involving tutorials, reading, and laboratory work. Students engage in intensive exploration of specific topics related to the anatomic, physiologic, psychophysiologic, and behavioral aspects of the sounds and hearing sciences. OTOLARYN

250. Research. (1-8) W, S, Prerequisite: Consent of instructor.
Staff
Students participate in ongoing research or initiate independent research project under guidance of supervising instructor. Assignments include literature review, design of research, execution of research, data reduction and analysis, and reporting. OTOLARYN

299. Dissertation. (0) W, S, Prerequisite: Advancement to candidacy and permission of the gradu- ate advisor.
Staff
For graduate students engaged in writing the dissertation for the Ph.D. degree. OTOLARYN

Stomatology

100. HIV/AIDS: A Current Review. (2) W, Prerequisite: Dental I, Dental Hygiene I. Lecture 2 hours.
Bartol et al, D. Greenman, Levy
An overview of the HIV/AIDS epidemic, with a selective focus on basic and clinical sciences, and social/psychological aspects. Sixteen hours are presented in lecture format, two hours as panel presentations, and two hours as emphasized review sessions. STOMATOL

185
Clinical clerkship in approved hospitals in other universities by special arrangement and approval of the chairpersons of the department and the dean. SUR-GERY

140.03. General Surgery–PMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and consent of instructor. SUR-GERY

140.04. Vascular Surgery Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 130. Surgery 110 and 111. Goldstone Students serve as acting interns on the vascular surgery team, participating in preoperative, intraoperative, and postoperative management of patients, as well as in clinics, rounds, and conferences. SUR-GERY

140.05. Operable Heart Disease. (1.5 per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111. Rankin Ward rounds and conferences on patients with operable, congenital, or acquired heart disease. Details of selection, differential diagnosis, and results of surgery are discussed. SUR-GERY

140.06. Emergency Medicine–SFUGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 or Surgery 110 and 111. Neighbors Students care for patients in the Emergency Department at SFGH as acting interns, and care for all medical and surgical problems. The rotation focuses on wound-care techniques (including suturing), didactic conferences, and bedside one-to-one instruction by senior residents and faculty. SUR-GERY

140.07. Shock & Trauma Research. (1.5 per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111. F. Lewis Course involves clinical and laboratory investigation and a detailed study of specific patients with trauma and shock. SUR-GERY

140.08. General Surgery–C. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 & Medicine 110. V. Richards Students work as interns on Surgical Service; they evaluate general surgical patients preoperatively; work with patients in operating room; assume graduated, increasing responsibility in postoperative management. Round and conferences enhance clinical experience; interaction with staff in patient care emphasized. SUR-GERY

140.09. Trauma Surgery–SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111 and consent of instructor. Schechter Clinical clerkship in the Trauma Service of the Department of Surgery at SFGH. The student will work at intern-clerk level as an integral part of the service. SUR-GERY

140.10. Cardiothoracic Surgery. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Rankin As an integral member of the cardiothoracic team, the student directly and actively shares in preoperative evaluation, operative procedures, and postoperative care. Cardiothoracic and thoracic conferences and daily ward rounds provide the didactic training. SUR-GERY

140.11. Burn Care–SFUGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110. J. Horn Clinical rotation on a large Burn Center Service. Pathophysiology of thermal injury including pulmonary aspects will be stressed. Students act as integral members of the team and participate directly in patient care. SUR-GERY

140.12A. Adv Clerkship in Plastic/Reconstructor Surgery–UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110, Medicine 110. Mathes Students act as advanced clerks, taking part in operative procedures as well as postoperative management of the patient. Students will be exposed to patients with general reconstructive problems; trauma to the head and neck, hand surgery, and congenital anomalies. SUR-GERY

140.12B. Adv Clerkship in Plastic/Reconstructor Surgery–SFUGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110, Medicine 110. Mathes Students act as advanced clerks, taking part in operative procedures as well as postoperative management of the patient. Students will be exposed to patients with general reconstructive problems; trauma to the head and neck, hand surgery, and congenital anomalies. SUR-GERY

140.13. General Surgery–VAF. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. O’Hara Students receive broad clinical experience in general surgery at VAF and with practicing surgeons in selected community settings in the central San Joaquin Valley. Balance between VAF and community assignments is individually arranged according to students’ interests. SUR-GERY

140.14. Surgical Intensive Care Clerkship–VMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Fourth-year students only. Parks Clerkship offers an “organ systems” approach to critical surgical illness with experience in invasive and noninvasive monitoring and appropriate therapeutic interventions. Course is aimed at providing patient management experience and familiarity with basic science concepts and literature upon which invasive care is based. SUR-GERY

140.15. Burn Center Clerkship–VMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Fourth-year students only. Parks Presents a clinical spectrum in critical-care medicine: burn wound infection control, supportive management, hemodynamic monitoring, with emphasis on appropriate nutritional and metabolic support. Also stressed are psychological and emotional needs of patients. Students participate as full members of the Burn Team. SUR-GERY

140.16. Nutritional Support Service–SFUGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110. Hickey, Weaver Students will be instructed in the formulation and administration of parenteral and enteral feedings; the insertion of subclavian catheters; the management of metabolic/nutritional problems. Students will perform nutritional assignments and activity, and participate in daily rounds at San Francisco General Hospital. SUR-GERY

140.17. Pediatric Surgery. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111, Clinic 40. Harrison The student works as an acting intern on a busy pediatric surgical service consisting of pre- and postoperative management and in the operation. An interesting wide variety of problems is encountered. SUR-GERY

140.18. Liver Transplantation. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110, Surgery 110. Ascher and Stage Students will participate in evaluation of potential liver recipient (including HLA-typing, cromosoma, immune monitoring); observe the liver transplant procedure; participate in postoperative care (including immunosuppressive management and mechanisms of graft rejection). Students will attend conferences, clinics, and daily rounds. SUR-GERY

140.19. Advanced Clinical Surgery–VMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. 4th-year standing. Parks, Gliden Senior clerkship responsibilities include participation as member of busy postoperative care team, with emphasis on pre- and postoperative care, supervised clinic and operating room assignments, and participation in department conferences. The aim is to provide exposure to a spectrum of elective and emergency surgical problems. SUR-GERY

140.20. Clinical Trauma Surgery–VMC. (1.5 per week) Su, F, W, Sp. SS1, SS2. Prerequisite: Surgery 110. S. Parks, J. Davis
Subspecialty responsibilities are to participate on a busy patient care trauma service emphasizing resuscitation, evaluation of injury, operating room participation, postoperative follow-up. There is also experience with non-operative management of trauma. The student will participate in departmental conferences. SURGERY

150.01. Research in Surgery. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

Hunt

Opportunities for research in one of the departmental laboratories by arrangement with the instructor. SURGERY

160.05. Advanced Surgery Reading. (2) F, Sp.

E. Lewis

A weekly seminar where previously assigned papers are discussed and critiqued. Papers representing the clinical and current concepts in general surgery are covered. SURGERY

160.06. Total Parenteral Nutrition. (5) Su, F, W. Prerequisite: Surgery 110 and consent of instructor. Lecture 3 hours, Lab 6 hours.

Hickey

Course emphasizes nutritional and metabolic requirements of injured, ill, and malnourished patients. Clinical rotation involves methods of preparation, administration, and assessment of patients receiving calorie protein or amino acid support at part of specific therapy. SURGERY

198. Supervised Study. (1-5) F, W, Sp. Prerequisite: Consent of instructor.

Debas and Staff

Library research and directed reading under supervision of a member of the faculty with the approval of the chairperson of the department. SURGERY

199. Laboratory Project. (1-5) F, W, Sp. Prerequisite: Consent of instructor.

Debas and Staff

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. SURGERY

400. General Surgery Staff Conf. (1.5) F, W, Sp.

UC Debas, SFGH Lewis, VA L Way

Conferences include presentation of case studies with reference to the literature, case records, laboratory tests, and special studies. Faculty and occasional guest lecturers discuss surgical problems. Death and complications are reviewed weekly. SURGERY


Seminars include case reports and demonstrations of the currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories. SURGERY


Interns and residents. DMC Heer, SFGH Lewis, UC Debas, VA L Way

Seminar is held in the surgical wards with discussion of current problems concerning the diagnosis and management of general pattern surgery. SURGERY


UC Debas, SFGH Lewis, VA L Way, DMC Heer, C. V. Richards, P. M. Russell

Residents, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postruoperative care, and attendance at follow-up clinic. Senior residents have certain additional administrative, teaching, and clinical responsibilities. SURGERY

452. Experimental Surgery Laboratory. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 450 and 452 may not be taken concurrently.

Debas and Staff

Course includes experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in general surgery. SURGERY


Debas

Assistant residents in off-campus hospitals approved by the chairperson of the department and the dean. Course includes clinical and experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in surgery. SURGERY


Lewis

Interns rotate through the general surgical service, including the intensive care unit. Under the direction of the attending staff, experience is provided in vascular, chest, hand and plastic surgery, and surgery of maxillofacial injuries. SURGERY


Debas

Interns, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postruoperative care, and attendance at follow-up clinic. SURGERY

Teaching Methodology


Staff

Course provides resource information in the form of a systematic overview of educational technology. This information is introduced in conjunction with the development by the individual student of an actual microcourse, teaching a single skill. GEN DENT


Staff

Practical teaching experience in selected courses under the supervision of members of the staff. GEN DENT

186.01A–B-C. Practice Teaching. (0–3) F, W, Sp.

Lab 3 hours.

Staff

Practical teaching experience in selected courses under the supervision of senior members of the staff. GEN DENT

Toxicology

200A. Introduction to Biochemical Toxicology. (4) 3.5 credits. Prerequisite: Pharmaceutical Chemistry 203 or co-requisite. Lecture 4 hours.

Mehan

The metabolism and bioactivation of drugs, carcinogens, and other toxicants will be presented, and these examples will serve to illustrate how toxic substances alter and disrupt normal cellular processes at the molecular level. PHARM

Urology

Core Clerkship–Surgery 110 includes clinical clerkships in the outpatient clinics and hospitals, assistance at operations, and participation in residents' seminars.

140.01. Advanced Urology Clerkship–UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

Tanagho

Students work as interns on the Urology Service at UC. They also attend rounds and scheduled seminars with residents and visiting staff. UROLOGY

140.02. Off-Campus Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

Tanagho

Clinical clerkship in off-campus hospitals approved by the chairperson of the department and the dean. UROLOGY

140.03. Advanced Urology Clerkship–VA. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

R. D. Williams

Students work as interns on the Urology Service at VA. They also attend rounds and scheduled seminars with residents and visiting staff. UROLOGY

140.04. Advanced Urology Clerkship–SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

McAninch

Students work as interns on the Urology Service at SFGH. They also attend rounds and scheduled seminars with residents and visiting staff. UROLOGY

150.01. Research in Urology. (1.1 per week) Su, F, W, Sp. Prerequisite: Must be third- or fourth-year medical student. Must have approval of chair, dean, and involved research faculty. CARROLL

Research project under the direction of a member of the Department of Urology. UROLOGY

170.01. Fundamentals of Urology. (2) F, W, Sp. Prerequisite: Consent of instructor.

Tanagho and Staff

Seminar and library research. UROLOGY

199. Laboratory Project. (1–5) F, W, Sp. Prerequisite: Consent of instructor.

Tanagho and Staff

A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department. UROLOGY


Tanagho

Seminar includes study of the basic sciences and urologic nomenclature with members of the attending staff. UROLOGY


Tanagho

Seminar includes discussion of diagnosis and treatment of patients in the urology wards with the attending staff. UROLOGY


McAninch

Interns rotate through urological wards. Under the direction of the attending staff they are responsible for the care of patients, including history-taking, physical examination, laboratory tests, and consultation. UROLOGY

170.01. Fundamentals of Urology. (2) F, W, Sp. Prerequisite: Consent of instructor.