This chapter represents a compendium of all the courses of instruction offered at the University of California San Francisco. The courses are arranged in numerical order by subject. The information included in each course has been arranged according to the following rules:

Course Description — Course information is arranged in two paragraphs with periods separating items. The first paragraph includes course number, title, units in parentheses, session offered, prerequisite, format and breakdown of hours, and instructor in charge. The second paragraph describes the course content.

Abbreviations — These abbreviations are used where applicable: Su = summer term, SS = summer session, F = fall quarter, W = winter quarter, Sp = spring quarter. For courses where units are followed by a $, the courses so designated are open to graduate academic students for credit. Hospitals are designated by the following initials:

- A Alta Bates Hospital, Berkeley.
- CC Crippled Children's Hospital, Phoenix, Arizona.
- CHC Crippled Children's Hospital, Oakland.
- CM Children's Hospital Medical Center of Northern California, Oakland.
- CMCH Children's Hospital Medical Center of Northern California, Oakland.
- CMCHSC Community Hospital of Sonoma County, Santa Rosa.
- CMU Cowell Memorial Hospital, Berkeley.
- FR French Hospital, San Francisco.
- G Good Samaritan Hospital, San Jose.
- H Highland General Hospital, Oakland.
- IIB Irwin Memorial Blood Bank, San Francisco.
- K Kaiser Foundation Hospital, San Francisco.
- KH Kaiser Foundation Hospital, Honolulu, Hawaii.
- KP Kaiser Permanente Medical Center, Oakland.
- KSF Kaiser Foundation Hospital, South San Francisco.
- L Letterman Army Medical Center, San Francisco.
- LPI Langley Porter Institute, San Francisco.
- M Marin General Hospital, Ross.
- MM Mills Memorial Hospital, San Mateo.
- MZ Mt. Zion Hospital and Medical Center, San Francisco.
- NAT Natividad Medical Center, Salinas.
- NRMHC Naval Regional Medical Center, Oakland.
- OC O'Connor Hospital, San Jose.
- P Palta Hospital, Oakland.
- PH Peninsula Hospital and Medical Center, Burlingame.
- PHS United States Public Health Service Hospital, San Francisco.
- PMC Pacific Medical Center, San Francisco.
- QC Queen's Medical Center, Honolulu, Hawaii.
- RDMC Randolph Medical Center, San Francisco.
- RLA Rancho Los Amigos Hospital, Downey.
- S Stanford Medical Center, Palo Alto.
- SCC Santa Clara Valley Medical Center, San Jose.
- SFCM San Francisco Community Health Service, San Francisco.
- SFGH San Francisco General Hospital, San Francisco.
- SGH Scenic General Hospital, Modesto.
- SN Shriners Hospital for Crippled Children, Honolulu, Hawaii.
- SJ San Joaquin General Hospital, Stockton.
- SM Samuel Merritt Hospital, Oakland.
- SRR Santa Rosa Memorial Hospital, Santa Rosa.
- SSR Shriners Hospital for Crippled Children, San Francisco.
- STA St. Agnes' Hospital and Medical Center, Fresno.
- STJ St. Joseph's Hospital, San Francisco.
- STL St. Luke's Hospital, San Francisco.
- STM St. Mary's Hospital and Medical Center, San Francisco.
- T Tripler Army Medical Center, Honolulu, Hawaii.
- UC University of California Hospitals and Clinics, San Francisco. (includes UC, Moffitt, and Ambulatory Care Center.
- VA Veterans Administration Hospital, San Francisco.
- VAM Veterans Administration Hospital, Martinez.
- VAP Veterans Administration Hospital, Phoenix, Arizona.
- VAPA Veterans Administration Hospital, Palo Alto.
- VMC Valley Medical Center of Fresno, Fresno.
- VPC Valley Park Convalescent Hospital, Mill Valley.

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 = post-doctoral professional course. The meanings of the second (tens) and first (units) digits vary among the schools. A detailed explanation of course numbering is available from the Office of the Dean of each school.

**Ambulatory and Community Medicine**

110. Required Clinical Clerkship in Ambulatory and Community Medicine. (1½ per week) Su, F, W, Sp. Prerequisite: Completion of 24 weeks of clinical clerkship, including Pediatrics 110 and either Medicine 110 or Surgery 110 and 111. Crede

Integrated ambulatory clerkship experience of wide scope offered in a diversity of patient settings, including Adult Comprehensive, Family Care, Pediatric, and Dermatology Clinics, Home Care Service, Community Health programs, with additional assignments and seminars in radiology, psychiatry, and emergency care.

130. Introduction to Medical Practice — The Profession of Medicine. (2) F. Malloy

An interdepartmental course introducing concepts of medical practice including physician-patient roles, health care systems, medical economics, medical jurisprudence, and bioethics. In preceptorships, students observe physician-patient relationships and processes of care, practice basic maneuvers of examination, and talk with patients.

140.02. Clinical and Community Health Programs. (1½ per week) Su, F, W, Sp. Prerequisite: Determined
by students' clinical experiences and elective for which they are applying.

**Staff**

Elective experience for two weeks to three months in community health projects of varied nature. Students may study and participate in unique health care settings: Indian Health Service, Diabetic Summer Camp, Planned Parenthood Program, and Family Practice preceptorships.

140.03. Occupational Medical Practice. (1%-per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

H. Davis

Clerkship at an industrial medical dispensary, for two to four weeks; supervised instruction in diagnosis of industrial diseases, occurrence of industrial hazards and health promotion activities.

140.04. Preceptorship in Family Practice. (1%-per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

H. Davis

Students work with a family practitioner, general internist or pediatrician in the office, observing the practice and participating in all activities as training partners. Experience will teach common health problems and primary care in a community setting. Rural preceptorship will be encouraged.

140.05. Social Medicine Pathway Selective. (1%-per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

D. Werdager

Field work experience or research germane to social medicine individually arranged with consideration of student's major area of interest.

140.06. Community Rehabilitation Medicine. (1%-per week) F, W, Sp. Prerequisite: Consent of instructor.

Students will be assigned to a variety of community medicine and other rehabilitation facilities for two to three weeks. Students will be on an interdisciplinary approach to rehabilitation, and the selection of patients who are suitable for rehabilitation.

140.07 Family Practice in Head Start (1%-per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

R. Barnett, Rodnick

Clerkship in a family physician's office. Students are assigned families and participate in their total health care. Medical problems will be considered in relation to the family system as a whole under the supervision of the physician and behavioral sciences staff.

140.08. Family Practice Clerkship at CHS. (1%-per week) Su, F, W, Sp. Prerequisite: Third or fourth year standing. Medicine 110 and Pediatrics 110, Obstetrics and Gynecology 110 and Surgery 110 recommended.

Clinical experience in comprehensive primary medical care of families (outpatient); participation in team approach to medical care involving family physicians and allied health personnel; experience in utilizing appropriate community health resources in solution of medical and family problems.

140.21. Emergency Medicine Clerkship at VMC. (1%-per week) Su, F, W, Sp. Prerequisite: Third or fourth year standing. Medicine 110 or Surgery 110, and Obstetrics and Gynecology 110 or Pediatrics 110.

B. Bloomom

Involvement in comprehensive primary medical care of families (inpatient and outpatient; participation in team approach to medical care involving family physicians and allied health personnel; experience in utilizing appropriate community health resources in solution of medical and family problems.

140.22. Problem-Oriented Clinical Clerkship at STA. (1%-per week) Su, F, W, Sp. Prerequisite: Ambulatory and Community Medicine 110 or Medicine 110.

J. Corbus, Werdager

Problem-oriented experience in ambulatory patient care, patient management and health education. Program stress an introduction to private, community hospital setting.

140.23. Rehabilitation Medicine Clerkship at Fresno Community Hospital. (1%-per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

J. H. Davis, Grace, Neal, Wellock

Clinical experience in techniques of rehabilitation in a model community hospital rehabilitation center.

140.24. Primary Care Clerkship in a Semi-Rural Community Hospital at Visalia. (1%-per week) Su, F, W, Sp. Prerequisite: Third year standing.

J. Werdager

Supervised work-up of ambulatory patients with emphasis on interdisciplinary patient management in a private practice setting; close association with the medical community and introduction to a semi-rural locale.

140.25. Clinical Clerkship in Primary Care at a Fresno Community Hospital. (1%-per week) Su, F, W, Sp. Prerequisite: Medicine 110 or Pediatrics 110.

D. Knapp, Werdager

Clerkship based at the largest community hospital in Fresno utilizes inpatient office and community set-tings for clinical experience in primary care. Content of general medicine, family care, psychiatry, and ob-stetrics/gynecology is designed to meet students' particular interests.

140.26. Clinical Clerkship in Primary Care and Community Health at the Fresno County Health Department. (1%-per week) Su, F, W, Sp. Prerequisite: Basic clinical rotations.

D. Werdager

An elective course within the Fresno County Health Department designed to provide responsibility in patient care and a community health project, involving health education, clinical algorithms, new record pursuit, and public health studies.

140.27. Community Medicine Clerkship in the San Joaquin Valley. (1%-per week) Su, F, W, Sp. Prerequisite: Ambulatory and Community Medicine 110, or Medicine 110, or Pediatrics 110. Clinic 40 hours.

R. Dally, Werdager

A clerkship offering training in various aspects of emergency medicine. Primary responsibility for pa-tients is included. The elective is divided into the following rotations: ambulatory patients, including minor lacerations and sutures and experience with paramedic ambulance systems.

140.30. Family Practice Clerkship at NAT. (1%-per week) Su, F, W, Sp. Prerequisite: Third or fourth year standing. Medicine 110 and Pediatrics 110. Obstetrics and Gynecology 110 and Surgery 110 recommended. Clinic 40 hours.

T. Rose

Experience working with family practice residents on both hospital floors. Emphasis is on providing optimal ambulatory care in the Family Practice Center, attendance to psychosocial problems, and special health care problems of the medically underserved Mexican-American population.

150.01. Community Health Field Work. (1%-per week) F, W, Sp. Prerequisite: Consent of instructor.

C. Crede

Field work in exploration of one or more areas in social medicine or community health. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare participate where needed.

160.01. Clinical Aspects of Community Medicine. (1%-per week) F, W, Sp. Prerequisite: Consent of instructor.

Barbaccia

Assignments to community health agencies where students have the opportunity to participate in activities of the agency's program for analysis. Seminars are used to clarify issues in community health. Faculty from Schools of Medicine, Pharmacy, Nursing, Dentistry participate where needed.


H. Crede

Clinical demonstration of the live presentations representative of occupational and environmental disease.

160.05. Centro Latino Elective. (1%-per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Sanchez, Pascoe

Students participate in a program serving the needs of the Latino community and all age levels, from prekindergarten to elderly. Health care, free breakfast, and lunch programs are conducted at the Centro Latino, 1292 Pinto Ave.

160.06. Latino School Elective. (3) Su, F, W, Sp. Prerequisite: Consent of instructor. Seminar 3 hours, Lab 6 hours.

Sanchez, Pascoe

This project is a continuous outreach program dealing primarily with Spanish-speaking children, parents, teachers, and administrators in Mission District elementary schools. Students participate in teaching, dissemination, and delivery of health care.


Ransom, W. Gerber

Students meet in small group seminars led by family physicians. Through seminar discussion, reading, a preceptorship, and continuing contact with families, understanding of medical care, students will be introduced to family medicine in the broadest sense.

160.08. Introduction to Family Therapy. (1) F, W, Sp. Seminar 1 hour.

Ransom, Schroder

This course provides an introduction for students expecting to take more advanced training in family therapy. Students will not see families themselves, but will participate in videotaped role playing exercises to learn therapeutic techniques.

170.01. Aspects of Social Medicine in Community Health Agencies. (1-5) W. Prerequisite: Consent of instructor.

Seminars explore one or more areas of social medicine or community health. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare participate where needed.


H. Crede

Tutor instruction concerned with environmental medical problems.

170.05. Rehabilitation Medicine. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Seminar and Field work 2-8 hours.

Sikes, Byl

According to the student's interest in areas such as chronic or crippling disease in children, surgical specialties, oncology, etc., individualized programs will be arranged to investigate rehabilitation services and related facilities.


Bouloux

The nature of information processing. Concepts of problem solving with the digital computer. Represen-tation of information within a computer system. Introduction to programming languages and basic program-ming methodology. Examples of present and potential applications of computer systems to the medical environment.
172. Legal Medicine (2) F, Sp. Lecture 2 hours.
   Tennhausen
   Fundamental legal principles and procedures affecting medical practice including civil, criminal, ad-
   ministrative, business, and insurance law, with em-
   phasis on medical negligence; the physician's role in
   litigation and its hazardous areas of medical practice
   which frequently must involve litigation.

   J. Cook
   Seminar covering various aspects of preventive
   care as related to family medicine. A practicing family
   physician leads discussion of topics developed by
   the students in conjunction with specific aspects as
   well as the issues and demands of primary care.

   G. Sykes
   A structured experience in the use of group proc-
   ess and communication skills in facilitating team
   work. Both experiential and didactic material will be
   used to illustrate methods of developing a function-
   ing health care team.

175.01. The Western Medical Attitude. (1) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour.
   Guttentag
   An exploration of the theoretical premises on
   which western medicine rests; its relationship to
   other disciplines, of the structure of patient-physi-
   cian relationships, its operational concepts, such as
   the concept of the patient as a sick role member.

   Guttentag
   Seminar on selected writings and of topics dis-
   cussed in Ambulatory and Community Medicine 175.

176. Introduction to the Allied Health Professions. (1) F. Lecture 1 hour. Lab 1 hour.
   Byl
   Allied health professionals will describe their train-
   ing, job opportunities and function on the health care
   team. Seminar discussions will be followed by
   observation of the professional or health care team in
   action.

   Lectures and seminars introduce entering students
   to the social and preventive aspects of health care,
   including demographic and epidemiological factors
   influencing social and behavioral factors in
   Community Prevention Planning, and
   formation of social health policy.

182. Public Health Programs. (2) Sp. Prerequisite: Third or fourth year standing for Pharmacy students.
   Petraakis
   Government agencies concerned with public health.
   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.

184. Contemporary Spanish-Speaking Subcultures. (3) F, W. Prerequisite: Consent of instructor. Lecture 3 hours.
   Baca
   Investigation of selected theories of migration, ur-
   banization, assimilation, and conflict with emphasis
   on diverse Spanish-speaking subcultures and their
   organization and development; areas: relationships between this grouping and for-
   mal institutions, such as education, law enforce-
   ment, and medical services.

   Barbaccia
   Lecture-seminar format is used to cover aspects of
   the organization and function of the health care
   system and its subsystems, including manpower,
   hospitals, ambulatory care, planning regulation and
   control, economic government programs, and
   health services research.

186. Work/Health Problems in a Clinical Setting. (1-2) F, F. Lecture 1 hour. Student project or
   research required for 2 units.
   Merderg, Sykes
   Presentations of different types of patients with
   specific health problems. Students interview patients
   struggling with unresolved employment problems im-
   posed by medical diagnosis.

187.01. Practitioner-Patient Relationship 1. (1) F, F, W. Seminar 1-2 hours. Schroeder, D. N.
   Exploration of communication skills and tools of
   interviewing techniques in medicine and related
   fields. Direct observation of interviews conducted by
   physicians and other practitioners, post-interview
   discussion with providers and patients. Analysis of
   key elements of practitioner-patient interaction
   through videotape review.

187.02. Practitioner-Patient Relationship II. (1) F, W. Seminar 1 hours. Schroeder, D. N.
   Provides experience in various interviewing con-
   texts through direct observation of other practitioners
   interaction. Objective of the course is the development
   of self-awareness as well as recognition of basic skills in
   practitioner-patient interaction.

188.01. Health Policy Seminar (2) F, F. Lecture 2 hours.
   L. Lee and Staff
   An introductory series relating health care issues to
   health policy and ethical analysis, specifically,
   "Primary Health Care."

188.02. Health Policy Seminar. (2) W. Lecture 2 hours.
   P. Lee and Staff
   An introductory series relating health care issues to
   health policy with emphasis on methodology and
   analysis, specifically, "Principles of Health Policy and Ethical Analysis — A
   Case Study Review."

189.03. Health Policy Seminar. (2) F, Sp. Lecture 2 hours.
   P. Lee and Staff
   An introductory series relating health care issues
   to health policy and ethical analysis, specifically,
   "Financing Health Care."

189.04. Practitioner in Therapeutic Relationships: An Interdisciplinary View. (2) F, W. Prerequisite: Am-
   bulatory and Community Medicine 130. Lecture 3 hours.
   P. Lee, Shenkin
   Descriptions of practitioner-patient interactions,
   followed by past forces of education, social class,
   personality, and present work organization.
   Psychological, sociological, economic, political and
   health policy viewpoints examined. Discussion of
   articles and Friedson's "Profession of Medicine."

189.08. Health and Human Rights. (3) Sp. Lecture 3 hours.
   Jonsen, M. Parker
   Concepts of patients' rights (right to care, right of
   informed consent, right to treatment) are analyzed in
   legal and ethical cases. Objective is to increase
   awareness of claims to certain "rights" which im-
   pose burdens on providers of health care.

190. Bioethics Workshop. (1) F. Lecture 1 hour.
   Jonsen, P. Lee
   Lecture and workshop discussion of several health
   care situations in light of their ethical and public
   policy dimensions: confidentiality, genetic screening
   and counseling, therapeutic experimentation in hope-
   less cases and testing of pharmaceutical products are
   discussed.

190.01. Workshop in Ethics and Medical Care. (1) W. Lecture 1 hour.
   Jonsen, P. Lee
   Lecture and workshop discussion of several
   medical care situations in light of their ethical and
   policy dimensions: genetic screening and counseling,
   experimentation, and the role of the pharmaceutical
   industry in health care.

190.02. Workshop in Ethics and Biomedical Issues. (1) Sp.
   Jonsen, P. Lee
   Lecture and workshop discussion of ethics and policy
   dimensions of several current biomedical issues:
   aging and health care, societal research, technology, and
   the role of the pharmaceutical industry in
   health care.

   Schroeder, D. N.
   Students observe family therapy sessions on
   videotape. Role playing family situations and
   therapeutic strategies will be emphasized. App-
   ropriate readings are assigned and discussed in
   seminar.

198. Supervised Study in Ambulatory and Community Medicine. (1-3) F, W, Sp. Prerequisite: Consent of
   instructor.
   Study designed to permit directed study for
   undergraduate and graduate students in the
   community health setting. Seminar in the department.

   3 hours on four days during period 1 and
   2. Jonsen, M. Parker, Shenkin
   Analysis of protocols for clinical research in terms of
   criteria for scientific validity and ethical suitability;
   description of current local and national review pro-
   cess for approval of funded research.

211. Ethical Theory. (4) F. Prerequisite: Consent of instructor. Lecture 3 hours. Independent study 3 hours.
   Jonsen, Lebacz
   Basic concepts and methods of philosophical ethics,
   with particular emphasis on virtues and their appli-
   cation to persons, and justice, will be traced in class and
   modern authorities. Emphasis will be placed on critical
   analysis of ethical theories.

211. Theories of Human Nature. (2) Sp. Prerequisite: Graduate standing. Seminar 2 hours.
   Jonsen
   Examination of how several classical and modern authors in the Western philosophical tradition define
   human nature. Several basic theories and their im-
   plications for contemporary science and medicine
   are developed.

   Gude
   Monthly seminars are held on recent literature in
   the major clinical disciplines and subspecialties as it
   pertains to the training and practice of the family
   physician.

   Schielke, Fishbein
   Radiologists on attending staff present system-
   atic review of techniques of interpretation of X-rays
   as needed by the family physician. Roentgen findings
   in selected medical, surgical, pediatric, urological,
   obstetric, and neurologic systems will be covered.
   Normal findings and their variants are stressed.

402. Family Practice: Office Counseling and Family Therapy at CHS. (1-1) Su, F, W, Sp. Lecture 1 1/2 hours.
   Ransom, Grace
   Theory and techniques for working with normal, emotional, behavioral and interpersonal problems
   are developed. The process is facilitated by the use of a
   one-way mirror, video-recording, and case con-
   ferences.

403. Family Practice: Staff Conferences at CHS. (3) Su, W, Sp. Lecture 3 hours.
   Menachof
   Family practice residents and members of the attending staff prepare and present case histories of pa-
   tients as well as clinical reviews of selected problems
   in pediatrics, adolescent medicine, and family prac-
   tice.

404. Family Centered Health Care at CHS. (4) Su, F, W, Sp. Lecture 3 hours, Lab 3 hours.
   Grace, Ransom
   Theory and techniques of family-centered health
   care are presented through a series of cases observed
   directly through a one-way mirror and on
video tape. Readings are discussed in seminars and role playing is occasionally used.

405. Family Practice: Visiting Professor Program at CHS and YMCA. (2) Su, F, W, Sp. Lecture 1 hour. B. Barnett, YMCA Mokahnt. Weekly lectures, rounds, informal seminars, and case presentations are conducted by visiting faculty members as well as clinical reviews of selected problems in obstetrics and gynecology.

406. Family Practice: Conferences in Obstetrics and Gynecology at CHS. (2) Su, F, W, Sp. A. Adams Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in family practice, internal medicine, and its various subspecialties.

407. Family Practice: Conferences in Surgery at CHS. (11/1) Su, F, W, Sp. C. Fraser Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in general surgery and its various subspecialties.

408. Family Practice: Conferences in Orthopaedics at CHS. (3) Su, F, W, Sp. C. Campbell, Gilsh Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in various aspects of orthopaedic surgery.

409. Family Practice Preceptorships at CHS. (11/1) Su, F, W, Sp. Clinic 40 hours. D. Dervin, Neal Family practice resident physicians spend blocks of time in clinical practice settings learning aspects of applied family medicine, office management, and how to function as a member of the health care team.

410. Introduction to Rural Health at CHS. (1) Su, F, W, Sp. Lecture 1 hour. R. Rodnick Resident physicians are exposed to problems in health care patient care in an emphasis on Mexican-American and counter-culture issues in two rural set-

411. Seminar on Issues in Family Practice at CHS. (11/1) Su, F, W, Sp. Lecture 1 hour. R. Barnett, Dervin Resident physicians meet weekly to discuss a broad range of problems related to family practice and family practice training. Topics range from the management of specific cases to the role of the family physician in the health care system.

412. Family Practice Seminar at SFGH. (11/1) Su, F, W, Sp. Seminar 1 hour. Suzuki A seminar teaching a systems approach to the understanding of family dynamics and family therapy; lectures, case discussions, and technique demonstrations are included.

413. San Francisco Family Forum at SFGH. (11/1) Su, F, W, Sp. Utzinger A series of conferences on family process and family change, utilizing speakers prominent in the field of family therapy. A forum type atmosphere is encouraged with interchange between speaker and audience.

414. Family Practice: Clinical Conferences at SFGH. (11/1) Su, F, W, Sp. Massaad Conferences on medical subjects relevant to ambulatory care with participation by members of the faculty of the Family Practice Residency and appropriate representatives of diverse clinical specialties. Series of meetings about specific problems are scheduled.

415. Community Seminar at SFGH. (11/1) Su, F, W, Sp. Seminar 1 hour. Barnes, Donsky A seminar in which specific projects of Family Practice residents are presented, or in which broad issues are discussed that relate health care problems to the patients' sociocultural milieu.

460. Clinical Primary Care — Medicine. (11/1) Su, F, W, Sp. Prerequisite: Refer to Medicine 460. Clinic 40 hours. 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 and related clinic services such as Dermatology, Neurology.

461. Clinical Primary Care — Medicine. (11/1) Su, F, W, Sp. Prerequisite: Refer to Medicine 461. Clinic 40 hours. 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 Residency Program and related clinical services, such as Dermatology, Neurology.

462. Clinical Primary Care — Pediatrics. (11/1) Su, F, W, Sp. Prerequisite: Refer to Pediatrics 462. Clinic 40 hours. Grumbach, Dower Interns in the Primary Care Track of Pediatrics are responsible for patient care in a pediatric primary care clinic. Other rotations include those common to the regular Pediatrics Internship Program and related clinic services such as Dermatology, Otolaryngology.

463. Clinical Primary Care — Pediatrics. (11/1) Su, F, W, Sp. Prerequisite: Refer to Pediatrics 463. Clinic 40 hours. Grumbach, Dower 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 Residency Program and related clinical services, such as Dermatology, Otolaryngology.

475.01. The Western Medical Attitude. (1) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Guttenag An exploration of the theoretical premises on which Western medicine rests; its relationship to the field of family medicine. A forum type atmosphere is encouraged with interchange between speaker and audience.


100A. Systemic, Regional and Developmental Anatomy. (5) F. Lecture 3 hours, Lab 6 hours

M. R. Miller 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.

100B. Systemic, Regional and Developmental Anatomy. (4) W. Lecture 2 hours, Lab 2 hours

M. R. Miller 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.

100C. Systemic, Regional and Developmental Anatomy. (8) SS. Lecture 4 hours, Lab 12 hours

Asling 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.

100D. Systemic, Regional and Developmental Anatomy. (3) F. Lecture 2 hours, Lab 2 hours

Asling 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.

102. Histology. (8) F. Lecture 3 hours, Lab 4 hours

J. Long Course covers the microscopic structure of cells, tissues, and organs with the exception of the endocrine and reproductive systems.

113. Nervous System: Form and Function. (4-6) Sp. Prerequisite: Consent of instructor required for graduate students. Lecture 3 hours, Lab 4 hours.

H. Halston, Fields and Staff The structure and function of the mammalian nervous system is studied in lectures, conferences, demonstrations and laboratories, with emphasis on the human nervous system organization. Intended for students in the School of Medicine and as an introductory course for graduate students.

115. Histology. (3) Sp. Lecture 2 hours, Lab 3 hours

Mills and Dougherty 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.

116. Gross Anatomy. (3) W. Lecture 2 hours, Lab 3 hours

Riley A study of the macroscopic structure of the human body by means of lectures and dissections. Functional aspects of the structures are stressed.

117A-B. Gross Anatomy. (4-6) F. W. F. Lecture 2 hours, Lab 6 hours W. Lecture 3 hours, Lab 9 hours.

Riley Gross anatomy of the trunk, upper extremity, and head and neck are studied by laboratory dissection and demonstration. The course includes an introduction to neuroanatomy. Emphasis is placed on the functions of the structures and systems examined.

118. General Histology. (3) F. Lecture 2 hours, Lab 3 hours

S. McDowell The microscopic structure of tissues and organs of the body are studied in relationship to their histophysiological considerations.

119. Neuroanatomy. (3) Sp. Lecture 2 hours, Lab 3 hours

S. Sutherland The structure and function of the nervous system is studied in lectures and laboratory.

150.01. Gross and Regional Anatomy. (11/1) Su, F, W, Sp. Prerequisite: Refer to W. Laboratory 4 hours, Lab 2 hours, assigned by department and adviser during quarter previous to enrollment. Asling Individual or group dissection; review of gross anatomy.

156. Survey of General and Head and Neck Anatomy. (8) F. Lecture 3 hours, Lab 9 hours.

D. Coleman The systems of the body are studied through lectures and laboratory demonstrations. The structures of the head and neck, including the central nervous system, are major topics. The student is placed upon function and anatomic relationships.

170. Advanced Head and Neck Anatomy. (1.5) Sp. Prerequisite: General histology, gross anatomy of the head and neck, and oral histology. Lecture 1 hour, Lab 0-12 hours.

S. Coleman Designed for postgraduate specialty certificate students completing specialty related programs in the School of Dentistry. Seminar presentation and demonstrations of head and neck anatomy is correlated with their application to clinical dentistry.
A seminar series dealing with current literature in neuroanatomy and neuroendocrinology.

230. Comparative Pathology and Forensic En-docrinology. (2) F. Lecture 2 hours. Contopoulo A series of discussions covering the comparative anatomical and physiological aspect of pharmacology and its relation to the development and physiology of the fetal endocrine glands.

231. Molecular and Cellular Analysis of Development (3) W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1978-79.

Calvocoressi Molecular and cellular events relating to differentiation and development. A variety of developmental mechanisms will be studied and related to genetic and epigenetic control mechanisms.


298. Thesis (0) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser.

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

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

For graduate students engaged in writing the dissertation for the PhD degree.

300. Practicum in Teaching. (1-4) F, W, Sp. Prerequisite: Consent of instructor.

Staff Training in teaching in a course offered by the Department of Anatomy in the supervision of an instructor in charge. Laboratory teaching, presentation of lecture material, practical experience in setting up and correcting of examinations and participation in course are included.

Anesthesia


Willenkin Instruction and experience in operating room anesthesia including preoperative and postoperative evaluation and care. Cardiopulmonary resuscitation and care of the unconscious patient are stressed. The service is given at SFGH, UC, VA, C, FR, and A hospitals.


Willenkin Instruction and experience in cardiopulmonary resuscitation, care of the unconscious patient, and treatment of pain problems. Rotation through UC, SFGH. Attendance at the teaching conferences of the department.


Willenkin Clinical clerkship in approved hospitals by special arrangement with the Department of Anesthesia.

Anatomy

68 Anatomy

Anatomy 102. Lecture 1/2 hour, Lab 3 1/2 hours.

A. Jones This course offers training in electron microscopic techniques applicable to basic research and clinical problems.

202. Seminar Course on Tissue Culture Methods in Biological Research. (1) W. Prerequisite: Basic knowledge of biological principles and consent of instructor. Lecture 1 hour, Lab 1 hour. Elson, R. Armstrong

Course covers potentials and limitations of culture methods, advantages of assessing effects of various agents, preparation of controlled environment and use of culture methods with other research tools (e.g., autoradiography of electron microscopy).

205. Biology of Mammalian Development. (3) F. Prerequisite: Undergraduate course in embryology or consent of instructor. Lecture 3 hours. R. Pedersen

Aspects of mammalian development will be discussed and related to genetic and epigenetic control mechanisms.


An advanced presentation of the relationships between structural organization and the physiological activities of cells. Assigned readings, lectures and seminar discussions are included.


H. Glass Laboratory or library research in mammalian embryology or directed reading on current developments in gnetogenesis, fertilization, cleavage, implantation, organogenesis, or molecular differentiation.

217. Anatomy of the Head and Neck for Advanced Students. (2-4) F, W, Sp. Prerequisite: Anatomy 117A-B or equivalent and consent of instructor. Lecture 2 hours, Lab 0-12 hours.

M. Pfeiffer A critical analysis of selected topics and methods in head and neck sections. The topics are correlated with appropriate laboratory experience and are presented by students, staff, and guests.


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

219. Laboratory Organization. (4) W. Prerequisite: Consent of instructor. Lecture 3 hours, Lab 3 hours. Offered 1978-79. H. Raiston

Examination of the neuronal organization of the nervous system, including neurocytology, development and plasticity of neural networks, the manner in which neurons form systems of the brain. Lectures, laboratory and seminars are included.


H. Raiston A seminar series dealing with current literature in neuroanatomy and neuroendocrinology.

230. Comparative Pathology and Forensic En-docrinology. (2) F. Lecture 2 hours. Contopoulo A series of discussions covering the comparative anatomical and physiological aspect of pharmacology and its relation to the development and physiology of the fetal endocrine glands.

231. Molecular and Cellular Analysis of Development (3) W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1978-79.

Calvocoressi Molecular and cellular events relating to differentiation and development. A variety of developmental mechanisms will be studied and related to genetic and epigenetic control mechanisms.


298. Thesis (0) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser.

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

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

For graduate students engaged in writing the dissertation for the PhD degree.

300. Practicum in Teaching. (1-4) F, W, Sp. Prerequisite: Consent of instructor.

Staff Training in teaching in a course offered by the Department of Anatomy in the supervision of an instructor in charge. Laboratory teaching, presentation of lecture material, practical experience in setting up and correcting of examinations and participation in course are included.

Anesthesia


Willenkin Instruction and experience in operating room anesthesia including preoperative and postoperative evaluation and care. Cardiopulmonary resuscitation and care of the unconscious patient are stressed. The service is given at SFGH, UC, VA, C, FR, and A hospitals.


Willenkin Instruction and experience in cardiopulmonary resuscitation, care of the unconscious patient, and treatment of pain problems. Rotation through UC, SFGH. Attendance at the teaching conferences of the department.


Willenkin Clinical clerkship in approved hospitals by special
A cross-cultural view of sex roles through critique of anthropological research, concentrating on factors affecting women's roles and status. Relevant perspectives will be applied to selected current issues and discussed in terms of the implications for change.

22A-B-C. Topics in Medical Anthropology. (0-0-0) 3 W, W, Sp. Prerequisite: Consent of instructor; Lecture 1 hour. Staff

Students, staff or guests present selected topics based on their current work.

205A-B. Introduction to Medical Anthropology: Sociocultural Aspects. (4-4-4) F, W, Prerequisite: In- tended primarily for doctoral students in medical anthro- pology, and others at graduate standing with consent of instructor. Lecture 3 hours. Lab 3 hours. Two-quarter course. Ablon, Todd Seminar in the history and theory of social anthro- pology as applied to problems of health and ill- ness. Major concepts and problems will be illus- trated through critical review of selected research literature.

206. Introduction to Biomedical Anthropology. (4) F, W, Prerequisite: Consent of instructor. Course is re- quired for first year students in the San Francisco program in medical anthropology; open to students in the interdisciplinary program in medical anthropology. Lecture 3 hours. Lab 3 hours. Dunn Survey of the principal areas of medical anthro- pology that are linked to biomedicine and human biology.

211 A-B-C. Research Training Seminar. (4-4-4) F, W, Prerequisite: Consent of instructor. Lecture 3 hours. Lab 3 hours. Clark Fundamentals of anthropological research and research methods through lectures, readings, and seminars.

216. Research Design. (3) W § Lecture 2 hours. Lab 3 hours. Nydegger Workshop format, utilizing student research interests. Topics include: problem formulation; design of research strategies; evaluation of sampling methods; operationalization of concepts; special procedures used in research. Course is preparatory for anthropological statistics.

217. Statistics in Anthropology. (2) § Sp. Prerequisite: Anthropology 216. Lecture 2 hours. Lab 3 hours. Mitnitzky Introduction to statistical methods for the social sciences: measurement, selected data characteristics, probability theory, descriptive statistics, descriptive statistics, the general linear model, analysis of qualitative data. Emphasis is on understanding funda- mental assumptions and procedures of statistical methods relevant to anthropology.

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

222 A-B-C. Communication Skills for Anthropologists. (1-1-1) F, W, Sp. Lecture 1 hour. Open to Medical Anthro- pology students, staff, and students. Tufts, Ruffini Students submit papers for editorial comment and advice on style, organization, grammar, syntax, and presentation. Scholars present work in progress and receive in- formal group discussions on problems encountered in effec- tive communication, and some assigned and recom- mended readings. Tufts, Ruffini Exploration of the relationship between culturally conditioned ways of perceiving, thinking, and commu- nicating, and individual behavior and personality development.

231. Ethnopsychiatry. (2-3) W Prerequisite: Consent of instructor, Lecture 2 hours, plus 3 hours independent study for 3 units.

233. The Anthropology of Aging. (2-3) § W Prereq- uisite: Consent of instructor. Lecture 2 hours, plus research project for 3 units. M. Clark Cross-cultural approaches to roles, statuses and problems of aged persons. Cultural factors in- fluencing the condition and adaptation to the aging process in diverse American societies. Topics to be covered include cultural attitudes and values, social relationships and health problems.

234. Culture and Symbolism. (2-3) § F, Prerequisite: Anthropology 200A or equivalent, or consent of instructor. Lecture 2 hours, plus research project for 3 units. M. Murodo Symbolic expressive behavior is considered from a psychocultural and psychoanalytic perspective. Various projects and case studies are analyzed: psychological tests, dreams, folklore, myths, religious rituals, alternate states of con- sciousness, and healing procedures.

255. Transitional Aspects of Childhood. (2) § F, Prerequisite: Consent of instructor. Open to students in medicine, nursing and graduate departments. Lab 2 hours, plus research paper. Staff A review of child development, child rearing and family dynamics in various cultures and in selected ethnic subcultures of the United States. Cultural contexts of personality formation, devia- tions in development and childhood illnesses will be discussed.
244. Legal Gerontology. (2-3) F. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study. Prof. Rodulf.

A cross-cultural examination of the legal problems, needs, and behavior of the elderly, relating data from other societies to problems in the contemporary United States. Concepts, theories, and methods drawn from anthropological, legal, medical, and gerontological literature.

248. Comparative Medical Systems. (2-3) S. Prerequisite: Consent of instructor. Lecture 2-3 hours.

A comparative examination of traditional and contemporary systems of health care delivery with special attention to theories of disease including notions regarding etiology, prophylaxis, treatment and treatment settings, and the therapeutic experience. Experience in field and clinical observation included.

247. Seminar in Contemporary American Society. (3) F, W. Prerequisite: Lecture 2 hours, plus 3 hours independent study.

Ablon

An examination of basic American values, social organization and ethnicity. Major emphasis will be on changing institutions giving rise to new values and life styles.


Staff

Groups of two or more collaborate on special problems in anthropology under the direction of faculty. Study of problems that may be of long-range interest and future research project.

249. Directed Reading. (1-5) F, W, Sp. Prerequisite: Consent of instructor.

Staff

Independent study.


Staff

251. Seminar in Social Gerontology. (2-4) S. Lecture 2 hours. Lab 0-6 hours.

Todd, C.L. Johnson

An intensive exploration of theoretical 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.

252-256. Seminar in Medical Anthropology. (2-4) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Independent study 3 or 6 hours for additional credit.

Staff

Core seminar in medical anthropology offered UC Berkeley in fall and spring, and UC San Francisco in winter. A review of the principal fields of medical anthropology with emphasis on current research and methods.

260. Epidemiology and Medical Anthropology. (2-4) F. W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 0-6 hours.

Dunn

Individual or small group directed reading and discussion of the major work of a master in field of medical anthropology.


Pawson

Overview of evolutionary mechanisms: evolution and the cell — DNA, the genetic code; evolution and the individual — Mendelian genetics; evolution and the population — population genetics, natural selection; evolution and the species — evolution of the hominoids, orangutans, gorillas, chimpanzees, and humans.

263. Biological Perspectives on Growth and Development. (1) S. Prerequisite: Consent of instructor. Lecture 3 hours.

Wilson

Examination of the human growth process with emphasis on cellular growth and differentiation; biochemical basis of the growth process; critical periods of growth — fertilization, implantation, prenatal development, birth, early postnatal development, adolescence, senescence, and developmental adaptation and racial differences in growth.

265. Principles of Human Variation. (2) S. Prerequisite: Consent of instructor. Lecture 2 hours.

Pawson, Petritis

Exploration of the extent, origins, and significance of biological variation among human populations. Emphasis is placed on genetic, morphological, and functional aspects of this variation, and how these are maintained by evolutionary mechanisms.

267. Nutritional Anthropology. (3) W. Prerequisite: Consent of instructor. Lecture-Seminar 3 hours.

Wilson

Survey of past and current research on the sociocultural aspects of diet and nutrition in developed and developing countries in lecture-seminar format. Methodology for nutritionally-oriented field studies will be presented.

270. Research in Population. (2) W. Lecture 2 hours.

Staff

Population research issues and methods, covering sources of demographic data and studies on family planning, evaluation of birth control programs on population and health, and considerations relevant to the use and acceptability of contraceptive methods.


Staff

299. Dissertation. (0) F, W, Sp. Prerequisite: Advancement to candidacy and permission of graduate advisor. Lecture 2-3 hours.

Staff

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

210A-B. Cellular Structure and Function. (3-3) F, W. Prerequisite: Consent of instructor.

Noble

Lectures and conferences in biochemistry and molecular biology with emphasis on fundamental knowledge and illustrating its applicability to medicine. Primarily for medical students.

204A-B. Cellular Structure and Function. (3-3-3) F, W. Prerequisite: Consent of instructor.

Fleisch and Staff

Lectures in biochemistry include aspects of cell physiology and cellular structure, with some emphasis in the area of connective and muscle tissue. Fundamental knowledge is presented in the context of its application to clinical health sciences. Primarily for dental students.

111. Special Study for First Year Students. (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Noble

Jewett and Staff

Discussion of biochemical problems of interest in dentistry including enamel, saliva, mineralization, connective tissue, plaque, and oral bacterial metabolism.

120A-B. Cellular Structure and Function. (4-4) F, W. Prerequisite: Consent of instructor. Lecture 4 hours.

Rutter

Lectures and conferences in biochemistry include aspects of cell physiology and cellular ultrastructure, with some emphasis on nucleic metabolism. Fundamental knowledge is presented in the context of its applicability to clinical medicine. Primarily for pharmacy students.

150.01. Research in Biochemistry. (1/2 per week) F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

Staff

Research in biochemistry.

170.01. Issues in Human Nutrition. (2) F, W. Prerequisite: B104A-B. Lecture 2 hours. Offered in alternate years. Offered 1978-79.

Nestle

Course emphasis on critical examination and analysis of the existing evidence on dietary intake of specific nutrients such as fats, cholesterol, sugar, salt, vitamins, and fiber to specific human diseases such as coronary heart disease, arteriosclerosis, hypertension, cancer, colds.

158. Supervised Study in Biochemistry. (1-5) S, F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

Library research and directed reading under supervision of a member of the faculty with the approval of the biochemistry chairman.

199. Laboratory Project in Biochemistry. (1-5) S, F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Laboratory project under direction of a member of the faculty with the approval of the chairman of the department.

200A-B. General Biochemistry. (3-3-3) F, W. Prerequisite: Calculus, physical chemistry, organic chemistry, introductory biochemistry, and an advanced course in biology are recommended. Students with adequate background may enter at any quarter with the consent of instructor.

H. M. Goodman, McCarthy, Boyer

A comprehensive, year-long course of lectures, problems, and laboratory work offering fundamental general biochemistry. This course is offered biennially, alternating with Biochemistry 200B-E.

200E. General Biochemistry. (3-3-3) F, W. Prerequisite: Calculus, physical chemistry, organic chemistry, introductory biochemistry, and an advanced course in biology are recommended. Lecture 11/2-3 hours. Staff

A comprehensive course of lectures, problems and group discussions concerning general biochemistry. This course is offered biennially, alternating with Biochemistry 200A-B.

200F. General Biochemistry. (3-3-3) S. Prerequisite: Calculus, physical chemistry, organic chemistry, introductory biochemistry, and an advanced course in biology are recommended. Lecture 11/2-3 hours. Staff

Together with Biochemistry 200D and 200E, a comprehensive, year-long course concerning general biochemistry. This series is offered biennially, alternating with Biochemistry 200A-B.

200G. General Biochemistry. (3-3-3) Sp. Prerequisite: A year each of organic and physical chemistry, or consent of instructor. Lecture 11/2-3 hours.

Staff

Applications of physical concepts and experimental methods in the study of chemical and physical properties of biopolymers. Course provides a theoretical background along with applications to biological problems for spectroscopy, hydrodynamics and magnetic resonance.

201A. Physical Biochemistry I. (3) Sp. Prerequisite: A year each of organic and physical chemistry or consent of instructor.

Yung

Application of physical concepts and experimental methods to the study of the structure and function of biopolymers.

201B. Physical Biochemistry II. (3) F. Croke

Interaction of electromagnetic radiation with matter. Spectroscopic methods useful in studying biological systems. Theory and applications of nuclear magnetic resonance, electron spin resonance, X-ray diffraction, fluorescence and quasi-elastic light scattering.

202. Computation in Biochemistry and Physiology. (3) F, W. Prerequisite: Consent of instructor. Lecture 3 hours.

Staff

The use of general purpose digital computers at the research level. Elements of parameter estimation linear and nonlinear algebraic and transcendental differential equations of mathematical modelling and error analysis. Programming and running general biochemistry. This course is offered biennially, alternating with Biochemistry 200D-E.

203. Introduction to Bioinformatics. (3) F, W. Prerequisite: Consent of instructor. Lecture 3 hours.

Landa, Martinez, Pellar

Mathematical modeling of enzyme kinetics, metabolic and hormonal control mechanisms, cooperative
interactions of macro-molecules, diffusion, passive and active transport, membrane models, excitation and conduction, flow, irreversible thermodynamics. Course offers experience in problem formulation and reading of current literature.

207. Biochemistry of Connective Tissues. (2) W. Prerequisites: BIOT 110A-B or equivalent and consent of instructor. Lecture 2 hours. Offered in alternate years. Offered 1979-78. Newburn and S. Lectures and assignments on chemistry, structure, and metabolism of the mucopoly saccharides, collagen, and elastin. Principles of histochemical reactions of connective tissues.

210. Current Topics in Biochemistry. (F, W, Sp. Prerequisite: Consent of instructor. Lecture 1-5 hours. Staff) Discussion of selected areas in biochemistry, biophysics, and biomathematics.

211. Biological Transport Systems. (1) S. Prerequisite: Biochemistry 100 A-B, Physiology 100, and Physical Chemistry 110A-B, or equivalents. Edelman Advanced seminar course on mechanisms of passive transport in biological and model membranes, kinetics of passive and active transport, the role of specific proteins and enzymes in these processes, and biochemical pathways involved in the regulation of rates of transport.

213A-B. Bio-Organic and Enzyme Mechanisms. (2-2) S. Prerequisites: BIOT 110A-B, or equivalent. Senti Biochemically important chemical transformations from the physical organic point of view, emphasizing catalytic mechanisms of enzymes and mechanisms of biochemical reactions, and to the development of enzyme model systems. Intermediates forces and enzyme-substrate interactions. Techniques of investigating enzyme mechanisms.

215. Preparation for Research in Biochemistry and Biophysics. (3) F, W, Sp. Prerequisite: Consent of instructor. Lab 2 hours. C. Guthrie A laboratory rotation course to familiarize new departmental graduate students with various approaches to biochemical research.

220. Seminar. (0-1) F, W, Sp. Lecture 1 hour. Senti Lectures and discussion on topics of current interest in biochemistry and biophysics.

221. Student Seminar. (0-1) F, W, Sp. Lecture 1 hour. Spudich Presentations of selected topics in biochemistry by graduate students in the Department of Biochemistry.


257. Special Study. (1-3) F, W, Sp. Staff Reading and conferences for properly qualified students under the direction of a member of the staff.

288. Thesis. (0-6) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate advisor. Staff For graduate students engaged in writing thesis for the master's degree.

299. Dissertation. (0-12) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate advisor. Staff For graduate students engaged in writing the dissertation for the Ph.D. degree.

Biomathematics 12

180. Algebra and Calculus for Biomedical Use. (3) S. 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.

185. Introduction to Differential Equations. (3) W. Prerequisite: Biomathematics 180 or equivalent. Lecture 2 hours. Lab 3 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 of muscle system, physiology, toxicology, enzyme and drug kinetics, and metabolic and biological dynamic processes.

191. Dynamics of Linear Process and Signal Analysis. (3) S. Prerequisite: Biomathematics 180 or equivalent. Lecture 3 hours. G. Glanz.


Biophysics


299. Dissertation. (0-12) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate advisor. Staff For graduate students engaged in writing the dissertation for the Ph.D. degree.

Biostatistics

110. Statistical Treatment of Clinical and Laboratory Problems. (3) F, S. Lecture 3 hours. M. C. King Concepts and techniques for the planning and analysis of laboratory and clinical research. Introduction to statistical techniques to summarize observations and draw inferences from the data. Design and interpret investigations.

151. Biostatistics. (2) Sp. Lecture 2 hours. M. C. King Course will cover frequency distributions, graphs, centiles, averages, variance, standard deviation, correlation, the binomial distribution, statistical significance, the normal curve, sampling, testing hypotheses, drawing inferences, and checking through the means, correlation techniques, and linear regression.

161. Research and Evaluation. (2) F, W. Prerequisite: Biostatistics 151 Lecture 2 hours. R. Ray Planning and analysis of variance, significance of correlation coefficients, reliability, validity, stem analysis, and other statistical tests. Introduction to research and research articles, individual research and a written report.


Basic concepts and techniques for the planning and analysis of laboratory and clinical scientific experiments. Introduction to statistical techniques to summarize quantitative and qualitative data and to draw inferences, taking into account the design and execution of the investigation.

190. Introduction to Biostatistics. (3) F. Lecture 3 hours. Zippin

191B-C. Introduction to the Theory of Statistical Concepts and consent of instructor. Zippin

Zippin Introduction to probability distribution theories, stochastic processes in biostatistics and their use in medicine and biology.

197. Introduction to Statistical Concepts. (F) F, W, Sp. Bosstron An introduction to probability and statistical inference including topics such as analysis of variance, simple linear regression and analysis of discrete data. The laboratory focuses on use of the computer in statistical calculations.

Biomathematics / Biophysics / Biostatistics
Chemistry

11. Organic Chemistry. (3) F. Prerequisite: Chemistry 1A-B or equivalent. Lecture 3 hours. Castagnoli
An introductory study of the structure, stereochemistry, reactivity, and functionality of compounds of carbon.

12. Organic Chemistry. (3) W. Prerequisite: Chemistry 11. Lecture 3 hours. Ketcham, R.B. Meyer
A continuation of the study of compounds of carbon including some aromatic compounds.

16. Organic Chemistry — Laboratory. (2) W. Prerequisite: Chemistry 11. Lecture 1 hour, Lab 3 hours. Oppenheimer
Laboratory techniques in organic chemistry. The preparation and study of organic compounds, with an introduction to quantitative organic analysis.

A continuation of the study of compounds of carbon including some aromatic, hydroaromatic, and heterocyclic systems.

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. Crippen, Slafer
Elementary physical chemistry with emphasis on thermodynamics.

116. Physical Chemistry. (2) W. Prerequisite: Chemistry 115 or equivalent. Lecture 1 ½ hours, Conference and Discussion 1 hour. T. James
Elementary physical chemistry with emphasis on chemical kinetics.

117. Organic Chemistry — Laboratory. (2) F. Sp. Prerequisite: Chemistry 12, 16 and concurrent enrollment in Chemistry 113, or consent of instructor. Conference 1 hour, Lab 4 hours. Ketcham
Laboratory experiments in identification and quantification of organic substances.

151. Physical Chemistry. (1-3) Sp. Prerequisite: Consent of instructor. Lecture 1-3 hours. Shellar, Kuntz
Selected topics at an introductory level, which vary from year to year. Past topics included structure of nucleic acid and proteins, quantum chemistry, and spectroscopy.

155. Chemical Toxicology. (2) F. Lecture 1 hour, Lab 3 hours. K.H. Lee
The methods of chemical detection and analysis of the common poisons. Usually open to third and fourth year students.

A course with some flexibility depending on the student’s interest in the area of qualitative organic analysis or organic synthesis, dealing in part with compounds of pharmaceutical interest.

158, Physical Chemistry — Laboratory (1) Sp. Prerequisite: Chemistry 151. Lab 3 hours. Kollman, Kuntz
Laboratory exercises in conjunction with Chemistry 151.

159. Organic Chemistry — Laboratory. (3) Sp. Prerequisite: Chemistry 16. Lecture 1 hour, Lab 6 hours. Castagnoli, M. Wolff
Advanced experiments in organic chemistry intended to broaden students’ knowledge of experimental procedures.

160. Advanced Physical Chemistry. (2) W. Prerequisite: Two quarters of physical chemistry or consent of instructor. Lecture 3 hours. Tuck, Crippen
Chemical thermodynamics.

161. Advanced Physical Chemistry. (3) Sp. Prerequisite: Chemistry 116 or equivalent. Lecture 3 hours. Castagnoli
Theory and applications of chemical kinetics.

162. Advanced Physical Chemistry. (4) F. Prerequisite: Chemistry 151 or equivalent. Knowledge of differential equations recommended. Lecture 4 hours. Kollman
Quantum mechanics and applications to molecular problems.

165. Organic Chemistry — Analytical Methods. (4) W. Prerequisite: Chemistry 113. Lecture 1 hour, Lab 9 hours. Weinkam
A study of the reactions of organic compounds by applying a system of qualitative analyses to the determination of chemical structure. The emphasis of this course is on lab techniques.

170. Group Studies Course. (1-4) F. W. Prerequisite: Consent of instructor. Staff
Group studies of selected topics in chemistry.

172. Supervised Study in Chemistry. (1-5) F. W. 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.

199. Laboratory Project in Chemistry. (1-5) F. W. 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.

A study of the detailed processes associated with organic reactions.

203. Advanced Organic Chemistry. (4) W. Prerequisite: Chemistry 113, 115, and 165 recommended. Lecture 4 hours. Ortiz de Montellano, J. Craig ap. Staff
Physical organic chemistry; the structure of molecules and its relationship to mechanisms of reaction.

204. Organic Chemistry: Reactions and Synthetic Methods. (2) F. Prerequisite: Chemistry 113 and 157, or equivalent. Chemistry 165 recommended. Lecture 8 hours. J. Craig
A course in advanced laboratory work exemplifying the major reactions and newer synthetic methods used in organic chemistry.

205. Recent Advances in Synthetic Methods. (2) F. Prerequisite: Chemistry 113 or equivalent. Chemistry 165 recommended. Lecture 8 hours. J. Craig
Recent advances in synthetic methods, comprising specific oxidizing agents, specific reducing agents, and other specific reagents.

Terpenes and steroids. Occurrence, chemistry, stereoisomerism and structure-function relationships of natural products such as carotenoids, fat-soluble vitamins, and steroids, and their precursors.

209. Chemistry — Laboratory. (2) W. Prerequisite: Chemistry 113 and 157, or equivalent. Lecture 3 hours. J. Craig, Kenyon
A survey of the main nitrogen, oxygen, and sulfur-containing heterocycles.

Clinical Dentistry


Clinical Laboratory Science

Principles and evaluation of chemical laboratory methods used to diagnose abnormalities in metabolism and organ function.

207. Enzymology. (2) Sp. Prerequisite: Consent of instructor.
The fundamental concepts of enzyme kinetics are reviewed; enzyme measurement and automation; enzyme profiles in various diseases and specific enzyme methodologies are presented.

209. Quality Control. (2) F, W. Prerequisite: Enrollment in the Clinical Laboratory Science master’s program.
A review of principles of statistics and their application to quality control in the clinical laboratory; legal aspects of quality control, preventive maintenance.

210A-B. Clinical Pathology Seminars. (1-1) F, W. Prerequisite: Consent of instructor. Seminar 1 hour.
Specialists on various established and proposed laboratory tests will present interpretation and evaluation of test results.

211. Computer Applications in the Clinical Laboratory. (2) F or W or Sp. Prerequisite: Enrollment in the Clinical Laboratory Science master’s program. Lecture 2 hours.
Applications of computer science in collecting, storing, analyzing and reporting data in a clinical laboratory. Statistical quality control methods will be discussed. Practical computer programming instruction and experience, using FORTRAN, will be stressed.

215. Clinical Toxicology. (2) Sp. Prerequisite: Consent of instructor. Lecture 2 hours. J. Craig, Reynolds, McKinn
Course introduces students to the implications as well as the systemic schemes and specific techniques of vitamins, acids, neutral and basic drugs, metals, and miscellaneous drugs and toxic agents encountered in clinical and forensic laboratories.

218. Clinical Toxicology Laboratory. (2) Sp. Prerequisite: Consent of instructor. Course is given as a three-week trimester program in one of the most active toxicology laboratories in the Bay Area.

230A. Clinical Microbiology. (2) Sp, F, W. Prerequisite: Consent of instructor. Lecture 2 hours.
Principles of clinical laboratory methods for diagnosis of infectious disease are reviewed. Newer detection techniques (immunofluorescence, radioimmunosay, gas chromatography) are examined. In vitro methods of susceptibility testing and assay of antimicrobials are discussed critically.

230B. Clinical Microbiology. (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.
Principles of clinical laboratory methods for diagnosis of infectious disease are reviewed. Newer detection techniques (immunofluorescence, radioimmunosay, gas chromatography) are examined. In vitro methods of susceptibility testing and assay of antimicrobials are discussed critically.
Clinical Pharmacy

110. Orientation in Pharmacy. (F) Conference and Field observation 3-4 hours. deLeon, Herfindal, Besta

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

130. Clinical Pharmacy. (F) Prerequisite: successful completion of all required first and second year courses or consent of instructor. Lecture 4 hours, Conference 2 hours. Winter, Kimble, Benet

Orientation to selected areas of medical practice, the clinical evaluation and comparison of drugs used in these areas, and the biopharmaceutics of drug combinations. The clinical evaluation and comparison of drugs used in these areas, and the biopharmaceutics of drug combinations.

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

Continuation of Clinical Pharmacy 130.

132. Clinical Pharmacy. (7) Prerequisite: Clinical Pharmacy 131 or consent of instructor. Lecture 6 hours, Conference 2 hours. Barrie and Staff

Continuation of Clinical Pharmacy 131.

135. Preclerkship Orientation and Drug Information Analysis Service (DIAS) Rotation. (3) F, W, S, Prerequisite: Third year medical students. Shimomura, Cutip, McSweeney

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

148A. Inpatient Clinical Clerkship. (F, W, S, Prerequisites: Clinical Pharmacy 131, 132 and 135, and Pharmacology 136. Passing grade in the Clinical Pharmacy 130 series comprehensive examination. Clinical 40 hours per week. Gambergotilo, McSweeney and Staff

Supervised clinical pharmacy experience in an inpatient setting to develop the skills and explore the roles of an interdisciplinary health care team, take medication histories, monitor drug therapy, provide patient education, and answer research patients' specific drug information questions.

148B. Inpatient Clinical Clerkship. (F, W, S, Prerequisite: Clinical Pharmacy 148A. Clinic 40 hours per week for six weeks.

Gambergotilo, McSweeney and Staff

Continuation of Clinical Pharmacy 148A. (F) W, S, Prerequisite: Clinical Pharmacy 130, 131, 132 and 135, and Pharmacology 136. Passing grade in the Clinical Pharmacy 130 series comprehensive examination. Clinical 36 hours per week for six weeks.

Closson and Staff

Supervised clinical experience to prepare students for patient care. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education.

149B. Outpatient Clinical Clerkship. (F, W, S, Prerequisite: Clinical Pharmacy 149A. Clinic 36 hours per week for six weeks.

Continuation of Clinical Pharmacy 149A.

152. Problems in Drug Induced Diseases. (F, W, S, Prerequisite: Pathology, 135 and third year standing or higher. Lecture 2 hours. Conference and Special project 4 hours. Tong

The problems of iatrogenic diseases will be studied with major emphasis on their significance, pathology, and management. Assessment of collection and analytic methods of adverse drug reaction information and evaluation of literature will be considered. Special projects will be assigned.

153. Pharmacy Systems. (3, F, S, Prerequisite: Third year standing or higher. Lecture 1 hour. Conference and Special project 5 hours. deLeon, Herfindal, Besta

Orientation to inpatient and outpatient pharmacy systems. Projects in design, justification and implementation of distribution systems such as unit dose, intravenous additive services, computer applications are the primary emphasis. Evaluation will be based on the ability to implement a program.

154. Seminar in Interprofessional Communications. (F, W, S, Prerequisite: Third year standing and consent of instructor. Seminar 1 hour. Discussion leader 2 hours. Field trips deLeon, Beste

Students serve as preceptors for Clinical Pharmacy 110 to gain experience in leading group conferences, discussing the use of the pharmacy and identifying and implementing concepts related to patient oriented pharmacy. Course may be repeated for credit.

156.01. Clinical Pharmacy Clerkship in Inpatient Pediatrics at UC. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Cutip

Students participate in the activities of the Inpatient Pediatrics Service. Activities include routine review of patient charts, monitoring patient response to drug therapy; attendance at conferences, seminars and rounds; and participation in selected therapeutic consultations.

156.02. Clinical Pharmacy Clerkship in Renal Medicine at UC. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Gambrogotilo

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 will prepare detailed consultations regarding individual patient therapy.

158.03. Clinical Pharmacy Clerkship in Infectious Diseases at UC. (1-8) W, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Barriere

Students review Infectious Disease Service therapeutic consultations and evaluate patients' responses to recommended therapy by following chart records and by direct interviews. Attendance at conferences, seminars and rounds. Special projects will be assigned.

156.20. Clinical Pharmacy Clerkship in Pediatrics at K, H, W, F, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Kimble, Pigeon

Students participate in the activities of the Inpatient Pediatrics Service. Activities include routine review of patient charts, providing therapeutic consultation where appropriate, monitoring patients' response to drug therapy, attendance at conferences, seminars and rounds. Special projects will be assigned.

156.22. Clinical Pharmacy Clerkship in Pediatrics Specialty Clinics at UC. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B, 148B or 149A, 149B. Consent of Instructor.

Students work under supervision of a clinical pharmacist and physicians in preparation of a therapeutic management plan for selected patients. They participate in conferences and seminars, and perform selected therapeutic consultations for the clinical staff.

156.25. Clinical Pharmacy Clerkship in Inpatient Medical Services at VA. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A, or 149B, 149B. Consent of Instructor.

Kimble, Nagata and Staff

Experience in various medical services at VA. Activities include interviewing patients, monitoring drug therapy, consultation with house staff, and participating in conferences, seminars and rounds. Special projects will be assigned.


Kimble, Furtado

Experience in various medical services at VAPA. Activities include monitoring therapy, attending rounds, discussing patients and preparing therapeutic consultations of patients, as well as participating in conferences, seminars and rounds.

156.27. Clinical Pharmacy Clerkship in Medicine at STJ. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of Instructor.

Students attend rounds with physicians and pharmacists, participate in seminars with the pharmacy staff, monitor drug therapy, and research drug therapy questions formulated by physicians and pharmacists.

156.28. Clinical Pharmacy Clerkship in Medicine at MM. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Kimble, Chann

Experience in various medical services at a private community hospital. Students interview patients, monitor drug therapy, consult with house staff and nursing service, and prepare drug information reports appropriate to patient care.

156.30. Clerkship in Clinical Pharmacology at SFGH. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Students, in an interdisciplinary setting, assess clinical problems related to the selection, pharmacodynamics, and therapeutic merits of drugs and drug products. Activities include participation in rounds and conferences, collaboration on selected therapeutic consultations, and retrieval and evaluation of drug literature.

156.31 Clinical Pharmacy Clerkship in Clinical Pharmacology. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B. Consent of Instructor.

Kimble, Tatro

Students participate in the activities of the Division of Clinical Pharmacology. This clerkship includes a discussion of computerized patient drug profiles to monitor adverse drug reactions, and participation in conferences and seminars. Special projects will be assigned.

156.40. Clinical Pharmacy Clerkship in Thyroid Clinic at UC. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A, or 149B and 149B. Consent of Instructor.

Dong

Students participate in the activities of the Thyroid Clinic, including patient monitoring, and attendance at conferences and seminars. They will work under supervision of the clinical pharmacist and physicians in the chronic management of selected patients.

156.41. Clinical Pharmacy Clerkship in Dermatology Clinic at UC. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A, or 149B and 149B. Consent of Instructor.

McCart

Experience in various subspecialty areas in the Dermatology Clinic. Students will take medication histories, and instruct patients on proper medication usage. They participate in conferences, seminars and rounds, and provide therapeutic consultations when appropriate.

156.42. Clinical Pharmacy Clerkship in Obstetrics and Gynecology at UC. (1-8) F, W, S, Prerequisite: Clinical Pharmacy 149A or 149B, Consent of Instructor.

Kimble, Ruggiero
Experience in various subspecialty areas in the Obstetrics and Gynecology Clinic. Students work with other health care professionals in the clinic, participating in conferences and seminars. They will prepare detailed consultations regarding drug therapy for patients, when appropriate.

156.43. Clinical Pharmacy Clerkship in Diabetes Clinic at UC. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Kimble, Students participate in activities of the Diabetes Clinic, including patient education, drug therapy consultation, and management of drug therapy at conferences and seminars. At option of student, a special project may be undertaken in addition to regular clinic activities.

156.44. Clinical Pharmacy Clerkship in Tropical Medicine Clinic at UC. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Kimble and Staff Students participate extensively on activities of the Tropical Medicine Clinic. Emphasis is placed on patient interviews and rational treatment of parasitic diseases. Special project is optional.

156.45. Clinical Pharmacy Clerkship in Anticoagu- lation Clinic at UC. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Kayser Students participate in activities of the Anticoagulation Clinic. A special project will be required; the subject of the project shall be chosen by the student, with the consent of the preceptor.

156.46. Clinical Pharmacy Clerkship in Hematology/Oncology Clinic at UC. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Ignacio Students participate in daily activities of the Hematology and Oncology Clinics. A special project will be required; the subject of the project shall be chosen by the student, with the consent of the preceptor.

156.47. Clinical Pharmacy Clerkship in Rheumatology Clinic at UC. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Kimble and Staff Students participate in activities of the Rheumatology and Arthritis Clinics. A special project will be required; the subject of the project shall be chosen by the student, with the consent of the preceptor.


Lohfflm Students will interview patients, maintain medication record, explain medication dosage to patients, and answer drug therapy questions generated by physicians, pharmacists, and patients in a pharmacy located within group medical practice.


Kimble, Gao, Olayos Students take patient medication interviews, explain medication usage problems to patients, and evaluate drug therapy questions generated by physicians, pharmacists, and patients in a community pharmacy setting.


Kimble, Wholey, Torigoe Students collect data and prepare updated medication record, dispense medication, educate patients as to proper medication usage, and provide drug therapy recommendations for patients assigned to the pharmacists for chronic therapy management.

156.63. Clinical Pharmacy Clerkship at Sunset Mental Health Clinic. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Kimble, T. Wong, S. Cohen Students work with the clinical pharmacist to evaluate psychiatric patients’ responses to drug therapy, and present consultations reviewing overall patient therapeutic management in weekday seminars.

156.64. Clinical Pharmacy Clerkship at Haight- Ashbury Heroin Detoxification Unit. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor.

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

156.90. I.V. Additives and Parenteral Fluid Therapy at UC. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor. Kimble, Chan Students participate in I.V. fluid therapy selection and preparation and use of I.V. therapeutic intravenous medications. Conferences will be held on topics related to problems in the use of I.V. therapeutic intravenous preparations.


Koike, Rupp Students participate in the preparation of I.V. irrigation and infusion solutions, and are exposed to various types of I.V. additives. Conferences will be held on topics related to the clinical use of parenteral therapy and drug distribution systems.


Curp Students participate in the preparation of I.V. irrigation and infusion solutions, and are exposed to various types of I.V. additives. Conferences will be held on topics related to the clinical use of parenteral therapy and drug distribution systems.


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


Kimble, Fleckenstein Experience in collection, evaluation and dissemination of drug information; participation in a community-based drug information service. Activities will include answering drug information requests from community practitioners.

156.92. Clerkship in Unit Dose Systems at Mary’s Help Hospital. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor.

Kimble, Scarpaci, Hishi Practical experience in a community hospital pharmacy unit dose system. Conferences will be held on topics related to the principles and theory of the unit dose system, drug therapy problems encountered in monitoring, and interprofessional relationships.


Kimble, Hirschman Participation in peer review and quality assurance aspects of various health care programs. Activities include selecting and preparing case histories for review, evaluating and making recommendations, and formally presenting cases to the peer review committee. Students will also include:

165. Hospital Pharmacy. (1-5) F, W, Sp. Conference and special projects. Beste, Oyang, Herfindal Course is intended and recommended for students who are interested in the resident program in hospital pharmacy. Other students may enroll with consent of instructor.


Kimble, R. Stoff Group studies of selected topics in clinical pharmacy.


Winter Students participate in the clinical service of the Clinical Pharmacokinetics Laboratory. Course includes and reviews drug levels; selecting patients to be monitored; preparation and presentation of reports; attendance at seminars and experience in leading in lab.

199.21 Infectious Diseases at SFGH. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

Barriere, Tong Students attend rounds with the Infectious Disease Service, evaluate infectious disease selection, and patients’ response to therapy; serve as drug consultants to staff on the service. Special project relating to an aspect of infectious disease and its therapy is assigned.

199.22 Infectious Diseases at VAM. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor.

Kimble, Warren Students attend rounds, provide medication consultations, monitor drug therapy, work with health care professionals regarding antibiotic uses and misuse, and provide pharmacokinetic monitoring.

199.27. Pediatric Specialty Clerkship at SFGH. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A and 149B. Consent of instructor.

R.H. Levin Students participate with the pediatric staff in dealing with problems frequently encountered in patients of the Pediatric specialty clinic, which afflicts children from low income, overcrowded and substandard conditions. Activities include rounding, conferences and participation in special projects.


Kimble, Wraith Students participate in the development and testing of the computer program MYCIN, a subset emphasizing infectious disease therapy or computer utilization will be required.


Kimble, Rainey Experience in various medical services at a private community hospital. Students will interview patients, monitor drug therapy, consult with house staff and nursing staff, and provide drug information reports appropriate to patient care.

199.55. Medical Specialties Clerkship at SFGH. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148A or 149A, 149B. Consent of instructor. Enrollment limited.

Kimble, R. Conte Students rotate through the various Chronic Dialysis and Communicable Disease Units where they participate in conferences, work rounds and seminars, monitor drug therapy, provide therapy consultation, and drug information retrieval and analysis.


Staff Exploration of the potential service roles of clinical pharmacists in various medical specialty settings.


Kimble, Scheidmann Practical experience in a hospital-owned community pharmacy offering progressive, patient-oriented services, including drug monitoring, establishment and maintenance of medication profiles, patient counseling, drug information and inservice education.

199.66. Rockridge Medical Care Center Pharmacy. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131, 132 and/or consent of instructor. Kimble, Warren
Practical experience in the administrative, dispensing and consulting roles of a pharmacist in a prepaid health plan; includes customer service, utilization review, patient education, interaction with various health professionals, and participation in committee work.

McCarr
Students will design a prospective drug utilization review study. After reviewing introductory material about the purpose and value of such studies, students will gather, evaluate, and interpret data for a final written report suitable for publication in the Hospital Pharmacy Bulletin.

196.81. I.V. Fluid Therapy at Mary’s Help Hospital. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor. 
Kimble, Kotabe, Rupp
Participation in weekly 3 hour conference and 6 to 10 hours monitoring patients with fluid problems. Students are responsible for preparation and leading of conferences on rotational basis. A special project of student’s interest is required with the consent of the preceptor.

196.82. I.V. Additives at VA. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor. 
Kimble, Kikugawa
Introduction to the administration, professional and technical aspects of establishing and maintaining an I.V. additive service. Students will participate in workshops and conferences.

196.83. I.V. Additives and Unit Dose at VAM. (1-8) F, W, Sp. Prerequisite: Registered intern with California State Board of Pharmacy and consent of instructor. 
Kimble, Gee, Woo
Students actively participate in reviewing patients’ drug profiles, preparing parenteral solutions using aseptic techniques, unit dose packages, providing education to other hospital personnel, and dispensing unit dose drugs.

196.84. UTI and Drug Utilization Review at VAM. (1-8) F, W, Sp. Prerequisite: Second year standing and/or consent of instructor. 
Kimble, Gee, Woo
Students review patients’ charts, collect data in management of UTI’s and antibiotic utilization, in an interdisciplinary approach to health care in a hospital environment.

Kimble, R. Robertson
Students interview patients, monitor drug therapy, provide in-service education, provide drug information consultations to physicians, and conduct drug utilization and adverse drug reaction studies. Documentation and report findings are to be presented in a written report.

196.93 Clerkship in Skilled Nursing Facilities at Hampshire Convalescent Hospital and Central Gardens Convalescent Hospital. (3-6) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. 
Kimble, Warren
Students practice in a convalescent hospital and gain exposure to the pharmaceutical services provided to such institutions by a community pharmacist. Students review drug regimens, prepare case histories for presentation to preceptors, and attend various hospital committee meetings.

198. Supervised Study in Clinical Pharmacy. (1-5) F, W, Sp. Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

Herfindal, Besta and Staff
Residents provide pharmacy service to patients in the wards and outpatient clinics including taking drug use histories, preparing and monitoring medical orders, giving drug information and consultation, and related activities. In addition, there are administrative and teaching responsibilities.

Herfindal, McCarty, Kayser
Residents provide drug information and consultation services on request. Activities include literature searches, preparing reports and other communications and administrative responsibilities involving the Drug Information Analysis Service.

452. Hospital Pharmacy Administrative Work. (5) Su, F, W, Sp. Prerequisite: Resident standing and approval of program director. 
Herfindal, Besta and Staff
Residents are responsible for carrying out assignments related to the administration of a modern hospital pharmacy service. Activities include preparation of budgets, supervision and development of staff, program planning, and related dispensing assignments.

453. Pharmacy Clinical Research. (1-5) Su, F, W, Sp. Prerequisite: Resident standing and approval of program director. 
Herfindal, Besta and Staff
Research programs are arranged with appropriate faculty members on an individual basis.

469. Seminar in Hospital Pharmacy. (0) F, W, Sp. Prerequisite: Admission to the program in Hospital Pharmacy. 
Besta, Herfindal and Staff

Clinical training in four-handed, sit-down dentistry using full time chairside dental assistants. Course is conducted in three week blocks of eight students at SFSGH in conjunction with the general dentistry rotation. General Dentistry 109.01.

120. Introduction to Use of Dental Auxiliaries. (1/2) F, W, Sp. Prerequisite: Preventive Dentistry and Community Health 111. Lecture 1 hour for one-half of quarter. 
Ino
Classroom instruction and demonstrations in the effective use of the dental assistant.

An elective course primarily designed to examine the theories and practice of personnel management as related to a small, single proprietorship business such as a dental practice.

150. Introduction to Dental Health Education. (2) W, Lecture 2 hours. 
Taibolt
An introduction to theories of learning and educational methodology as applied to clinical practice of dental hygiene. Development and implementation of individualized preventive programs for dental patients is emphasized.

160A. Classroom Dental Health Education I. (2) F, W, Sp. Prerequisite: Dental Health Education 150. Lecture 2 hours. 
Francisco, Pope
Course covers fundamentals of classroom education techniques, including objective writing, lesson planning and test construction.

160B. Classroom Dental Health Education II. (1) W, Prerequisite: Dental Health Education 150 and 190A. Lecture 9 hours. Lab 12 hours. 
Pope
Field work experience utilizing techniques learned in Dental Health Education 160A.

160C. Community Dental Health Education. (2) F, W, Sp. Prerequisite: Dental Health Education 150, 160A and 160B. Lecture 2 hours. 
Francisco
Course covers community dental health roles for dental hygienists, including program planning and financing.

188. Supervised Study in Dental Health Education. (1-5) F, W, Sp. Prerequisite: Dental Health Education 150, 160A, 160B and Biostatistics. 
Francisco
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

198. Laboratory Project in Dental Health Education. (1-6) F, W, Sp. Prerequisite: Dental Health Education 150, 160A and 160B. Lecture 1 hour, Lab 0-12 hours. 
Francisco
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

109. Dental Hygiene. (2-2.5) F, W, Sp. Prerequisite: Dental Hygiene 150A-B. 109, and approval of the chairman of the division. Clinic 3-4 hours. 
Francisco
Course provides additional clinical dental hygiene experience before entry into the second year clinic.

Hallerman and Staff
The role of the dental hygienist in preventive dentistry is studied with emphasis on the objectives and principles of oral prophylaxis. Introduction to the anatomy and physiology of the oral cavity and to dental disease.

151. Orientation to Dentistry. (1) W. Lecture 1 hour. 
Francisco
Introduction to dental specialties and clinical dental procedures. Tabled to be included are oral diagnosis, operative dentistry, periodontics, endodontics, and myofunctional therapy.

152B. Introduction to Research. (2) W. Lecture 2 hours. 
J. Boyce
Introduction to research for the dental hygienist. Course includes types of research, problem selection, research protocol and evaluation.

152C. Research Design. (2) Sp. Lecture 2 hours. 
J. Boyce
Continuation of Dental Hygiene 152B; design and implementation of research project, and preparation of report for table clinical presentations.

152A-B. Introduction to Clinical Dental Hygiene. (2-2.5) F, W, Lab 3 hours, Clinic 3 hours. 
Francisco
Laboratory and clinical experiences in patient examination and taking, operator-patient positioning, and techniques for managing slight to moderate periodontal disease.

Francisco and Staff
Continuation of clinical experiences from Dental Hygiene 150A-B with emphasis on improved proficiency in all areas.

Francisco and Staff
Seminar to discuss patient management and clinical procedures.

Francisco and Staff
Students identify their personal and professional responsibilities as members of the health care team and are informed of general office policies and procedures. Other subjects discussed include selection of a position, taxes, ethics, jurisprudence, and insurance.

151A-B. Orientation to Dentistry. (1-1) F, W, Prerequisite: Dental Hygiene 151. Lecture 1 hour. 
A. Gould
Continuation of Dental Hygiene 151. Course includes head and neck Intraoral and Extraoral, tooth transplantation and implantation, orthodontics, oral surgery, craniofacial anomalies, maxillofacial rehabilitation, and removable and fixed prosthetic devices.
169A-B.C. Advanced Clinical Dental Hygiene. (4-4-4) F, W, Sp. Prerequisite: Dental Hygiene 155A-B and 159 or equivalent. Francisco Advanced clinical dental hygiene techniques including periodontal maintenance therapy, pain control and soft tissue curettage in cases of moderate to advanced stages of periodontal disease.

169.01A-B.C. Clinical Dental Hygiene Seminar. (1-1-1) F, W, Lecture 1 hour. A. Gould Discussion of individual cases in practice and participation in seminars and conferences. Course requirements are subject to change.

188A-B. Advanced Clinical Functions. (2-2-2) F, W. Lecture variable 1-2 hours. Lab 2 hours. Zwaschak Course will encompass current regulations on the utilization of dental auxiliaries as defined by the California State Board of Dental Examiners for the Registered Dental Assistant and the Registered Dental Hygienist.

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

189.01 Clinical Experience in Mobile Dental Clinic. (0-3S) SS. Clinic Variable. R. Miller Clinical experience in mobile dental clinics.

189.02. Community Health Clinical Practice. (0-2) F, W. Prerequisite: Winter or spring quarter standing of first year dental hygiene curriculum; or fall, winter or autumn quarter standing of second year dental hygiene curriculum. Francisco One-half unit of credit for every five-three-hour visit to off-campus clinics or institutions. Objective to secure clinical experience and involvement. This elective is above the required eight visits to off-campus clinics and institutions.

190. Laboratory Project in Dental Hygiene. (1-5) F, W, Sp. Lecture 1 hour, Lab 0-12 hours. Guppard A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

190. Dental Jurisprudence. (1) W. Lecture 1 hour, for five sessions. F. Bradley The course broadens student insight into the legal problems and obligations of dental practice.

115A-C. Basic Dental Techniques. (1-1-3) F, Sp, Lab 3 hours. M. Stark First year students are oriented to the necessity for accuracy in manipulation of materials, impression taking, pouring of casts, waxing technique, investing, casting, and soldering are covered. Manipulation of restorative materials will be demonstrated and used by the student in the laboratory.

185. Introduction to Basic Dental Techniques. (2-2S) SS. Lab 18 hours, for three weeks. Bragalone Technical orientation to the basic techniques taught in the first year dental hygiene such as amalgam, prophodontics, biomatials, and operative dentistry.

Dermatology

Dermatology is a branch of medicine that deals with the diagnoses, treatment, and prevention of diseases that affect the skin, hair, and nails. It is a specialized field that focuses on conditions that involve the integumentary system, which includes the skin, hair, and nails.

First-Year Coordinated Instruction - Medicine 131A-B. Lecture-demonstrations and sections and work devoted to the supervised examination of patients.

Core Clerkship - Ambulatory and Community Medicine 110 includes lectures and case demonstrations on the examination and diagnosis of dermatological diseases. This includes instruction in history-taking, physical diagnosis, and diagnostic and therapeutic procedures.

140.01 Clinical and Research Dermatology. (1½ per quarter) F, W, Sp. Prerequisite: Consent of Instructor. Cramp Activities of students are determined after an interview with the instructor. Emphasis is placed on routine outpatient and inpatient care and research methods, according to individual interest.

140.02. Clinical Clerkship. (1½ per week) F, W, Sp. Prerequisite: Dermatology 140. W. L. Epstein Clinical clerkship in approved hospitals by special arrangement and approval of the Dean and chairman of the department.

150.01. Research in Dermatology. (1½ per quarter) F, W, Sp. Prerequisite: Consent of instructor. Fukuyama A research project under the direction of a member of the faculty.

160.01. Clinical and Research Dermatology. (1-½) F, W, Sp. Prerequisite: Consent of Instructor. W. L. Epstein Activities of students are determined after an initial interview with the instructor. Emphasis is placed on routine outpatient and research methods, according to individual interest.


190. Laboratory Project in Dermatology. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Fukuyama A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

400. Dermatology Staff Conferences. (2-2) F, W. W. L. Epstein and Staff Residents present and present cases histories of patients seen by dermatology staff. Conferences include discussions of new developments and research investigation by staff members and faculty from other UC departments and other hospitals.

401. Dermatopathology. (2) Su, F, W, Sp. Lecture 2 hours. R. Goodman 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 discussions of material presented.

402. Seminar in Dermatological Literature. (1) F, W, Sp. Seminar 1 hour. Malbach and Staff Seminar covers recent literature in dermatology. Included is assigned reading with required reports which are evaluated by members of the faculty.

403. Speciality Seminars. (2) F, W, Sp. Seminar 2 hours. Seminars include discussions, required reading, and reports on dermatology and related basic sciences such as embryology, histology, histopathology, and parapsoriasis in relation to dermatologic conditions, and oncology as it relates to the skin.

404. Seminar in Clinical Dermatology. (1) F, W, Sp. Seminar 1 hour. W. L. Epstein and Staff Seminar involves the evaluation of recent clinical cases of special interest. Cases are presented by the faculty and resident staff.

405. Research in Dermatology. (3) F, W, Sp. Lab 9 hours. In the conduct of research projects dealing with electron microscopy, biochemistry, biochemistry, and immunology of the skin under normal and pathological conditions.

406. Basic Science Seminars. (1) Su, F, W, Sp. Seminar 1 hour. W. L. Epstein and Staff In-depth discussion of the sciences basic to an understanding of the function and dysfunction of skin and its appendages, including histology, immunology, pharmacology, biochemistry, genetics and physiology. Over a three-year period, course covers all aspects of basic sciences relevant to dermatology.

407. Medical Cutaneous Microbiology. (2) Su, F, W, Sp. Prerequisite: Consent of Instructor. Lecture 2 hours. Kaye 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.

450. Clinical Dermatology. (10) Su, F, W, Sp. K. McLintock, PHS Falsal, Hoke, UC Conant, SGFH Galvin, VA Tufanelli Residents, under supervision, are responsible for patient care in the wards and outpatient clinic. Duties include history-taking, physical examination, and consultations. In addition, the senior resident has certain administrative, teaching, and clinical responsibilities.

451. Clinical Dermatology. (1½ per week) Su, F, W, Sp. J. H. Epstein Residents, under supervision, are responsible for patient care in the wards and outpatient clinic. Duties include history-taking, physical examination, and consultations. In addition, the senior resident has certain administrative, teaching, and clinical responsibilities.

452. Clinical and Experimental Dermatology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of Instructor. W. L. Epstein Assistant residents work at off-campus hospitals, in the United States and other countries, approved by the Dean and the chairman of the department. Course includes training in clinical and investigative dermatology.

Economics

150. Economics of the Health Services. (3) W. Prerequisite: Consent of instructor. Lecture 3 hours. Staff Consideration of the health service sector of the economy. Study of its structure and the pricing, financing, and allocation of health services. Emphasis is on questions of public policy.

151. Principles of Economics. (3) Sp. Lecture 3 hours. Staff An introduction to the principles of economic analysis, emphasizing the allocation of resources, the composition of output, and the level of income and employment in the American economy. Not recommended for students who have received credit for either Economics 1A or 1B.

180A-B. Economics. (1-1) F, W. Lecture 1 hour. Winters Lectures and group discussions related to dental practice. Subject areas covered include economic analysis, tax policies, national and international financial policies, disposal of goods, and health care programs. Prepaid dental care programs and the role of professional organizations are presented by guest lecturers.

Endocrinology

190. Animal Hormones and Their Actions. (2) § Sp. Lecture 2 hours. Offered in alternate years. Losroth, Papoff. Basic information on animal hormones, their structures, functions, and interrelationships. Concepts regarding hormonal actions are derived from chemical structure-function and biological in vivo, in vitro studies. Where possible, mechanisms will be discussed.

191. Topics in Endocrinology. (1) § Sp. Prerequisite: Endocrinology 190 or consent of instructor. Lecture 1 hour. Offered in alternate years. Papoff, Losroth. Selected topics of current interest.

Dermatology / Economics / Endocrinology
192. Structure and Function of the Hormones. (2) § W. Prerequisite: Course in basic biochemistry recommended. Course will examine the chemical nature of the endocrine systems; the methods employed for purification, characterization, structural determination, and synthesis; and the relationship of the molecular structure to biological activity will be studied, as well as comparative and evolutionary aspects.

198. Superficial Study in Endocrinology. (1-5) § Su, F, W, Sp. Prerequisite: Consent of instructor. Ganong and Staff

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

199. Laboratory Project in Endocrinology. (1-5) § Su, F, W, Sp. Prerequisite: Consent of instructor. Ganong and Staff

A laboratory research project under direction of a member of the teaching staff with the approval of the chairman of the department.

202. Mechanisms of Hormone Action. (3) § W. Prerequisite: Physiology 101 and Human Biology 200A and 200B, or Biochemistry 100A-B or consent of instructor. Lecture 2 hours plus independent study. Goldfine, J. A. Williams

Reading and discussion of classical and current literature concerning known and speculative mechanisms of hormone action. Major hormones covered are insulin, glucagon, thyroxine, and corticosteroids.


Students will attend and participate in a seminar series devoted to topics of current interest in endocrinology.


Seminar presentations in areas of current interest in reproductive endocrinology by guest lecturers and members of the Reproductive Endocrinology Center. Term paper required. Course may be repeated for credit.

230. Reproductive Endocrinology. (2) § W. Prerequisite: Consent of instructor. Lecture 2 hours. W. H. Noble

Lectures and assigned readings in the reproductive endocrinology of the male and female. Topics include structure, function, and regulation of hypothalamic, pituitary, and gonadal hormones, with special emphasis on masculinization.


Endocrinology


Clinical endocrinology. Minimum of 100 points or two units required for graduation.

References:

125. Sophomore Preclinical Endocrinology Laboratory Course. (1-16) § Su. Lecture 5 hours. Lab 12 hours. Nguyen

Course presents the scope of modern endocrinology and lays the groundwork for endocrinologic clinical practice. Laboratory procedures involved in both endocrine therapy with emphasis on the interrelationship of endocrinology to basic sciences and other disciplines of dentistry will be presented.

130. Clinical Endocrinology. (1) § F. Lecture 1 hour. Nguyen

Course covers prevention, diagnosis and treatment of diseases of the endocrine system, with emphasis on the pertinent clinical aspects of the disease process. Numerous related experimental and clinical aspects of endocrinology will be covered through integration of didactic presentation with laboratory exercises and patient care. Radke

181. Advanced Endodontic Concepts. (1) § W. Lecture 1 hour. R. J. Rosenberg

Diagnosis, case selection, and management of pain and infection in endodontically-involved teeth; advanced techniques for treating difficult root canal system anatomy; refinements in obturation of the root canal system.

189. 01. Endodontology Clinical Practice. (0-9) § F, W, Sp. Prerequisite: Approval of the chairman of the division. Clinic Variable. Nguyen and Staff

Clinical experience at the level of Endodontics 109.

189. 02. Advanced Clinical Endodontics. (0-4) § Sp. Clinic Variable. Sapon

Advanced instruction in the field of clinical endodontics.

189. 03. Expanded Clinical Endodontics. (0-9) § F, W, Sp. Prerequisite: Completion of endodontics graduation requirements and satisfactory progress toward graduation in all other divisions. Consent of instructor and approval of Clinic Review Committee. Clinic Variable. Enrollment limited. Nguyen and Staff

Objectives of the course are to offer more extensive endodontic service, rather than extraction, to clinic patients. Internal and external root resorption, iatrogenic root perforations, and tissue exploitations for diagnosis and treatment for students showing interest in endodontics.

189. 04. Undergraduate Clerkship in Endodontics. (0-16) § F, W, Sp. Prerequisite: Fourth year standing and completion of majority of graduation requirements. Lecture 5½ hours, for the variable. Clinic

Nguyen, Sapon and Staff

An endodontic clerkship offering advanced senior students the opportunity to gain in-depth experience in diagnosis, emergency care and, along with many of the surgical and surgical endodontics, as well as the related endodontic-periodontic problems.

Exfoliative Cytology

401A-B-C-D. Exfoliative Cytology. (14-14-14-14) § Su, F, W, Sp. Nguyen and Staff

Lectures in cytology include normal, malignant, and abnormal nonmalignant cells. Instruction covers method of specimen collection; preparation, staining, and microscopic examination of specimens; development of speed and accuracy in microscopic examination and correlation of cellular and tissue pathology.

Fixed Prosthodontics


Clinical correlation will be taken concurrently with third and fourth year lecture courses.


Course provides material on the construction of a single unit bridge (posterog) on the typodont models, specifically preparation design, articulation and mounting principles, provisional restorations, waxing design and casting technique.

115. Techniques in Fixed Prosthodontics. (2) § Sp. Prerequisite: Concurrent enrollment in Fixed Prosthodontics 110. Lab 6 hours. Radke

Course covers the basic techniques of fixed prosthodontics.

120A-B. Fixed Prosthodontics Techniques Theory. (1-1) § F, W. Prerequisite: Fixed Prosthodontics 110 and 115. Lecture 1 hour. Radke (F), Lacy (W)


130A-B-C. Fixed Prosthodontics Theory. (1-1-1) §§, W, Sp. Lab 1 hour; W 2 hours. Sapon, Mell (SS, Tueller), Staffanou (W)

170. Seminar in Fixed Prosthodontics. (2) § F, W, Sp. Prerequisite: Students in Fixed Prosthodontics Certificare Program must register for this course each quarter and summer session.

New concepts and theories are discussed and related to research and clinical practice. Students are encouraged to develop new concepts in the application of basic sciences and research to fixed prosthodontics.

171.01A-B. Clinical Procedures in Fixed Prosthodontics. (3) § F, W, Sp. Prerequisite: Admission to postdoctoral standing and consent of instructor. Lecture 1 hour; Clinic 6 hours. W. H. Noble

Instruction in clinical practice in the diagnosis, treatment, and training of clinical patients.

171.02. Clinical Procedures in Fixed Prosthodontics. (2) §§, W. Prerequisite: Fixed Prosthodontics 171.01A-B-C. Clinic 6 hours. W. H. Noble

Clinical procedures in fixed prosthodontics. Course provides a continuation of clinical experience received in Fixed Prosthodontics 171.01A-B-C.

172.01A-B-C. Advanced Clinical Procedures in Fixed Prosthodontics. (3-3-3) § F, W, Sp. Prerequisite: Compl
General Dentistry

108. General Dentistry. (0-4) F, W, Sp. Prerequisite: Third year standing. Clinic Variable. G. Hall An elective course in which students perform patient treatment in a variety of clinical settings.

109. Dental Hygiene at SFGH. (0-4) F, W, Sp. Prerequisite: Fourth year standing. Clinic and Seminar. Darke, Khosla

Provision of comprehensive and emergency dental care for the community served by SFGH clinics. Concepts of clinical dental auxiliary utilization will be used while rendering treatment.


Introduction to the clinical procedures and techniques used in the diagnosis, management and control of oral disease.

150. Dental Morphology. (2) F, Prerequisite: Concurrent enrollment in Dental Hygiene 150A. Lecture 3 hours. B. Hartman

The development and form of deciduous and permanent dentition and occlusion. Study of individual tooth and arch form to interarch relationships as well as endodontic morphology.

189.01 Advanced Clinical Clerkship in General Dentistry and Pre-Doctoral. (4-4) F, W, Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee. Weir, G. Hall

Students provide comprehensive dental care to patients assigned to them under supervision of staff in the medical and hospital environment. Attendance at seminars and conferences included.

Health Sciences Education

200. Introduction to Health Sciences Training. (2) F, Prerequisite: Consent of instructor. Lecture 2 hours. K. Jacoby

Course focuses on instructional techniques and strategies useful for the beginning clinical instructor. Emphasis is on the development of an effective personal teaching style. Open to advanced graduates, residents, teaching assistants and new faculty.

220A-B. Health Sciences Education Seminar. (2-2) F, W, Prerequisite: Consent of instructor. Seminar 2 hours. Rosinski

Consideration of principles of learning, including individual student differences, techniques of instruction, and approaches to evaluation of student progress. Individual teaching plans are developed and critiqued. Emphasis is placed on the graduate and professional school student as a learner.


Graduate seminar integrating clinical experiences and academic study of students enrolled in the Kellogg Education Project. Relationships of course work experiences to future roles as allied health

various health professions and services, with consideration of the economic and ethical factors involved.

198. Supervised Study in History of Health Sciences. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Rosinski

A seminar to review and develop objective techniques in assessing the historical and philosophical context under supervision of students and practitioners. Techniques will be developed and validated for a number of clinical disciplines.

History


Projections, based on a background of the growth and development of the profession, develop "curves of probability" of future technical and biological developments. Growing social impacts upon the present and future practice of dentistry are stressed.

History of Health Sciences

150. History of Pharmacy. (3) Sp. Prerequisite: Upper division mathematics. Lecture 3 hours. T. Schwarz

Emphasis is on the historical development of pharmacy, its relationship to the other health professions and the personalities who significantly contributed to the advancement of health sciences.

170.02. Medical History and Bibliography. (1-5) F, W, Sp or Lecture 1 hour. J. Saunders

Lectures and informal seminars on aspects of medical history.


Lectures and informal seminars on the growth of American medicine from Colonial times to the present, with an examination of the sociopolitical and social-economic factors influencing that growth.

170.04. History of Psychiatry. (1-5) F, W, Sp, Prerequisite: Consent of instructor. Veith

Changing concepts of psychiatrics from earliest times to the present. In relationship to the changing climate of thought on the nature of the psychic process and psychic disorders.

170.06. Introduction to the History of Medicine. (1-5) F, W, Sp. Lecture 1 hour, Independent study Variable. Veith

An introductory course intended for all students in the health professions and graduate students interested in the broad conceptual developments influencing the growth of medical sciences and the health professions from the classical to the modern period.

170.07A-B. History and Philosophy of the Health Professions. (1-2, 1-2) F. Lecture 1 hour. Paper required for 2 units. Briger, J. Saunders

Survey of the history and development of the various health professions and services, with consideration of the economic and ethical factors involved.

200. History of Medical Education. (1-3) W, Sp. Lecture 1-2 hours, plus paper or research for 3 units. Briger

Lectures, discussions, and readings on the development of medical education in practice and practice from ancient to the present. Emphasis will be on American medical education in the nineteenth and twentieth centuries.

211. Theories of Human Nature. (3) Sp. Prerequisite: Graduate standing. Lecture 3 hours. Jonsen

Course examines several classical and modern theories of human nature, from Greek and Roman to enlightenment, from the Middle Ages to the post-modern era. Emphasis will be on basic theories and their implications for contemporary science and medical practice.

220. Seminar. (1-3) F, W, Sp. Seminar 1-3 hours. Staff

Students, staff, or guest lecturers present selected topics concerned with current research.

297. Special Study. (1-3) F, W, Sp. Staff

Reading and conferences for qualified students under the direction of a member of the staff.

298. Thesis. (0-9) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate advisor. Staff

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

299. Dissertation. (0-9) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate advisor. Staff

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

Hospital Dentistry

170. Emergency Medical Care Seminar. (1) W. Prerequisite: Postdoctoral or fourth year standing. Seminar 2 hours. Lim

The course is designed to stimulate group discussion on the principles of emergency medical care. Topics include transportation, disaster planning, team, cardiopulmonary resuscitation, management of shock, head and neck injuries, as well as special problems related to dentistry.

171. Physical Diagnosis. (0) F, W, Sp. Prerequisite: Enrollment in a postgraduate specialty program or consent of instructor. Lecture 2 hours. J. Klein

Designed to prepare the oral surgeon to conduct a physical examination as a preclinical evaluation before performing oral surgical procedures. Techniques of examination are demonstrated and practiced.

172. Oral Biology Conferences. (1) W. Prerequisite: Presentation of a standing. Seminar 2 hours. Staff

Conferences include case presentations by interns and residents, and seminars covering selected sub-
jects in oral biology relevant to clinical and preventive dentistry.

**Human Biology**

204A. Cell Biology. (3) § F. Prerequisite: Biochemistry 100A or equivalent, or consent of Instructor. Lecture 3 hours.

208B. Cell Biology. (3) § W. Prerequisite: Biochemistry 100A or equivalent, or consent of instructor. Lecture 3 hours.

**Stoeczek**

An introductory course in the structure, biochemistry, and function of the eukaryotic cell.


**Stoeczek**

An introductory course in the structure, biochemistry, and function of the eukaryotic cell.

202A-C. Basic Concepts of Neurosciences. (4-4-4) § F, W, Sp. Prerequisite: Admission to neuroscience program or consent of instructor. Lecture 4 hours.

202A-B. Basic Concepts of Neurosciences. (4-4-4) § F, W, Sp. Prerequisite: Admission to neuroscience program or consent of instructor. Lecture 4 hours.

R. Steinberg and Staff

Interdisciplinary introduction to nervous system function: membrane structure, biophysics, ion transport mechanisms, cellular ion economy, synapses, and memory. Topics in current literature are read and discussed. Each student must participate regularly and present one seminar per quarter.

202A-B. Basic Concepts of Neurosciences. (4-4-4) § F, W, Sp. Prerequisite: Admission to neuroscience program or consent of instructor. Lecture 4 hours.

**Human Development And Aging**

2014-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Three-quarter course.

2014-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

**Stoeczek**

Theory and research covering adolescence to old age from sociological, psychological, psychoanalytic, and anthropological perspectives. Topics include stress, personality and cognitive change, time perspective, values, socialization processes and adaptations. Students work on their own research interests in human development.

2014-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Three-quarter course.

**Human Development And Aging**

2014-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Three-quarter course.

**Stoeczek**

An interdisciplinary seminar in human development.

2015. Family, Culture, and Crisis. (3) § F. Prerequisite: Consent of instructor. Lecture 1 hour. Lab 6 hours.

**Lennard, Kiefer**

Videotape analysis and interviewing of families with long-term physical or psychiatric illness as techniques for understanding family processes. Emphasis is placed on the analysis of concepts and techniques for understanding everyday family life. A range of background and ethnic origins is represented in study populations.

220. Pro-Seminar. (11) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, given in alternate weeks.

**Staff**

Students, staff, or guest lecturers present selected topics based on their current research.

224A-B. Basic Concepts of Neurosciences. (4-4-4) § F, W, Sp. Prerequisite: Admission to neuroscience program or consent of instructor. Lecture 4 hours.

**Fiske, Horowitz, Chiriboga, Visiting Faculty — UCB**

This pro-research seminar, for advanced students with a strong background in the stress research literature, is devoted to elaboration of stress theory and concepts, and refinement of methodologies addressed to specific research projects.

207. Social Change and Implications for a Theory of Adult Socialization. (3) § W. Prerequisite: Consent of instructor. Lecture 2-4 hours.

**Suzman**

Review of approaches to studying social change at the social system level and consideration of the implications for individual socialization of changes which have occurred in the United States over the last few decades.

2014-B-C. Interdisciplinary Seminar in Aging. (3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

**Staff**

Emphasis on the aging literature; one quarter each focusing on: the individual and policy issues surrounding mental health and illness in later life; socialization, roles and intergenerational relationships; and problems and resources of the minority elderly in the United States.

210. Socialization to Old Age. (3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

**Rosow and Brody**

Interdisciplinary seminar in the socialization of individuals in late life, with an emphasis on the intergenerational roles and the impact of variables normally affecting socialization in earlier status transitions.

214. Developments in Social Science Philosophy. (2) § F, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

**White**

Exploration of important new developments in the philosophy of social sciences, including work on justice, on work of Jurgen Habermas and Anthony Wilden.

215. Social Aspects of Death and Bereavement. (3) § F, W, Sp. Prerequisite: Consent of instructor. 

**Kishish**

An analysis of the psychological and social aspects of dying and death occurring for the dying persons themselves, their survivors, and those professionals who attend them.

226. Developmental Statistics. (3) § W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

**Staff**

A statistics course structured to the needs of students specializing in the field of Developmental Program. Special emphasis is given to methods appropriate to analysis of development and change, with attention more to the understanding of statistical ideas than to computation.

249. Special Studies. (2-8) § F, W, 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 and analysis of empirical data, or the development of conceptual analyses or methodologies.


**Staff**

Human Sexuality

159. Human Sexuality. (2) Sp. Lecture 1 hour, Seminar 1 1/2 hours. Social, behavioral, and clinical aspects of human sexuality are covered in a series of lectures and seminars. Lectures present didactic material and seminars focus on problems related to sex.

Interdepartmental Studies


**R. Day**

Course is designed to trace the biological mechanisms concerned with control, development and reproduction from the fertilized ovum through the embryonic and fetal life, and postnatally to the mature individual.

International Health

100. Medical Parasitology. (2) W, Sp. Prerequisite: Microbiology 100 (without parasitology) or equivalent. Lecture 2 hours. Lab open demonstration 2 hours.

**Hoyman**

An introduction to protozoa and helminths and human diseases they produce, with emphasis on some parasitic epidemiology and life cycles, clinical and diagnostic aspects are considered in lectures, films and cadaveric showings. Laboratory demonstrations displayed throughout the week.

140.02. Clinical Clerkships Abroad. (1½ per week) Su, F, W, Sp. Prerequisite: Six months of clinical work.

Goldsmith

A clinical clerkship elective in a developing country. Students work at a medical school, provincial hospital, or rural health clinic from one to three months.

140.03. Leprosy and Other Communicable Diseases. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 10.

Gerber, Factor

As part of the consultative team, students work up and follow communicable disease problems on the medical service. Participation in the inpatient and outpatient leprosy service and attendance regularly at PHS conferences.


C. S. Wilson and Staff

Four-week block elective with 3 hour lecture-discussions on nutritional requirements and deficiencies; clinical experience in various Bay Area clinics and schools on the usefulness of foods in the diet of patients in various stages of nutritional deficiencies, and in obtaining and retaining nutritional status.

150.01. Medicine in Developing Countries. (1½ per week) F. Prerequisite: International Health 100 or consent of instructor.

R. Goldsmith

Four-week block elective on the recognition and treatment of diseases of tropical and developing countries. The course is designed to prepare students for work abroad. Presentation format includes lectures, seminars, films, laboratory sessions, and supervised independent study.

150.02. Field and Laboratory Research in UC-ICMR Overseas Program. (1½ per week on 1 hour in Sp. Prerequisite: Consent of instructor. Dunn and Staff

Research under faculty supervision utilizing UC-ICMR stations in India and occasionally elsewhere. Research may be in clinical fields as well as in basic medical sciences, preventive medicine, and public health. May immediately follow a student research fellowship abroad.

150.04. Host-Parasite Interactions and Pathology. (1) W. Prerequisite: International Health 100 or equivalent. Dunn and Schachter

Introduction to the study of host-parasite interactions involving protozoan and helminth infective agents of mankind, with occasional excursions into other fields of interest. Readings include current literature and lectures and discussions to review the patterns of host-parasite interactions involving protozoan and helminth infective agents of mankind, and will explore current views of immune and other types of response and their disorders that may result in human disease.

150.05. Introduction to International Health. (2-3) W. Lecture 2 hours, plus 3 hours independent study for 3 units. Dunn and Staff

Lecture and discussions introducing the field of international health from an ecological and behavioral perspective. The course surveys world health and development problems, issues in the delivery of medical care and career opportunities in international medicine.

170.06. Geography of Human Health and Disease. (3) F. Lecture 3 hours. Dunn and Staff

Course covers principles of medical geography and landscape epidemiology, including patterns of human health and disease in the context of physical, biotic, and sociocultural environments, and in relation to human activities. Analysis of selected specific diseases of global importance.

170.07 Laboratory Project in Leprosy. (1-6) F, Su, W, Sp. Prerequisite: Consent of instructor. Goldsmith, T. Weich

A laboratory research problem on leprosy under the guidance of faculty members of the Leprosy Research Unit at PHS. The unit's major research areas are the pharmacology, immunology, and chemotherapy of leprosy in animals and humans.

180. World Population Pressures and Family Planning Perspectives. (1-2) F. Lecture 1 hour, plus project required for 2 units. Ensrister

Analysis of population growth and family planning programs in developing industrialized countries. Contraceptive and abortion methods and their sociocultural acceptability are emphasized as well as demographic methods, population research issues, and the role of health professionals in population control.

180.01. Tropical Medicine Clinics. (1-2) F, W, Sp. Prerequisite: International Health 100 and six months of clinical experience. Clinic 3-6 hours. Dunn, R. Goldsmith, Frierson and Staff

Examination and treatment of patients in the Tropical Medicine Clinics under staff supervision. Students will assist with the infirmaries and hospitalization of patients. Most of the patients seen in these clinics at UC and SFGH have diseases associated with infection by parasites.

180.03. Introductory Statistical Treatment of Clinical and Laboratory Problems. (2-3) F, W, Sp. Lecture 2 hours, Lab optional 0-3 hours. Equivalent to Biostatistics 180.03. Zippin

Basic concepts and techniques for the planning and analysis of clinical and scientific experiments. Introduction to statistical techniques to summarize quantitative data and to draw inferences. Includes account of the design and execution of the investigation.

180.04. International Health. (2) W. Prerequisite: Consent of instructor. Seminar 2 hours. Berkman

Course considers environmental determinants of health status. Topics for discussion include the influence of social and life-style factors on disease, screening, and prevention programs. Seminar format with readings in epidemiology.

181. Essentials of Nutrition. (1) F. Lecture 1 hour. C. S. Wilson

An elementary course in basic concepts of human nutrition. Topics include nutrient requirements, dietary deficiencies and surplus, common and more rare nutrient deficiencies and their effects on vulnerable groups, with emphasis on the developing world.


Concepts in metabolic bases of nutritional requirements, dietary recommendations, evaluation of food intakes and dietary habits, and assessment of nutritional status. Emphasis on nutritional needs during pregnancy, lactation, growth, maturation, and disease, in developing countries and the United States.

186. Tropical Medicine Lectures. (1) F. Lecture 1 hour. Dunn and Staff

Lectures, case histories, and films emphasizing the diagnosis and treatment of tropical diseases including malaria, amebiasis, cholera, typhoid, schistosomiasis, leprosy and arbovirus infections. Plus review of opportunities for clinical clerkships abroad in developing countries.

198. Supervised Study in International Health. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Petrikas, Dunn, Heynenman, R. Goldsmith

Library research and directed reading under supervision of faculty with approval of the chairman of the department.

199. Laboratory Project in International Health. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Heynenman, R. Goldsmith, Petrikas, Schachter

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

190.01. Clinical Pathology. (1½ per week) Su, F, W, Sp. Prerequisite: One year of medical school and consent of instructor. SFGH Polycover

Laboratory sessions and seminars on aspects of clinical chemistry, hematology, microbiology, blood banking, and radiology are held in the clinical laboratories of UC and SFGH.

190.03. Hematology Clerkship. (1½ per week) Su, W, Sp. Prerequisite: Second year of hematology or equivalent. Recommendation from one faculty member.

Shohtet and Staff

Clerkship primarily in the clinical evaluation of hematologic patients. As new clinical problems arise, time will be available for laboratory projects relevant to those problems. Students will act as primary clerks and close supervision of hematology residents and fellows.

190.04. Clinical Immunohematology in Transfusion and Transplantation. (1½ per week) W. Prerequisite: Completion of two core courses in transfusion service. Noon.

A two-week rotation in transfusion service. Rational hemotherapy utilizing principles of physiology and immunohematology in evaluation of needs, risks and benefits of blood transfusion for replacement of blood loss and clinical management of various hematologic disorders.

150.01. Laboratory Medicine. (1½ per week) Su, F, W, Sp. Prerequisite: Medical Town meetings and an intensive four-week seminar series, using patient data, designed to increase the student's ability to choose and interpret laboratory tests in a variety of clinical settings. The scope of tests discussed includes hematology, blood banking, clinical chemistry, and microbiology.

160. Diagnostic Use of Isotopes. (2) F, W, Sp. Prerequisite: One year of medical school. Polycover

Basic laboratory course in radioisotopes. Clinical participation in the diagnosis of patients receiving radioisotopes in the outpatient clinics and in the wards.


UC Brecher, SFGH Polycover

Laboratory sessions and seminars on aspects of clinical chemistry, hematology, microbiology, blood banking, and radiology are held in the clinical laboratories of UC and SFGH.

170.02. Diagnostic Immunohematology. (1½) F. Lecture 1½ hours.

Vyas

Course covers laboratory aspects of blood bankin, transfusion and immunohematology in seminars, reviews or formal lectures. Theoretical and practical aspects of blood grouping, tissue typing and diagnostic immunology are also included.

400. Clinical Pathology Staff Seminars. (2) Su, F, W, Sp. SFGH Polycover, UC Brecher, VParekh

Residents prepare summaries of selected clinical cases which present problems in correlation of clinical and laboratory data. Residents and faculty discuss relevant literature with special reference to technical aspects of laboratory procedures and interpretation of results.

401. Special Clinical Pathology Seminar. (4) Su, F, W, Sp, SFGH Polycover, UC Brecher, VParekh

Review of current laboratory procedures and problems in hematology, microbiology, immunology, blood banking, and radiology. Application of isotopes. Library research and occasional formal reports are required.


SFGH Polycover, UC Brecher, VParekh

Research projects to be carried out by appropriate faculty members on an individual basis.


Brecher

Seminars in clinical pathology including clinical chemistry, hematology, immunohematology, microbiology, parasitology, and serology are conducted by faculty members in major university curricula. Residents do collaborative reading for discussion of problems of interpretation, diagnosis, techniques, and research approaches.
SFGH Pollycove, UC Brecher, VA Parekh
Principles of laboratory tests in hematology, clinical microbiology, and blood banking, as well as interpretation of results and correlation of clinical and laboratory data. Residents participate in performance of selected administrative duties related to operation of clinical laboratories.
SFGH Pollycove, UC Brecher, VA Parekh
Theory and practice of clinical chemistry, serology, blood banking, hematology, microbiology, patology, and clinical microscopy. Emphasis is on interpretation and correlation of data and study of literature.

Medical Diagnosis
Crede and Staff
The dental intern participates in medical history-taking, physical examinations, ordering laboratory tests, and developing differential diagnoses on medical clinic patients under the supervision of the medical staff. Comprehensive care of patients is emphasized.

Medical and Biological Illustration
Stoelling, Wakerin, Koelling
Anatomic interpretation: sketching from dissections; form and detail; rendering: color theory; individualized techniques development: perspective; theory of information selection and simplification; representation of structure and form in living tissue.
Stoelling, Wakerin
Anatomic sketching and illustration from dissections and autopsy; individualized techniques development: perspective; basic skill in rendering; illustration from pathologic specimen preparations; reproduction techniques for illustrations in medical literature.
Stoelling, Wakerin, Beindorf
Continuation of individualized techniques development: principles underlying visual representation of statistical data; construction of charts, graphs and diagrams from research data; graphics for projection; lettering systems; special graphics techniques utilizing photographic, diazo, 3M and other processes.
204. Illustration of Pathology and Animal Surgery. (3) F, W, Sp. Lecture 1 hour, Lab 6 hours.
Wakerin, Stoelling, Fudaska, Beindorf
Sketching, demonstration and photography of pathologic tissue; regular autopsy observation, sketching, photography and illustration of pathology in animal surgery; study of normal colors and textures of tissue; illustration of instruments and their interaction with various tissues.
Wakerin, Stoelling, Beindorf
Organization in the operating room: procedures and roles; regular observation of surgical procedures. Emphasis on developing skills of sketching from direct observation: photography: communication with physicians; and planning and development of illustrations.
Wakerin, Stoelling, Beindorf
Continuing study of more advanced surgical illustration techniques: combined photography/illustration methods; operating room photography; finished illustrations in media of choice; emphasis on innovative approaches to communication of surgical concepts.
Wakerin, Stoelling
Review of anatomy and observation of the ear and eye through otoscope, opthalmoscope and slit lamp. Ophthalmologic illustration, endoscopic drawing; finished illustrations of a retinal field, slit lamp view and a microsurgical procedure.
220. Seminar in Instructional Design and Communication Theory. (0) F, W, Sp. Prerequisite: Consent of director. Lecture 2 hours.
Wakerin and Staff
Readings and seminar in aspects of instructional design, including communication theory, psychology of learning, behavior modification, programmed instruction, systems design and methods for evaluation. Participation by guest lecturers.
Prerequisites: Advancement to candidacy and permission of the graduate adviser. Thesis project. Staff
For graduate students engaged in the thesis project for the Master of Science degree. Not for credit.
411. Introduction to Instructional Design and Communications Theory. (1) F. Lecture 1 hour.
Wakerin
Overview of theory basic to the development of instructional media.
417. Introduction to Media. (3) F. Lecture 1 hour, Lab 6 hours.
Survey of media production technology and formats. Black and white photography methods. Thesories of design, layout, composition, color, contrast, emphasis, impact; similarities and differences among media including appropriateness for different tasks.
Beindorf, Stoelling
Beindorf, Stoelling
Slide-tape production on an individual basis. Color negative/positive developing and printing.
Beindorf, Banks
Film and television. Videotape production in a studio setting with inserts of student-produced motion pictures. Theories of motion picture dynamics of balance, subjective camera motion. Basic cinematography, TV technology, production economics.
423. Graphical and Print Media. (4) F, W. Prerequisite: Medical Illustration 203. Lecture 2 hours, Lab 6 hours.
Wakerin
Caligraphy, brochure design, photography in graphic design; layout; copy fitting; camera-ready mechanicals; typography; printing; photoengraving; specifications for printing; paper stocks, inks, etc. Production of a brochure for use on campus.
425. Three Dimensional Illustration and Maxillofacial Prosthetic Reconstructions. (1-4) F, W or Sp. Prerequisite: Consent of instructor and approval of director.
Wakerin, Koelling, Humbleharw, Harwin
Basic three dimensional modeling, molding, and casting techniques. Preparation of cosmetic maxillofacial prosthetic reconstructions given major emphasis in course. Students assist in preparation of prostheses for clinical patients.
Beindorf, Stoelling, Wakerin
Techniques of motion picture animation. Terminology, animation camera and compound, pixilation, cycles, flow, movement of objects in space, timing, sound sync, shooting sheets, design of ten second character animation film with sound. Production is optional.
428. Display Design and Construction. (1-4) F, W or Sp. Prerequisite: Consent of instructor and approval of director.
Wakerin, Stoelling
Analysis of advantages and disadvantages of displays as teaching instruments. Aspects of design and construction of materials, scales, models, construction, logistics, cost effectiveness and handling. Field trips to display companies. Production of a display for an actual client.
Beindorf, Wakerin, Stoelling, Banks
Students begin work on an actual instructional unit. The choice of medium is determined by teaching needs, and developed through instructional design concept, storyboard, script, production planning, color, contrast, emphasis, impact; similarities and differences among media including appropriateness for different tasks.
431. Media Project II. (3-9) F, W, Sp. Prerequisite: Consent of instructor and approval of director. Lecture Variable.
Wakerin, Stoelling, Banks
Special study in educational TV, film, or print media; or completion of instructional unit (production and post-production) begun in Medical Illustration 429.
452. Portfolio, Presentation and Graduate Show I (3) F. Lecture 1 hour, Lab 6 hours.
Wakerin, Beindorf, Stoelling
Portfolio design and development; portfolio expectation and applications. Work on projects for graduate presentation; preparation of graduate show.
Wakerin, Beindorf, Banks
Seminar. Reading and discussion of principles and practices for professional business management and departmental administration.
Beindorf, Banks, Wakerin, Stoelling
Third quarter continuation of Media Project series of Medical Illustration 429, 431 sequence, or course may be taken as an independent media production project of choice including advanced animation.
455. Special Study in Medical Illustration. (3-4) F, W or Sp. Prerequisite: Consent of instructor and approval of director.
Wakerin and Staff
An elective for special study in area of choice.
456. Portfolio, Presentation and Graduate Show II (1-3) F, W, Lab 3-9 hours.
Wakerin, Beindorf, Stoelling
Final portfolio design and assembly. Production of final graduate media presentation; graduate show and arrangements.
458. Biological Illustration. (2) F, W or Sp. Prerequisite: Consent of instructor. Lab 6 hours.
Christman, Stoelling
Taxonomic illustration of botanic, entomologic, parasitologic, microbiologic and other life science subjects for publication or projection. Various techniques are utilized, but mainly pen and ink.
459. Forensic Illustration. (1-3) F, W or Sp. Prerequisite: Consent of instructors and approval of director. Lecture and Lab Variable.
Wright, Wakerin, Stoelling, Blendorf
Illustration and photography of various wounds to provide demonstrative materials for courtroom use. Considerations of adequacy and appropriateness of visual materials as evidence in criminal investigations. Guest lecturers and special presentations are included.
460. Museum Methods. (3) F, W or Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 6 hours.
Stoelling, Humbleharw, Christman, Stoelling
Techniques for preparation and presentation of scientific information such as specimens and models. Course includes plastic embedment, mounting and preservation of specimens, labeling.

Medical and Biological Illustration

94 Laboratory Medicine / Medical Diagnosis / Medical and Biological Illustration 95
Medical Information Science

190. Information Structures. (4) F. Prerequisite: Knowledge of higher level programming language. Lecture 3 hours, Lab 3 hours. Delivery Code: Boul. Staff
Course covers elementary and high level information structures and their relation to clinical laboratory information systems and a detailed examination of current clinical laboratory systems. Practical experience will be given on designing and implementing sample clinical laboratory problems in high level languages.

199. Laboratory Project in Medical Information Science. (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.

201. The Medical Environment. (3) W. Lecture 2 hours. Brunt
A survey of the professions, institutions, organizations and populations involved in the health care process, the special tasks are the aims, expectations, and constraints involved in the medical environment. Course provides a background for students without previous medical health care experience in relationships to processes and functions.

202. Nature of Medical Information. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Staff
Medical information considered from a variety of viewpoints: general medical knowledge versus specific patient data; medical information expressible in numeric versus language means. Particular emphasis on distinguishing algorithmic from non-algorithmic processing of medical data, and the functions of the medical record.

205. Administration and Evaluation of Health Care Systems. (3) Sp. Lecture 2 hours, Lab 3 hours. Staff
Introduction to the concepts, principles, policies, and functions of management of financial accounting with particular emphasis on hospitals and other health care system organizations.

210A. Computing Systems I. (4) W. Prerequisite: Medical Information Science 190 or equivalent, or consent of instructor. Lecture 3 hours, Lab 3 hours. Staff
Introduction to system architecture and organization; operating systems; programming languages and applications.

210B. Computer Systems II. (4) Sp. Prerequisite: Medical Information Science 210A or equivalent, or consent of instructor. Lecture 3 hours, Lab 3 hours. Staff
Language processors; software engineering concepts; specification and design of software systems; and software reliability.

211. Introduction to Operations Research. (3) F. Prerequisite: Elementary statistics or probability and one year of calculus. Lecture 3 hours. Staff
Introduction to mathematical programming, including linear structures, sensitivity analysis, and duality. Queuing problems and other selected topics such as computer simulation of operations research models is included.

222. Systems Analysis of Medical Care. (3) F. Lecture 3 hours. Stimson
Introduction to use of operations research and systems analysis as aids to design, management and evaluation of medical care systems. Application of operations research techniques to hospitals and other health care facilities are studied within a systems framework.

225A. Design of Medical Information Systems. (2) F. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours. Henry
The design of previous medical information systems is examined. Successful components of the system will be studied in detail, with respect to cost, performance, and acceptability. Field trips to existing systems will be made.

225B. Design of Medical Information Systems. (2) W. Prerequisite: Consent of instructor. Lecture 2 hours. Henry
The design of medical information systems is examined. The systems will be studied with respect to cost, performance, and acceptability. Proposals for new systems will be done through laboratory sessions in medical settings.

225C. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Staff
The design of medical information systems is examined. The systems will be studied with respect to cost, performance, and acceptability. Laboratory sessions involving analysis and interactive program implementation are a continuation of the studies in Medical Information Science 225B.

220A. Linear Models and Experimental Design. (4) F. Prerequisite: Introductory statistics and one year of calculus. Lecture 3 hours, Lab 3 hours. Heilbrun
Linear models for modeling, designing, and analyzing data from experiments, clinical and observational studies using the methodology of regressions and analysis of data.

230B. Discrete Analysis and Statistical Classification. (2) F. Prerequisite: Introductory statistics and one year of calculus. Lecture 1½ hours, Lab 1½ hours. Heilbrun
Introduction to the methods for analysis of discrete data. Statistical classification and other quantitative methods related to computer assisted diagnosis and treatment planning.
140.09. Gastroenterology at UC. (1/4 per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Schmid

Students become a part of the gastroenterology group and participate in all teaching activities including workup of patients in clinics and wards. They attend all conferences.

140.09. Clinical Cardiology Service at MZ. (1/12 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and 140.01 or equivalent senior ward medicine experience. Consent of instructor.

MoBeck

Students workPatients follow through diagnostic procedures, phonocardiograms, echocardiograms, stress electrocardiograms, cardiac catheterization, and angiographic studies. Instruction in cardiovascular pathophysiology, pathophysiology of heart disease, heart sounds. Attendance at department conferences. Reading assigned.

140.11. Renal- Electrolyte Service at PHS. (1/8 per week) F, W, Sp. Prerequisite: Medicine 110. Hulter

Students work up and manage patients under supervision of residents in the Dialysis Center including peritoneal and hemodialysis; attend Renal Clinic, presenting cases and daily rounds; attend seminars and conferences; and observe research activities of the unit.

140.12. Clinical Cardiology at PHS. (1/8 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Keuch

Students are assigned patients for work-up and management under supervision of resident, fellow, and instructors. They attend daily rounds, present patients in Cardiology Clinic, and observe cardiopulmonary unit procedures, including cardiac catheterization and angiographic injection. Instruction in electrocardiography is included.

140.13. Clinical Cardiology at PHS. (1/6 per week) Su, W, F, Sp. Prerequisite: Medicine 110. Lanzerotti

Students are assigned patients for work-up and management under supervision. They make daily rounds, present cases and seminars, Journal Club, CPC's, Death Conference, and Grand Rounds. Scope of responsibility is similar to that of interns.

140.14. Endocrine-Metabolic Medicine at PHS. (1/12 per week) Su, W, F, Sp. Prerequisite: Medicine 110 or consent of instructor.

V. Schneider

Students work-up patients and participate in the Endocrine-Metabolic Service under supervision; attend Metabolic Clinic; present patients there and on endocrine rounds; attend seminars and conferences. Program structured for participation in research activities according to students' interests and qualifications.

140.15. Inpatient Medicine at K. (1/8 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students.

Students based at K serve as clinical clerks. They examine patients, participate in ward rounds and attend teaching seminars and conferences of the Department of Medicine.

140.16. Hematology at SFGH. (1/6 per week) Su, W, Sp. Prerequisite: Medicine 110.

R.O. Wallerstein, Kan

Students work-up hematology patients; review pertinent clinical laboratory data of problems presented; attend slide rounds; assist in preparation of material for sessions; attend hematology rounds.

140.17. Clinical Pharmacology at UC. (1/3 per week) Su, W, Sp. Prerequisite: Medicine 110.

Morrelli, Melmon, Bourne, Shainer

Students evaluate patients regarding problems in drug choice, action of drugs, or drug efficiency. They present cases to a staff member for review, participate in daily rounds, conduct directed literature reviews, and are exposed to research efforts in the field.

140.18. Gastroenterology at VA. (1/12 per week) Su, W, Sp. Prerequisite: Medicine 110.

Brandborg

Students are rotated into the Gastroenterology Unit. They are assigned consultations, perform sigmoidoscopies under supervision, observe upper gastrointestinal endoscopy, and small bowel biopsy. They participate in all rounds and conferences.

140.19. Clinical Cardiology at WA. (1/12 per week) Su, W, Sp. Prerequisite: Medicine 110.

Bradlow

Students share consultations and on-call with cardiology resident; work-up patients on wards in ICU; assist D.C. electrical conversion; interpret EKG's and vectorcardiograms; attend rounds and conferences.

140.20. Infectious Disease Clerkship at UC. (1/12 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Open to UCSF students only.

J. Conte

Students work-up and present patients under the supervision of the infectious diseases resident. They are presented at attending rounds and infectious disease conferences.


L. H. Smith, Carbone

Working experience with an internist on the clinical faculty as he makes rounds in various private hospitals and at UC. Sees patients in private offices and on house calls, does follow-up studies, and reads electrocardiograms.

140.22A. Pathophysiology of Disease-Cardiocerebrovascular. (1/6 per week) Su, W, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger, Scheiman

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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 lists.

140.22B. Pathophysiology of Disease-Hematology. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger, Dallman, Reiss

Over all emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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 lists.

140.22C. Pathophysiology of Disease-Nephrology. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger, I. Diamond

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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 lists.

140.22D. Pathophysiology of Disease—Endocrine-Metabolism. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger, Kaplan

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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.

140.22E. Pathophysiology of Disease—Gastroenterology. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger, Earnest, MacGregor

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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.

140.22F. Pathophysiology of Disease—Infectious Disease. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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.

140.22G. Pathophysiology of Disease—Pulmonary. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Sipierst, Slesenger, Boushey

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or 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.

140.22H. Pathophysiology of Disease—Nutrition. (6 per week) F, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110.

Nestle, Sipierst, Slesenger

Overall emphasis on prototypes of disease in organ systems demonstrating fundamental biochemical or physiological defects. Lectures cover background material and general concepts. Students par-
140.23. Endocrine-Metabolic Medicine. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 112.

Humphreys

Fortsham

Students based at Metabolic Research Unit and eleventh floor Moffitt Hospital act as assistants to in- terns, residents, and research fellows on the ward; attend endocrine and metabolic clinics, and seminars and teaching exercises of endocrinology and metabol- ic medicine.

140.24. Rheumatology — Clinical Immunology at UC. (1% per week) F, W, Sp. Prerequisite: Medicine 110 and consent of instructor.

Stobo

Families immunology, clinical manifestations, rheu- matic disease therapy, immunologic disorders. Par- ticipation in inpatient clinics. Basic immunologic principles as related to clinically apparent immuno- logic dysfunction. Assignment of pertinent literature, lectures, and introduction to principles and practice of various aspects of immunology.

140.25. Renal and Electrolyte Service at SFGH. (1% per week) F, W, Sp. Prerequisite:Medicine 110.

Humphreys

Griffeth

Students work-up and follow renal and electrolyte patients seen in the service, participate actively in hemodialysis and peritoneal dialysis; they attend threecr times a week renal and bi-weekly seminars in renal and electrolyte diseases.

140.26. Acute Care Units at MZ. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Ulhey

Peters, Scheinman

Students attend rounds in the Coronary Care Unit and attend all regular teaching conferences and seminars.

140.27. Clinical Clerkship Stressing Cardiopulmonary Problems at C. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110

Griffeth

Students attend rounds in the Coronary Care Unit; receive instruction in cardiology, stressing 'electrocardiography'; may work in the pulmonary function laboratory, and attend all regular teaching conferences and seminars.

140.28. Infectious Diseases at SFGH. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110.

J. Mills

Course includes orientation to consultation ward, averaging three new consults per day. Daily patient rounds; weekly combined Infectious Diseases/ Pediatrics patients ward and Infectious Diseases inter- city rounds. Introduction to two infectious diseases clinics per week. Reading and library research.

140.29. Hematology at UC. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Shohet

Students work-up and present patients in the wards and outpatient clinics, participate in conferences, and present cases before the laboratory procedures applicable to their patients.,
140.55. Acting Internship at C. (1½ per week) Su, W, F, Sp. Prerequisite: Medicine 110. Limited to fourth year students.

Griffith Students, teamed with a resident, will evaluate and share the care of patients admitted to an acute care hospital. Experience includes history taking, physical examination, therapeutic plan, and progress notes. Attendance at daily teaching rounds and conferences.

140.56. Geriatric Medicine Clerkship at MZ. (1½ per week) Su, W, F, Sp. Prerequisite: Medicine 110. Feigelson, Botkin, H. Weinstein

Course offers opportunity for participation in various medically oriented geriatric programs. Assignment to health care teams serving patients at home, at MZ Geriatric Day Care Center, and the Jewish Home for the Aged. Supervision under MZ faculty and house staff.

140.57. Cancer at Fresno. (1¼ per week) Su, W, F, Sp. Prerequisite: Medicine 110 or consent of instructor.

A Robert Students see patients in the cancer care unit, wards and clinics at the University of California Teaching Facility at Fresno. They will develop and implement treatment plans with the consultant, read electrocardiograms, and attend all seminars and conferences.

140.58. Pulmonary Service at VAF. (1¼ per week) Su, W, F, Sp. Prerequisite: Medicine 110 or consent of instructor. Staufner

Students on Chest Service will have primary care responsibility for critically ill medical patients under supervision of the Physician Director of the Respiratory Care Service. Instruction on topics such as the use of respirators, arterial blood gas sampling and techniques.


The elective is designed to provide experience with routine procedures, the handling and monitoring of radioisotopes, techniques of tissue culture and various biochemical techniques. Presently, the laboratory is engaged in problems of myocardial hypertrophy, cell growth, and protein synthesis.

150.02. Research in Medicine. (1½ per week) Su, W, F, Sp. Prerequisite: Consent of faculty member in charge of student's research project and approval of third and fourth year coordinator.

L. H. Smith, Carbone

Students continue previously initiated research projects under the guidance of faculty members.

150.03. Cancer Viruses. (1½ per week) Su, W, F, Sp. Prerequisite: Consent of instructor in medical microbiology. J.A. Levy

Tissue culture techniques and animal experimentation will be used to demonstrate the role of viruses in animal malignancies and autoimmune disease.

150.51. Interdepartmental Clinical Correlation Course. (4F, W, Sp.) L. H. Smith A series of discussions are conducted in the clinic 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.

150.52. Seminars in Medical Literature. (1½ F, W, Sp.) VA Seleisger

Seminars on recent literature in internal medicine, with assigned reading, required reports, and evaluation of presented material by interns, residents, and faculty.

150.53. Specialty Seminars. (2F, W, Sp.) L. H. Smith Seminars are conducted in the fields of gastroenterology, hematology, cardiology, electrocardiology, endocrinology, chest diseases and pulmonary physiology, thyroid diseases, psychosomatic medicine, infectious diseases, infec-
tious diseases, and radiology. Library research, occasional formal reports and patient presentations are required.

150.54. Specialty Seminars. (4F, W, Sp.) VA Seleisger

Seminars are conducted in cardiology, hematology, gastroenterology, infectious diseases, metabolism, endocrinology involving discussions, required reading, and reports.

150.55. Specialty Seminars. (4F, W, Sp.) Va Seleisger

Seminars are conducted in cardiology, electrocardiography, hematololgy, hematognotology, 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 conference, tumor conference, cardiology conference, and neurosurgery conference.


Research programs are arranged with appropriate fellowship members on an individual basis.

150.57. Clinicopathological Conferences. (1½ F, W, Sp.) VA Seleisger

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.

150.58. Electrocardiographic Interpretation. (2 Su, W, Sp.) Sokolow

Seminars (individual instruction) for residents in medicine and residents in cardiac con-
results in the interpretation of all electrocar-
diograms and phonencardiograms taken at UC.


Griffith Students, teamed with a resident, will evaluate and share the care of patients admitted to an acute care hospital. Experience includes history taking, physical examination, therapeutic plan, and progress notes. Attendance at daily teaching rounds and conferences.

140.56. Geriatric Medicine Clerkship at MZ. (1½ per week) Su, W, F, Sp. Prerequisite: Medicine 110. Feigelson, Botkin, H. Weinstein

Course offers opportunity for participation in various medically oriented geriatric programs. Assignment to health care teams serving patients at home, at MZ Geriatric Day Care Center, and the Jewish Home for the Aged. Supervision under MZ faculty and house staff.

140.57. Cancer at Fresno. (1¼ per week) Su, W, F, Sp. Prerequisite: Medicine 110 or consent of instructor.

A Robert Students see patients in the cancer care unit, wards and clinics at the University of California Teaching Facility at Fresno. They will develop and implement treatment plans with the consultant, read electrocardiograms, and attend all seminars and conferences.

140.58. Pulmonary Service at VAF. (1¼ per week) Su, W, F, Sp. Prerequisite: Medicine 110 or consent of instructor. Staufner

Students on Chest Service will have primary care responsibility for critically ill medical patients under supervision of the Physician Director of the Respiratory Care Service. Instruction on topics such as the use of respirators, arterial blood gas sampling and techniques.


The elective is designed to provide experience with routine procedures, the handling and monitoring of radioisotopes, techniques of tissue culture and various biochemical techniques. Presently, the laboratory is engaged in problems of myocardial hypertrophy, cell growth, and protein synthesis.

150.02. Research in Medicine. (1½ per week) Su, W, F, Sp. Prerequisite: Consent of faculty member in charge of student's research project and approval of third and fourth year coordinator.

L. H. Smith, Carbone

Students continue previously initiated research projects under the guidance of faculty members.

150.03. Cancer Viruses. (1½ per week) Su, W, F, Sp. Prerequisite: Consent of instructor in medical microbiology. J.A. Levy

Tissue culture techniques and animal experimentation will be used to demonstrate the role of viruses in animal malignancies and autoimmune disease.

150.51. Interdepartmental Clinical Correlation Course. (4F, W, Sp.) L. H. Smith A series of discussions are conducted in the clinic 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.

150.52. Seminars in Medical Literature. (1½ F, W, Sp.) VA Seleisger

Seminars on recent literature in internal medicine, with assigned reading, required reports, and evaluation of presented material by interns, residents, and faculty.

150.53. Specialty Seminars. (2F, W, Sp.) L. H. Smith Seminars are conducted in the fields of gastroenterology, hematology, cardiology, electrocardiology, endocrinology, chest diseases and pulmonary physiology, thyroid diseases, psychosomatic medicine, infectious diseases, infectious diseases, and radiology. Library research, occasional formal reports and patient presentations are required.

150.54. Specialty Seminars. (4F, W, Sp.) VA Seleisger

Seminars are conducted in cardiology, hematology, gastroenterology, infectious diseases, metabolism, endocrinology involving discussions, required reading, and reports.

150.55. Specialty Seminars. (4F, W, Sp.) Va Seleisger

Seminars are conducted in cardiology, electrocardiography, 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 conference, tumor conference, cardiology conference, and neurosurgery conference.


Research programs are arranged with appropriate fellowship members on an individual basis.

150.57. Clinicopathological Conferences. (1½ F, W, Sp.) VA Seleisger

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.

150.58. Electrocardiographic Interpretation. (2 Su, W, Sp.) Sokolow

Seminars (individual instruction) for residents in medicine and residents in cardiac con-
results in the interpretation of all electrocar-
diograms and phonencardiograms taken at UC.

450. Clinical Medicine. (10) Su, F, W, Sp. SGFH H. Williams, UC L. H. Smith 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.


Residents are responsible for patient care, 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.


Residents are responsible for patient care, 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.

450. Clinical Medicine. (1½ per week) Su, W, F, Sp. VAF Rosenstiel

Residents are responsible for patient care, 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.


Residents are responsible for patient care, 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.

450. Clinical Medicine. (1½ per week) Su, W, F, Sp. VAF Rosenstiel

Residents are responsible for patient care, 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.


Residents are responsible for patient care, 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.
Microbiology

104A. Biologic Agents of Disease. (3) Sp. Prerequisite: Biochemistry 100A-B. Lecture 3 hours.

Lectures on the fundamentals of immunology and virology. Small group seminars on patient-related problems in these fields.

100B. Biologic Agents of Disease. (5) F. Biochemistry 100A-B. Lecture 3 hours. Conference 1 hour. Lab 4 hours.

Jewetz
Pathogenesis of infection and resistance to microorganisms, particularly bacteria and fungi. Natural history and pathogenesis of diagnosis, treatment and epidemiology of infectious diseases. Laboratory demonstrations and exercises of essential medical skills. Problem-solving exercises and conferences on clinical cases.

125. Microbiology. (6) § Sp. Lecture 4 hours, Lab and Conference 1 hour. Halbleib and Staff

Morphology and physiology of microorganisms including bacteria, fungi, yeasts, and viruses and techniques to study them. Fundamentals of infection and resistance, immunity, microorganisms, dissection, chemotherapy, biologic products, and epidemiology. Problems in laboratory diagnosis, treatment and prevention of infectious diseases.

126A-B. Microbiology. (1-5) Sp, W. Lecture 1 hour Sp, 3 hours W; Lab and Conference 6 hours W.

Moreland, F. Speck
An introduction to general immunology and a comprehensive presentation of microorganisms including bacteria, fungi, yeasts, viruses; fundamentals of infection and resistance, immunity, immunology, dissection, and immunologic chemistry, and antimicrobial agents. Laboratory study and demonstrations on indigenous flora and application of microbiology to Dentistry.

150.01. Research in Microbiology. (1-10) Su, W, F, W. Prerequisite: Microbiology 100A and 100B and consent of instructor. Research in microbiology: block elective for fourth year students.

190A. Medical Microbiology for Graduate Students. (3) § Prerequisite: Biochemistry 100A-B or equivalent. Lecture 3 hours. Equivalent to Microbiology 100A.

W. Levinson
Lectures and conferences on the fundamentals of immunology and virology. Small group seminars on patient-related problems in these fields.

190B. Medical Microbiology for Graduate Students. (4-5) § Prerequisite: Biochemistry 100A-B or equivalent. Lecture 3 hours. Conference 1 hour. Lab 4 hours (may be omitted with consent of instructor). Equivalent to Microbiology 100B.

W. Levinson
Lectures on infection and resistance. Microbial and fungal infections, epidemiology, treatment and control with emphasis on human diseases.

188. Supervised Study in Microbiology. (1-5) § Su, F, W. Prerequisite: Consent of instructor.

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 in Microbiology. (1-6) § 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 chairman of the department.

203. Molecular and Cellular Immunology. (3) § F, W, Prerequisite: Biochemistry 100A-B and Microbiology 100A and 100B and consent of instructor. Lab 3 hours. Offered in alternate years. Not offered 1979-80.

J. Goodman
Structural and functional aspects of antigens and antibodies, including chemical and genetic basis of immunogenicity, structure and biosynthesis of immunoglobulins, antigen-antibody interactions, immunogenetics, properties of immunocompetent cells, cell cooperation, lymphocyte receptors for antigens.

204. Immunology. (3) § W. Prerequisite: Microbiology 100A and 100B or equivalent course in basic immunology. Offered in alternate years. Not offered 1979-80.

Linscott
An advanced course covering antigen-antibody interactions, with special emphasis on their biological importance; experimental hypersensitivity, tumor immunology, transplantation immunology, immunological unresponsiveness, cytotoxic reactions, and the role of the complement system.

205. Selected Topics in Cellular Immunology. (3) § Sp. Prerequisite: Microbiology 203 and 204. Lecture 3 hours.

C.L. Miller
An in-depth analysis of selected areas in cellular immunology, including lymphoid cell interactions in immune regulation; specific and nonspecific immune response; and genetic control of the immune response.

206. Pathogenic Fungi. (2) § F. Prerequisite: Microbiology 100A and 100B.

A systematic approach to the fungi responsible for human disease, emphasizing pathogenesis, epidemiology, and diagnostic laboratory procedures.

207. Cellular Immunology and Graft Rejection. (3) § Sp. Prerequisite: Microbiology 203 and 204 and concurrent enrollment in Microbiology 205. Lab 9 hours.

C.L. Miller
Techniques of in vitro induction of cellular immune responses; separation of A, T and B leucocyte subsets; Jerne plaque assays and cell mediated cytotoxicity assays will be performed.

208. Molecular Biology of Animal Viruses. (3) § W. Prerequisite: General knowledge of nucleic acid structure and function and multiplication of viruses. Lecture 7 hours. Seminar 1 hour. Offered in alternate years. Offered 1979-80.

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 infection, and role of viruses in malignant transformation.

209. Research Problems in Immunology. (3) § F, W, Sp. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Lab 9 hours. J. Goodman
This is a research laboratory course, providing experience in solving problems in the instructor's laboratory. This is not a structured laboratory methods course, but rather a practical research experience exploring laboratory basic investigations on mechanisms of lymphocyte activation by antigens and cell interaction.

213. Clinical Immunology and Immunopathology. (3) W. Lecture 3 hours.

The pathophysiology of autoimmune, rheumatic and certain malignant diseases in relationship to immunologic mechanisms; basic principles of lymphocytes and immunoglobulin heterogeneity and function; immunologic mechanisms leading to tissue destruction and factors regulating lymphocyte proliferation. Review paper on a selected topic is required.

220. Seminar (0) 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.

221. Oral Microbiology. (1-5) § F, W, Prerequisite: Consent of instructor. Hurst
A seminar course concerned with the role of microorganisms in oral health and disease, with emphasis on the ecology and pathogenesis of the oral flora.


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

299. Dissertation. (0) § F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate advisor.

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


C.B. Wilson
Residents, under supervision, prepare and present case histories of cases selected from the laboratory work, X ray studies, special investigation and reference to the literature. Discussion is led by the faculty with participation by students.


C.B. Wilson
Conference includes discussion of special problems and laboratory work. Case presentations of patients seen are included. Conference is required for all residents.


C.B. Wilson
Residents discuss clinico pathological aspects of cases seen in the clinic and their correlation with the literature and special studies. Faculty and visitors discuss developments in related fields. Second year residents organize conferences and present some cases to visiting neurosurgical staff.

Microbiology / Morphology / Neurosurgical Surgery 105
Neurology

40.2. Extramural Clinical Clerkship, (1½ per week) Su, F, W, Sp. Prerequisite: Neurology 110. Fishman
Clinical clerkship in approved hospitals by special arrangement of the Dean and the chairman of the department.

Participation in child neurology activities, both inpatient and outpatient, and all regularly scheduled conferences of the division. Specific aspects of the developing nervous system and diseases of the nervous system affecting infants, children, and adolescents.

150.01. Research in Neurology, (1½ per week) Su, W, Sp. Prerequisite: Anatomy 103. Fishman
Opportunities for research in one of the department laboratories by arrangement with the chairman of the department.

Tissue pathology of diseases of the nervous system will be explored in greater depth in the postmortem room and by gross and microscopic techniques.

199. Laboratory Project in Neurology, (1½ per week) Su, W, Sp. Prerequisite: Consent of instructor.
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

400. Neuroscience Seminars, (1½ per week) Su, F, W. Sp. Prerequisite: Consent of instructor.
Seminars covering selected subjects in the basic sciences relevant to neurology including neuroanatomy, neurochemistry, neuropathology, and neurophysiology.

Conference includes resident preparation and presentation of patient case histories including reference to the literature, laboratory work, and special study. Faculty members and visiting professors from other universities discuss new developments in their respective fields.

402. Neurological and Neurosurgical Pathology, (1½ per week) Su, W, Sp. Malamud
Course involves the presentation and discussion of clinical histories and pertinent laboratory and roentgenograms of selected cases of neurological interest and histopathologic study, and discussion of surgical and postmortem specimens from neurological and neurosurgical patients.

Course involves pathological and clinicopathological research into various aspects of neurologicalopathology. Specific subjects of research are chosen in conjunction with members of the staff.

Clinical or basic research in various aspects of electroencephalography may be undertaken under supervision and research are chosen in conjunction with members of the staff.


Clinical and basic research in biochemical and metabolic aspects of neurological disorders. After consultation, assignments to one of the several department laboratories will be possible.

Specific projects in experimental pathology of the nervous system may be undertaken by direct arrangement. Techniques include neurohistochemistry, histologic autoradiography, and electron microscopy.

Residents learn interpretation of electroencephalograms under the supervision of experienced electroencephalographers. They interpret electroencephalograms and present them to the group, with individual instruction available as required. Instruction is accredited by the Board of Qualification of the American Electroencephalographic Society.

454. Clinical Training in Electromyography, (1½ per week) Su, W, Sp. Pickett
Students learn the application of electromyography in the routine and in the outpatient clinic with individual instruction as required.

Residents spend three months or more in the Neuropathology Laboratory at LIP performing supervised autopsies and pathologic studies of brains from neurological, neurosurgical, and psychiatric patients.

Course offers experience in the diagnosis and management of children with acute and chronic neurological disorders. Outpatient clinics are held weekly for pediatric convulsive disorders and behavioral and learning problems of the school child.


Nursing

101A. Introduction to Nursing, (2) SS. Prerequisite: Admission to School of Nursing.
Course introduces nursing students to the role of their profession in today's society and provides an orientation to a specific system of teaching and learning.

101B. Introduction to Nursing, (1) F Lecture 1 hour.
Course introduces nursing students to the role of their profession in today's society and provides an orientation to a specific system of teaching and learning.

102. Analysis and Presentation of Clinical Data, (2) W. Prerequisite: Nursing 101A and/or 101B, or consent of instructor. Lecture 2 hours.
Course is designed to acquaint the student with the process of analyzing and interpreting data obtained from the nursing history and physical examination. Students must take the course whether or not they have been enrolled in Nursing 101A.

110. Physiological Basis of Nursing Assessment, (3) F. Prerequisite: Consent of instructor. Lecture 3 hours.
Course provides a physiological basis for understanding the clinical signs and symptoms. Students will learn how to analyze and interpret these signs and symptoms.

R.A. Terry

Potash
Alterations of normal structure and function in selected major organ systems that occur in common illnesses are examined. Emphasis is placed on physiological concepts and facts that facilitate nursing observations and assessment.

111A. Anatomy and Physiology of Nursing, (7) F, W. Prerequisite: Nursing 110 or concurrent enrollment. Lecture 2 hours, Lab 15 hours.
Course explores the components of health, theoretical basis of health assessment, and identification of patient problems. Introduces the role of the nurse as a health assessor in inpatient and outpatient settings, on an aged continuum from infancy to senescence.

211B. Health Assessment in Nursing, (7) F, W, Sp. Prerequisite: Nursing 110 and 111A. Lecture 2 hours, Lab 15 hours.
Course explores the components of health, theoretical basis of health assessment, and identification of patient problems. Introduces the role of the nurse as a health assessor in inpatient and outpatient settings, on an aged continuum from infancy to senescence.

Furuta

The course is designed to provide a sound theoretical knowledge of the principles and issues involved in the study, establishment, and functioning of small groups. Focus is on application of theory to relevant nursing experiences.

113A. Communication: Theory and Practice in Nursing, (5) F, W, Sp. Prerequisite: Concurrent enrollment in Nursing 111A or consent of instructor. Lecture 1 hour, Lab 3 hours.
Course focuses on the development of interpersonal communication skills and the application of these skills to nursing practice.

Koehne-Kaplan
Communication theory and principles in laboratory
113B. Communication: Theory and Practice in Nursing, (2) F, W, Sp. Prerequisite: Concurrent enrollment in Nursing 111A or consent of instructor. Lecture 1 hour, Lab 3 hours.

A. Adams

Communication theory and principles in laboratory setting. Development and utilization of communication skills in nursing practice. Application of these skills with clients in the delivery of health care.

114A. Introduction to Family Health Care Nursing, (3) F, W, Sp. Prerequisite: Psychology 113A. Concurrent enrollment in Nursing 111B. Lecture 2 hours. Lab 3 hours.

Staff

Introduction to the nursing process through an in-depth involvement with a family unit in a primary health care setting. Theories, concepts, and issues related to family development from conception to death will be explored.

114B. Introduction to Family Health Care Nursing, (1) W, Sp. Prerequisite: Nursing 114A. Lab 3 hours.

Staff

Introduction to the nursing process through an in-depth involvement with a family unit in a primary health care setting. Theories, concepts, and issues related to family development from conception to death will be explored.


D. Adams

Course deals with theory and practice essential to identifying, understanding, and intervening in forms of adaptive behavior and faulty values. Emphasis is on working with psychiatric patients, using the nurse-patient relationship as a therapeutic tool.

118. Family and Community Patterns in Health and Illness, (5) F, W, Sp. Prerequisite: Concurrent enrollment in Nursing 117. Lecture 4 hours. Lab 6 hours.

Staff

Theories and practice essential to the assessment of family and community patterns in health and illness, and for planning, implementing, and evaluating nursing care on the basis of these assessed needs.

119. Pathophysiological Adaptation, (8) F, W, Sp. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, and 114A. Lecture 2 hours, Lab 2 hours, Yeach

Staff

Selected pathophysiological interusions and adaptations in adults. Emphasis on process of conceptualization of pathophysiological function through assessment of organ system function, evaluating adaptive mechanisms, and planning and implementing nursing interusions. Laboratory to implement nursing utilizing course content framework.

121. Physiological Basis of Nursing Practice, (3) F, W, Sp. Prerequisite: Nursing 110, 111A and 111B.

J. Potash

Course examines structural and functional alterations and related adaptive mechanisms in disease of selected major organ systems, and discusses manifestations, diagnostic tools, and therapies of disease processes in relation to nursing assessment and action.

123. Seminar in Advanced Social Systems Theory and Application to Nursing Practice, (2) Sp. Prerequisite: Sociology 123 or consent of instructor. Lecture 2 hours, Staff

In-depth exploration and application of social systems and change theories to clinical experience. Identification of factors which affect the delivery of nursing care and the quality of health services.

125. Issues in Nursing and Health Care, (3) W. Prerequisite: Sociology 206. Lab 3 hours.

B. Magers

Consideration of advances in nursing and other disciplines. Examination of the health care system and the relation of nursing to it.

130A. Clinical Practice in Circumscribed Areas of Nursing, (8) F, W, Sp. Prerequisite: Nursing 110, 111A and 111B, 112, 113A and 113B, 114A and 114B, 117, 118, 119, 121 and Sociology 123. Lecture 2 hours, Lab 2 hours, Staff

Course provides theory and clinical experience in a focused area of nursing practice for two quarters. Emphasis is on further development of clinical competence, utilization of a systematic method of inquiry, and development of the leadership role.

130B. Clinical Practice in Circumscribed Areas of Nursing, (8) F, W, Sp. Prerequisite: Nursing 130A and Sociology 123. Lecture 2 hours. Lab 2 hours.

J. Yeach

Course provides theoretical and clinical experience in a focused area of nursing practice for two quarters. Emphasis is on further development of clinical competence, utilization of a systematic method of inquiry, and development of the leadership role.


G.I. Okamoto

Course deals with commonly used drugs with emphasis on classification, use, rationale for choice, mode of action, and significant side effects.

156. Creative Uses of Play with Young Children, (3) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours or equivalent time spent in weekend workshops.

B. Grover

A practical introduction to play designed to increase nursing skills in promoting growth, communication and mental health in young children, using experiences and demonstrations with play materials, techniques, and methods in relating to young children therapeutically.

177. Theory and Process of Human Interaction, (3) W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 2 hours, Rosennau and Staff

Theories of organization in relation to the therapeutic relationship. Relevant principles of psychiatric theory, including communication and interpersonal, are related to interactional patterns of adult health nurse practitioners as they relate to their individual and maintenance role. Problems in interactive process are explored. Laboratory required.

181. Law and the Practice of Nursing, (2) W. Lecture 2 hours.

J. Dulaney

Survey of fundamental and critical current issues in law with respect to the theory and practice of nursing. Emphasis will be placed on those encountered in the everyday practice of nursing in both hospital and community settings.

182A. Health Education in Practice, (3-3) F, W, Sp. Prerequisite: Consent of Lecturer. Lecture 2 hours, Lab 3 hours.

R. A. Terry

Processes and means of incorporating health education into professional practice: identification of audience, delineation of specific pertinent health concern, and exploration of modes of transmitting health information. Evaluation methods are explored.

183. The Teaching Learning Process, (3-3) F, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab optional 0-3 hours.

J. Frances

An exploration of teaching methodologies with emphasis on the changing characteristics of students and with particular reference to the changing roles of health professionals. Principles of evaluation will be examined. Laboratory optional.


Z. Zalez

Theories and concepts of femininity, masculinity and sexuality throughout the life cycle. Exploration of the wide range of human sexual behavior. Content includes sexual response, common sexual dysfunctions and therapy, masturbation, homosexuality, and sexuality in some human races.


Groups of two or more collaborate in clinical investigation and studies of special problems related to nursing. Prerequisites: Consent of instructor. Students may select study topics related to their areas of interest.

198. Supervised Study in Nursing, (1-5) F, W, Sp. Prerequisite: Consent of 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 in Nursing, (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 chairman of the department.


J. Moore

Theories of organization in relation to the duties and responsibilities of nurses managers as they administer nursing service and educational programs. Special emphasis is placed on ambulatory care settings and schools of nursing.


J. Dunlap

Principles of curriculum development. Utilization of these principles as a frame of reference for designing educational programs in schools of nursing and nursing services.


Comparative study and critical analysis of major conceptual models in nursing. Emphasis is placed on propositions of the following theoretical frameworks: systems, symbolic interaction, developmental, and adaptation theories. Course may be repeated for credit.


O. Hollins

Study of theories and concepts of consultation as facilitating process relevant to nurses working in primary, secondary, and tertiary prevention services. Emphasis will be placed on consultation strategies. Optional laboratory for theory testing.

204A-B. Comparative Nursing Administration, (2.5-3) F, W, Sp. Prerequisite: Consent of Instructor.

A. Archer, Schatzman, Hill

Comparative analysis of nursing with emphasis on nursing administration in the United States and other countries. Perspectives from anthropological, educational, historical, organizational, philosophical, and sociological points of view. Particularly recommended for international students.

205. Processes of Supervision, (3) F or W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

H. Giles

A study of the supervisory process, the role of the supervisor in the management of the work, and principles and practice of supervision in nursing. Observation and laboratory experience in supervision arranged for and guided by the faculty.

206. Microteaching, (4) F, W, Sp. Lecture 2 hours. Lab 2 hours plus other hours to be arranged.

S. Eaton

Analysis of the selected teaching components of role development, stimulus variation, questioning and induction, and closure utilized in individual and group instruction with application and practice in a micro-teaching laboratory.

210A. Family Dynamics, Concepts and Assessment, (3) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

J. Moore

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

211. Family Dynamics, Pathology and Therapy, (3) F, Sp. Prerequisite: Nursing 210A or equivalent. Consent of instructor. Lecture 2 hours, Lab 3 hours.

J. Moore
Seemingly emphasizing family concepts which aid in the understanding of dysfunctional families. Marriage and family therapy as treatment modalities are studied. Simulation laboratory experiences are used to test theoretical concepts in Nursing 405 with consent of instructor.

211A. Introduction to Research: Perspectives and Student Research Experience. (3) S, Prerequisite: Elementary statistics or equivalent. Lecture 2 hours, Lab 3 hours.
M. Kramer
Lecture sections provide an overview of the research process including the styles of researchers, the researcher attitude, logic, ethics, philosophy, and tools of science.


Staff
Sections with different substantive foci are devoted to the development of the individual nurse as a consumer of research endeavors emphasizing attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.01B. Critique of Studies in Patient-Family Teaching. (3) W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Halburg
Critique of studies in patient-family teaching with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.02B. Critique of Studies in Maternal-Child Nurs- ing. (3) W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Highley, Vedera
Critique of studies in maternal-child nursing with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.04B. Critique of Research in Death in Childhood. (3) W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Carreri
Critique of studies in death in childhood with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.05B. Critique of Studies in the Field of Aging. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
E. Nichols, L. Reynolds
Critique of studies in the field of aging with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211B. Analysis of Clinical Interventions with Young Retarded Children. (3) S, W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Pothier
Critical analysis of clinical interventions with young retarded children with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.12B. Critique of Research Studies in Nonverbal Behavior. (3) W, or Sp. Prerequisite: Nursing 211A or consent of instructor. Lecture 2 hours, Lab 3 hours.
J. Gorman
Critique of studies in nonverbal behavior with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.13B. Critique of Research Studies in Preventive Health Behavior. (3) Sp. Lecture 2 hours, Lab 3 hours.
J. Swanson
Critique and research studies in preventive health behavior in the community setting with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

212.1B. Critique of Cardiopulmonary Research. (3) W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Barstow
Critique of cardiopulmonary research with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

212.2B. Critique of Research Studies in Quality of Patient Care. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Lerner
Critique of research studies on quality of patient care in acute care settings with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

212.22B. Critique of Research Studies in Quality of Patient Care. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Carreri
Critique of research studies on quality of patient care in acute care settings with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

212A. Nursing Measurements and Patient Monitor- ing. (2-3) W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-3 hours.
Beaumont, Fundamentals of electronics, transducers, and instrumentation applicable to the modes of obtaining physiological data from patients.

213B. Nursing Measurements and Patient Monitor- ing. (2-4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours.
Beaumont, Fundamentals of electronics, transducers, and instrumentation applicable to the modes of obtaining physiological data from patients.

214. Early Postpartum: High Risk Parenting. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Tesler
Course focuses on the puerperium, early maternal-paternal newborn relationships and the nurse's role in facilitating mother-infant acquaintances and attachment. Exploration of impact of premature infant or infant with defects on parenting process. Practicum available through Nursing 304.

215A. Health in Nursing. (3) W, Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours.
J. Swanson
Exploration of theories, concepts, and principles pertaining to the practice of community health nursing with focus on positive health factors and interaction within families, groups and communities.

215B. Health Care Planning in Communities. (3) F, Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours.
R.A. Terry
Exploration of analytic planning models applicable to community health services. Utilization of the community as a basis for planning and delivery of health care. Emphasis is on the role of the community health nurse in health planning.

215C. Community Health Issues. (3) W, or Sp. Prerequisite: Nursing 215A or 215B and consent of instructor. Seminar 2 hours, Lab 3 hours.
J. Swanson
Exploration of community health issues previously unaddressed and not previously identified in community health nursing. Opportunity to explore theories and test their applicability to community and family health.

215D. Strategies of Community Organization. (3) W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.
Staff
Exploration of strategies of institutional analysis, community assessment, and methods of community organization and development, which enable nurses to facilitate others' capacities to define, plan for, and meet their own physical, social, and mental health priorities.

215E. Research Methods in Community Health Nurs- ing. (3) W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Staff
Exploration of research methods in community health nursing and research analysis, interpretation, and reporting. Stresses these functions as essential for planning and evaluating community health programs.

216. Maternal Child Nursing. (3) F, W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Zalar, Dubnar
Survey of major phenomena utilizing concepts, theories, and laboratory experiences within childbearing: pregnant couple, enlarging family, mother-child relationships, mother-infant interaction, total family interactions, and life experiences in health and illness.

217. Psychosocial Care of Hospitalized Children and Their Families. (3) W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Tesler
Exploration of the theory related to the psychosocial experiences of illness and hospitalization for the child. Nursing care is directed toward minimizing trauma and promoting growth. Concurrent practicum recommended.

218. Maternal Identity: Role Transition. (2-3) S, Lecture 2 hours, Lab 0-3 hours.
Highley
Role identity as dramatized by maternal role identity is used to examine transition as a lifelong developmental construct. Patient data is utilized to develop theoretical concepts and generate new theory.

219A. Nursing Care of the Acutely Ill Child. (2) F, W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
J. Ward
Focus is on exploration of immediate physiological and pathophysiological processes and their implications for planning nursing management of the acutely ill child. Students employ the problem-oriented framework to assess and manage theoretical patient problems. Practicum optional.

219B. Nursing Care of Acutely Ill Children. (3) Sp. Prerequisite: Consent of instructor. Lecture 3 hours, Lab 3 hours.
J. Ward
Focus is on exploration of immediate physiological and pathophysiological processes and their implications for planning nursing management of the acutely ill child. Students employ the problem-oriented framework to assess and manage theoretical patient problems.

220. Advanced Seminar in Nursing Research. (3) F, W, Sp. Prerequisite: Nursing 211A and 211B or equivalent and consent of instructor.
A seminar intended for doctoral students to discuss methods and problems in current nursing research. Course may be repeated for credit.

21A. Role Development: Specialized Nursing Roles. (2-3) F, W, Prerequisite: Consent of instructor. Lecture 2 hours, Lab optional 0-3 hours.
Oda
Lecture/seminar focusing on the critical analysis of specialized nursing role developments. Role research emphasized. Includes traditional, existing, expanded, and emerging role concepts. Optional laboratory for theory testing and systematic observations.

21B. Role Development: Specialized Nursing Roles. (2-3) F, W, Prerequisite: Nursing 211A or equivalent and consent of instructor. Lecture 2 hours, Lab 0-3 hours.
Oda
Lecture/seminar focusing on the critical analysis of specialized nursing role developments. Role research emphasized. Includes traditional, existing, expanded, and emerging role concepts. Optional laboratory for theory testing and systematic observations in required for research credit.

21C. Role Development: Specialized Nursing Roles. (2-3) Sp. Prerequisite: Nursing 211A or equivalent and consent of instructor. Lecture 2 hours, Lab 0-3 hours.
Oda
Lecture/seminar focusing on the critical analysis of specialized nursing role developments. Role research emphasized. Includes traditional, existing, expanded, and emerging role concepts. Optional laboratory for theory testing and systematic observations.
theory testing and systematic observation is required for research credit.

222A. A Survey of Modern Psychiatric Thought. (3) F. Prerequisite: Consent of Instructor. Lecture 2 hours. K. Porter, Underwood

Selected theories related to human behavior will be presented. Clinical applications of, and research related to theories will be reviewed. Lecture-discussion on psychiatric personality theories will be organized around case studies.

222B. A Survey of Modern Psychiatric Thought. (3) W. Lecture 3 hours. J. Gorman, Polthier

Selected theories related to human behavior will be presented. Clinical applications of, and research related to theories will be reviewed. Lecture-discussion on cognitive theories of human behavior will focus on Piaget's theory and behavioral theory.

222C. A Survey of Modern Psychiatric Thought. (3) Sp. Prerequisite: Consent of instructor. Lecture 3 hours. A. J. Davis

Selected theories related to human behavior will be presented. Clinical applications of, and research related to theories will be reviewed. Lecture-discussion on interactional theories of human behavior will focus on communication and systems theory.

233. Theories of Brief Psychotherapy. (2) Sp. A. J. Davis

Hooking up on selected theoretical models of short-term psychotherapy. Emphasis will be placed on the theory of assessment and treatment with the brief psychotherapy model.

244. Current Trends in Group Psychotherapy. (3) F. Prerequisite: Nursing 244 or consent of instructor. Lecture 3 hours. A. L. Moore

Seminar focusing in depth on the theoretical bases and implementation of role playing, psychodrama, and gestalt therapy in the group setting by the social worker. Designed for nurses desiring advanced preparation in group psychotherapy.

255. Psychotherapeutic Process in Nursing. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. J. Moore

Lecture/seminar on the psychotherapeutic process in nursing. Material drawn from recent research in social science, psychiatry, and psychiatric nursing.

266. Nursing in Long-Term Illness. (3) F. Sp. Prerequisite: Consent of instructor. Lecture 2 hours. J. C. Burba

Intensive study of problems related to long-term illness. Explorations of the interaction between the social, clinical, psychological, and sociological factors involved in chronic illnesses, and field experience included.

277. Conceptual Approaches to Functional Psychopathology. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. K. Porter, Underwood

Lecture-seminar with emphasis on comparative study and analysis of selected sociological, psychological, and sociopathological theories of schizophrenia and depression. Selected research is included. Laboratory and in-care environment situations. Focuses on ideas, theories and research relating to leadership behaviors, styles, and strategies.

228. Communications — Theoretical and Philosophical. (2-4) F, W, Sp. Prerequisite: Consent of Instructor. Lecture 2 hours. A. Davis

The concept of communication has become one of the overlapping areas in a number of disciplines. This course examines the formal and philosophical writings which have made the concepts and problems of human communication central to their investigations, to their presentation and application, and then to their relationship with leadership roles, decision making, and organizational change.

229. Crisis Intervention. (2-4) F, W, Lecture 2 hours, Lab 0-6 hours. C. Mitchell

A seminar to discuss theories of crisis and innovative uses of crisis intervention in selected nursing areas. Emphasis is on stress as the antecedent of crisis, adaptive and maladaptive coping as behavioral manifestations, and resolution techniques to facilitate successful resolution.

230. Legislative Processes and Strategies. (2-4) F, W or Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours. C. Mitchell

Exploration of legislative processes which affect professional practice. Analysis of strategies for professional, political, or legislative. Examination of concepts and principles of professional lobbying, systems management of governmental relations, role of research, and expertise in policy making.

231A. Nursing Administration. (4) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours. J. Bailey

An advanced course designed to apply major concepts in organizational theory and management to nursing administrative practice. Emphasis on systems approach to nursing administration through techniques that will enable students to conceptualize and analyze problems in health care settings.

231B. Nursing Administration. (4) Sp. Prerequisite: Nursing 231A and consent of instructor. J. Bailey

An advanced course designed to apply major concepts in organizational theory and management to nursing administration practice. Emphasis on systems approach to relevant analytical techniques that will enable students to conceptualize and analyze problems in health care settings.

232. Dimensions of Leadership. (2-4) F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours. C. Mitchell

Overview of concepts, theories, principles, and research studies related to leadership and adjunct processes in group dynamics and structure. Focuses on systematic analysis of decision processes related to planned change in health care services. Laboratory 2 hours.

232A. Dynamics of Leadership. (2-4) W or Sp. Prerequisite: Nursing 232A or consent of instructor. Lecture 2 hours, Lab 0-6 hours. C. Mitchell

Analysis of interactive variables and functional relationships of leadership characteristics of the leaders and inter-role environments. Focuses on ideas, theories and research relating to leadership behaviors, styles, and strategies.

232C. Problems in Leadership. (2-4) W. Prerequisite: Nursing 232A and 232B or consent of instructor. Lecture 2 hours. C. Mitchell

Seminar focuses on the analysis of selected problems and case studies and on creative management of human resource management. Application and testing of ideas, principles, models, and theories related to leadership roles, decision making, and performance change.

233. Coping Styles of Children. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Dunbar

Examination and assessment of individual coping styles in young children. Theoretical framework based upon Murphy, Lazarus, Menninger, and others. Laboratory data is used to explore nursing interventions relating to stress periods and coping patterns in children.

234. The Threat of Death in Clinical Practice. (3) F. W or Sp. Lecture 3 hours. Laprequeft

Seminar providing opportunity for discussion about multiple issues which come into play when adult patients are threatened with meaning of dying from perspective of persons undergoing the experience and/or problems of health professionals who deal with these situations.

235. Process of Aging: Implications for Nursing Care. (4) F. or W. or Sp. Lecture 2 hours, Lab 0-6 hours. Takanu, Mirsky

Study of the physiological, psychological, sociological aspects of aging. Focus is on selected theories and research relevant to nursing care of the aged. Laboratory utilizes a variety of settings serving the aged.

236. Expectant Parent Group Education. (2) F, W. or Sp. Prerequisite: Consent of instructor. F. Abbott

Theoretical sessions related to methodology and techniques of conducting expectant parent discussion groups. Exploration of content relevant to concerns of expectant parents, encountering child-bearing and early child-rearing experiences. Concurrency practicum required.

237. Common Problems in School Health. (3). F. or W. or Sp. Prerequisite: Nursing 255.01 and 255.02. Consent of instructor. Lecture 2 hours. Seminar 1 hour. B. Locken

Physiological, psychological, and sociological theories and assumptions concerning common health problems in the school age population. Course provides format for the integration of theoretical information, clinical findings, emphasizing approaches of assessment, problem-solving, evaluation, and referral of health problems.

238A. Development of the Infant and Preschool Child. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab to be arranged. Enrollment limited.

Exploration of the major theories and research findings dealing with the physical, intellectual, and emotional development of the child from birth to school age.

238B. Development in Middle Childhood. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. Enrollment limited.

Exploration of relevant theories, literature, research findings dealing with normal cognitive, emotional, and social development during the elementary school years.

238C. Adolescent Development. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. Enrollment limited.

Exploration of relevant theory, literature, and research findings dealing with normal development during the adolescent period.

239A. Care of Patients with Pulmonary Problems. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. E. Clarke, Flood

A comprehensive study of the nursing care of patients with pulmonary problems: Examination of the physiological concepts necessary to understanding the patient and nursing problems. Exploration of the physiological bases for nursing decisions and nursing action.

239B. Care of Patients with Pulmonary Problems. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours. E. Clarke, Flood

A comprehensive study of the nursing care of patients with pulmonary problems: Examination of selected theories and research from the behavioral sciences relevant to the care of these patients. Identification and evaluation of interrelationships and socioeconomic influences in health care delivery.

239C. Care of Patients with Pulmonary Problems. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours. E. Clarke, Flood

Investigation of nontherapeutic, unintended psychologic effects of selected common nursing interventions with pulmonary dysfunctions. Clinical laboratory included.

239D. Clinical Decision Making. (3) F. or Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. E. Clarke, Flood

The theoretical basis for decision making in the management and teaching of adults, with emphasis on decision making in acute and chronic settings. Examination of coping mechanisms, teaching-learning theories, and related research as applied to individual style.

241A. Theoretical Basis of Cardiovascular Nursing. (3) W. Lecture 3 hours. L. Friesen

A study of cardiovascular theories applicable to
nursing practice. Focus will be on selected physiology and pathophysiology that support selected nursing interventions.

241.01B. Theoretical Basis of Cardiovascular Nursing Practice. Experiential learning from nursing 241.01A or consent of instructor. Lecture 3 hours. Stotts A study of cardiovascular theories applicable to nursing. Emphasis will be on selected pathophysiology and nursing interventions.

241.02. Renal Nursing: A Physiological Basis. (3) § W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours. E. Clarke Study of renal nursing theories and principles pertinent to selected renal physiology. Application of these principles to nursing assessment and the care of patients with renal problems.

241.03. Pharmacology for the Cardiopulmonary Patient. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Clarke Study of cardiopulmonary nursing theories and principles pertinent to selected physiology. This course will focus on principles and concepts related to selected physiological systems. Review of relevant anatomy, physiology, and drug action included.


243.01. Nursing Management of Metabolic Alteration in Surgical Patients. (3) § W. Prerequisite: Consent of instructor. Lecture 3 hours. Stotts Exploration and testing of theories, concepts, and principles underlying metabolic alterations in the perioperative and postoperative period. Emphasis is on the physiological and pathophysiological changes associated with surgery in adults and the nurse's role in promoting or inhibiting those alterations.

243.02. Nursing Management of the Surgical Patient in the Perioperative and Postoperative Period. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Stotts Application and testing of theories, concepts, and principles related to physiological and psychological adaptations in the perioperative and postoperative period. Emphasis is on the nurse's role in managing the health risk patient with selected maladaptations.

244. Theories of Group Psychotherapy. (2) § W. Prerequisite: Nursing 112 or consent of instructor. Lecture 1½ hours, Lab 1½ hours. Miller Dye Theories of group psychotherapy based on psychoanalytic, interpersonal, and communication theories pertinent to practice of group psychotherapy by nurses. Exploration of differing models of therapy, basic principles and techniques of group therapy, and role of psychiatric nurse as leader.

245. Deterrents to Parenting. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Dye Exploration of evolving mother-child relationships, adaptive tasks, and environmental and interpersonal situations interrupting healthy development of moth- pernel and child. This course will be examined with particular emphasis on the development of group interactions, and group structure will be evaluated for understanding of group processes and the group's impact on development of mother and child.

247.01. Issues and Trends in the Health Care of the Aged. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Clarke Exploration of the interrelationships of various issues, trends and theories related to the aged. A discussion of the nurse's role in the planning and delivery of health care to the aged, both sick and well.

247.02. Legislative Issues and Political Aspects of Aging in Long-Term Health Care. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Francis Investigation of legislative and political issues of long-term health care and the implications for nursing practice.

248. Group Independent Study. (1-6) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 1-6 hours. Staff Groups of two or more 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, Sp. Prerequisite: Consent of instructor. Individual study with emphasis on special problems in nursing. Students may select areas for study which are related to their area of interest or future goals.

250. Research. (1-8) § F, W, Sp. Prerequisite: Admission to doctoral study and consent of instructor. Staff

251. Professional Nurses in Bureaucracies. (3-4) § W. Prerequisite: Three months work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours. M. Kramer Exploration and analysis of research and issues of professionalism and bureaucracy: evolution, process and performance to goal achievement. Course focuses on problems and conflicts experienced by professional nurses in bureaucracies related to identification and amelioration of these conflicts.


253. Research in Small Group Behavior. (3) § W. Prerequisite: Nursing 211A and consent of instructor. Dye A comprehensive analysis of research design, theory, concepts, and methodology applied to the group process. Variables such as group interaction, group influence characteristics, and group structure will be examined with particular emphasis on measurement and experimental design.

254.01. Maternal and Neonatal Physical Assessment. (2-4) § W. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Reel Exploration of normal and abnormal physiological changes occurring during pregnancy and childbearing. Emphasis will be on reproductive systems, endocrine and neuroendocrine systems, and cardiopulmonary systems. Clinical experience to relate physiologic theory with clinical observation.

254.02. Fetal-Newborn Development. (2-4) § Sp. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Dulock, Reel Exploration of the critical phases and processes of fetal growth, development and function as a basis for understanding the genesis of congenital anomalies, pathophysiological problems in the newborn and the nursing implications.

254.03. Nursing Care of High Risk Pregnancy. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Reel Exploration of pathophysiological events affecting the maternal-fetal unit in high risk pregnancies. Clinical experience will be provided for integration of theory.

254.04. Nursing Care of High Risk Newborn. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Dulock Exploration of the physiological processes and pathophysiological events affecting the normal and high risk newborn. Current medical and nursing research findings included.

254.05. Developmental Pharmacology. (2-3) § Sp. Prerequisites: Nursing 254.01 and 254.02. Lecture 2 hours. Seminar optional 1 hour. Burkhalter, Reel Course provides theoretical concepts of interactions of drugs, and their pharmacokinetic effect on the maternal-placental-fetal unit and on the developing newborn in review of nursing approaches to their clinical care. Emphasis on drug therapy in designing a conceptual framework for individual assessment.

255.01. Child Health Assessment. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Dulock Theoretical and practical application of assessment skills and methods in examining the growth and development of the child. This course will be included with assessment of the child's growth and development. Emphasis on group instruction in application of knowledge. Laboratory for testing and integration of theory.

255.02. Child Health Maintenance. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Dulock Course provides exploration of theories, concepts and knowledge for comprehensive child health maintenance, encompassing prevention and promotion. Emphasis is on teaching parents as participants in assessment, decision-making and management of common health problems and normal developmental stresses in infancy and early childhood.

255.03. Management of Common Pediatric Illness. (4) § Sp. Prerequisite: Nursing 255.01 and 255.02. Consent of instructor. Lecture 2 hours, Seminar 2 hours. S. Phillips Covers theoretical basis of physiological and psychological principles necessary for understanding management of common pediatric illnesses. Provides format for integrating material with clinical findings, utilizing developmental and communication concepts in assessment and management. Collaborative roles between nurse, family and physician emphasized.

256. Therapeutic Use of Play. (3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Hardgrove Practical experience using play materials, techniques, and methods, in relating to young children to increase the graduate nursing student's observation skills and afford opportunities to test and evaluate theories of child development. Practicum optional.

257A. Children at Risk. (3) § W. Prerequisite: Nursing 236, 236B, or equivalent and consent of instructor. Lecture 2 hours, Lab 3 hours. Miller Introduction to assessment of temperament and related factors in child development and early recognition of vulnerability for developmental deviations; assessment of child rearing styles and environment and designing a conceptual framework for individual assessments.

257B. Children at Risk. (3) § Sp. Prerequisite: Nursing 257A. Lecture 2 hours, Lab 3 hours. Miller Exploration of health problems related to children at risk: developmental deviations, handicapping conditions, constitutional factors in child development and early recognition of vulnerability for developmental deviations; assessment of child rearing styles and environment and designing a conceptual framework for individual assessments.

258. Intrapartal Nursing. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Neeson Exploration of pain perception and clinical course of normal labor and delivery. Social, cultural and psychological factors influencing the family's decision to undergo or accept induction or cesarean delivery with clinical data. Practicum available through Nursing 406.

259.01. Health Assessment of Women in the Reproductive Years. (1) § F. Lecture 3 hours. Lab 3 hours. Neeson
Principles and theories of assessment of women’s reproductive health; methodologies of data gathering and analysis as they relate to pregnancy, the interconceptional period, the climacteric and the newborn. Consideration of social, cultural and ethnic variations.

259.02. Women’s Reproductive Health: Theories and Management. (3) W. Prerequisite: Nursing 259.01 or consent of instructor. Lecture 2 hours, Seminar 1 hour.

Neeson

Exploration of theories, concepts and knowledge necessary to maintain and promote women’s reproductive health. Emphasis on application of current research findings on fertilization and management of pregnancy, the interconceptional period and the climacteric, including collaboration with health team members.

259.03. Special Problems in Women’s Reproductive Health: Theories, Assessment, and Management. (3) Sp. Prerequisites: Nursing 259.01 and 259.02 or consent of instructor. Lecture 2 hours. Seminar 1 hour.

Neeson

Theory and management of bio-psycho-social deviations from normal in women before and during pregnancy, interconceptional period, and climacteric. Emphasis placed on critical analysis of research in metabolic, infectious and functional disorders including collaborative management of women manifesting these disorders.

261. Introduction to Computer-based Instructional Systems in Nursing Education and Practice. (2-4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour.

Archer

Focus is on computers as aids to instruction in nursing education and practice. Concepts, principles and methods of computer-based instruction will be discussed. Laboratory provides opportunities to design and write interactive instructional programs or to evaluate use of computer-based systems.

262. Conceptualization in Psychiatric Nursing. (3) W. Prerequisites: Nursing 222A and 222B. Consent of instructor. Lecture 2 hours. Lab 3 hours.

Underwood

Seminar focusing on psychiatric personality theories in psychiatric nursing conceptual framework for clinical practice and research. Major emphasis is on use of theory by psychiatric nurses in developing comprehensive practice and research. Students are expected to develop beginning conceptualization.

263A. Nursing Evaluations of the Long Term Client. (3) W. Prerequisite: Consent of instructor. Lecture 3 hours.

Davidow

Selected frameworks for assessment, analysis of data and diagnoses are explored as they are related to long term care clients in institutional and community settings. Data bases and methodologies for client evaluation are studied. Concurrent four unit practicum required.

263B. Restorative Nursing with Long Term Care Clients. (2) Sp. Prerequisite: Nursing 263A or consent of instructor. Lecture 2 hours.

Davidow

Examination of restorative nursing with long term clients in various levels of living and community settings. Exploration of methods of implementation of prescribed nursing care and evaluation outcomes toward client goals and achievement. Concurrent practicum required.

263C. Quality Assurance in Health Care. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

Nichols

Focus is on dimensions of quality assurance. Impact of value judgments in quality assurance, interdisciplinary assurance such as peer and utilization review, professional standards, consumer and institutional control, and vested interests, examined on the basis of outcomes in long term care.

264. Social Context of Nursing Practice. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Neeson

Focus is on the exploration of social processes and how they impinge on nursing practice. Interventions based on social data are explored.

265A. Research Methods in Program Planning and Evaluation. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

Archer

Exploration of research approaches in program planning and evaluation, emphasizing conceptualization of the evaluation problem, developing a research strategy, and analyzing the data. Focus is on problem definition and instrument construction.

265B. Research Methods in Program Planning and Evaluation. (3) Sp. Prerequisite: Nursing 265A and consent of instructor. Lecture 2 hours. Lab 3 hours.

Archer

Exploration of research approaches to program planning and evaluation's interests. Focus is on data collection, and analysis.

266A. Research Conceptualization. (3-5) Sp. Prerequisite: Nursing 211A or consent of instructor. Lecture 2 hours, Lab 3-9 hours.

M. Kramer

Discussion and practice in research problems, formulation and design selection for producers of research. Core classes and small group sessions are organized around projects and research. Students are expected to develop beginning conceptualization.

266B. Research Implementation. (3-5) Sp. Prerequisite: Nursing 266A. Lecture 2 hours, Lab 3-9 hours.

Archer

Data collection, analysis, and reporting of a research project, or of some aspect of a research project, such as tool construction, validity, or reliability study. Study is focused on selected ethical theories and dilemmas in health care and nursing practice. Focus is on selected case studies depicting ethical dilemmas in nursing practice, nursing research, and health policy.

268. Current Concepts in Nursing. (2-4) F. W. Prerequisite: Admission to the DNS program. Lecture 2-4 hours.

Hornof

Presentation and discussion of current issues and trends in nursing and the health fields.

270. Health Assessment of the Adult. (4) F. Prerequisite: Concurrent enrollment in Nursing 406. Consent of instructor. Lecture 2 hours, Lab 2 hours.

Archer

Course presents theoretical framework for comprehensive assessment of adults in primary care. In- troduction to systematic methods of gathering, interpreting clinical data derived from history and physical examination. Emphasizes pathophysiologic bases of signs, symptoms, incorporates framework for health maintenance of adults.

271A. Clinical Management of Common Adult Problems. (4) F. Prerequisite: Nursing 270 and consent of instructor. Concurrent enrollment in Nursing 406. Lecture 4 hours.

Resnik

Course introduces concepts essential in the management of common health problems of adults in primary care. Emphasizes the integration of psychosocial and pathophysiologic aspects of illness. Focus is on process of clinical decision-making through case method approach utilizing relevant research.


Resnik

Course introduces concepts essential in the management of common health problems of adults in primary care. Emphasizes the integration of psychosocial and pathophysiologic aspects of illness. Focus is on process of clinical decision-making through case method approach.

272. Prospective Health Care of Adults. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours.

Staff

Course introduces principles of health maintenance care for adults and dealing with health risk appraisals, problem identification and management. Focus is on health risks related to age, sex, health habits, history of individual and family illness, and life stress.

290.01. Conceptual Approaches to Family Study. (2-4) F. Prerequisite: Enrollment in the DNS program. Lecture 2 hours, Lab 3-9 hours.

M. Mercado

Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on interactional and structural-functional. Seminar focuses on theoretical applications to nursing problems in the maintenance of family health.

290.02. Conceptual Approaches to Family Study. (2-4) F. Prerequisite: Consent of instructor. Enrollment in the DNS program. Lecture 2 hours, Lab 0-6 hours.

M. Mercado

Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on the developmental, psychoanalytic and institutional. Seminar focuses on theoretical applications to nursing problems in the maintenance of family health.

290.03. Conceptual Approaches to Family Study. (2-4) Sp. Prerequisite: Nursing 290.01, 290.02 and/or consent of instructor. Enrollment in the DNS program. Lecture 2 hours, Lab 0-6 hours.

Savieda, Mercer

Individual development of an approach or model for study of a specific problem in family health. Seminar focuses on critique of models generated by students and their applicability to the research problem.

298. Thesis or Comprehensive Examination. (0) F, W. Prerequisite: Advancement to candidacy and permission of the graduate adviser.

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) F, W. Pr. prerequisite: Advancement to candidacy and permission of the graduate adviser.

Staff

For graduate students engaged in writing the dissertation for the Doctor of Nursing Science (DNS) degree.

401. Teaching Residency. (4-12) F, 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. (4-12) F, 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.

403. Consultation Residency. (4-12) F, 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.

404. Clinical Residency. (4-12) F, 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.

405A. Clinical Residency-Pediatric Nurse Associate. (4) W. Prerequisite: Nursing 255.01 and concurrent enrollment in Nursing 255.02. Consent of instructor. Lab 12 hours.

Savieda, Mercer

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory child health care.
404.06 B. Clinical Residency-Pediatric Nurse Associate. (4) Sp. Prerequisite: Nursing 404.06A and completion of 12 hours.

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under the direct supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory child health care.

405. Practicum in Mental Health and Community Nursing. (1-8) W. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Opportunity to apply theory in clinical practice in further develop skills and to extend clinical expertise in selected aspects of mental health and community nursing. Guided clinical laboratory experience is designed to develop mastery of advanced skills.

406. Practicum in Family Health Care Nursing. (1-8) F, W. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical expertise in selected aspects of family health care nursing. Guided clinical laboratory experience is designed to develop mastery of advanced skills.

407. Practicum in Physiological Nursing. (1-8) F, W. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical expertise in selected aspects of physiological nursing. Guided clinical laboratory experience is designed to develop mastery of advanced skills.

409. Counseling Education Residency. (6-12) F, W. Prerequisite: Counseling 201 or equivalent, and consent of instructor. Lab 16-36 hours.

Staff

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor. Focus is on development of the Counseling Specialist role in setting continuing education needs of registered nurses.

10. Teaching Practicum. (1-8) F, W. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Supervised practice in selected components of the teaching role in nursing.


Silverstein (W), Eckhaus (Sp).

An introduction to the basic principles of human nutrition. Subject material is related to the maintenance of normal nutrition throughout one’s life span, and emphasis is on normal nutrition and its preventive role in maintaining general health, specifically oral health.

130. Principles of Diet as Therapy in Nursing Interventions. (2) W. Prerequisite: Nursing 110 or consent of instructor.

Gutierrez

Concepts of dietary modification as required in the prevention and treatment of major disease entities.

Emphasis is on clinical approaches useful in nursing practice.

160. Foods and Nutrition. (2) Sp. Prerequisite: Nutrition 1308C. Lecture 1 hour, Lab 3 hours. Vinson

Emphasis on practical aspects of nutrition such as diet evaluation, obtaining diet histories, and nutrition education. Focus on discussion of pertinent topics in nutrition are included.


Supervised practice in nutrition counseling with dental clinics patients. Students will apply techniques of diet analysis, preventive program planning, and patient counseling.

181. Nutrition Counseling for Families. (3) F. Prerequisite: Nursing 114 and/or consent of instructor. Lecture 2 hours, Lab 3 hours. Gutierrez, Hoare

Students will have responsibilities of full-time acting interns on both the obstetric and gynecological services.

140.06. Gynecologic Clerkship at SFGH. (1½ per week) F, W, Sp. Prerequisite: Obstetrics and Gynecology 110 and consent of instructor. Jaffe and Staff

Course is individually structured for each student by the instructor, with emphasis on areas of interest and needs for in-depth clinical experience. Focus is on development of the gynecological clerkship in selected areas. Emphasis is on inpatient and outpatient care.

140.07. Gynecologic Clerkship at UC. (1½ per week) F, W, Sp. Prerequisite: Obstetrics and Gynecology equivalent. Braga, Glass

Supervised practices in the role of an acting intern in the gynecology service. Responsibilities are predominately in the inpatient service and will include both surgical and non-surgical aspects of gynecological surgery. Emphasis on clinical problem-solving, clinical reasoning ability, and general gynecology.


Clinical experience in a subspecialty area under the direction of a member of the faculty.

150.01. Research in Obstetrics, Gynecology and Reproductive Sciences. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor and chairman of the department.

Staff

A clinical research project under the direction of a member of the faculty.

198. Supervised Study in Obstetrics, Gynecology and Reproductive Sciences. (1-8) F, W. Prerequisite: Consent of instructor. Lab 0-3 hours.

Staff

Library research and directed reading under supervision of a member of the faculty with the approval of the Department of Obstetrics and Gynecology.

199. Laboratory Project in Obstetrics, Gynecology, and Reproductive Sciences. (1-5) F, W, Sp. Prerequisite: Consent of instructor.

Staff

A laboratory research project under the direction of a member of the faculty.


Kuhn Seminar presentations in areas of current interest in reproductive endocrinology by guest speakers and members of the Reproductive Endocrinology Center. Students will be required to submit a term paper. Course may be repeated for credit.

230. Reproductive Endocrinology. (2) W. Prerequisite: Consent of instructor. Lecture 2 hours. R. Wein.

Lecture and assigned readings on the reproductive endocrinology of the male and female. Topics include: structure, function and regulation of the hypothalamic-pituitary, and gonadal hormones, with special emphasis on the human.

231. Hormone Receptor Binding. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours. J. Roberts

An in-depth assessment of the characteristics of hormone receptor interactions by ligand binding methods. Lectures, assigned readings, and problems will focus on theoretical and practical aspects of the above topics. Literature data and current research.

232. Morphological Basis of Neuroendocrinology. (2) W. Prerequisite: Consent of instructor. Lecture 2 hours. R. Weiner

Lectures and assigned readings on the morphological basis of central nervous system and endocrine systems. Topics will include morphology, hypothalamic-pituitary, neural, and sympathetic pathways. Special emphasis will be placed on the evaluation of current methods and literature in the field.

400. Staff Conferences. (1) F, W, Sp. Jaffe and Staff

Conferences comprised of formal discussions by staff, faculty, and visiting lecturers.


Seminar includes the presentation ofpathologic material from the obstetric and gynecologic services with formal instruction and discussions.

402. House Staff Seminars. (1) F, W, Sp. Prerequisite: Laros Seminar includes presentations of special topics, literature reviews, and discussions. Discussion of resident staff functions also are held.


Webb

Residents are responsible for the care of patients in the hospital and outpatient clinic. Formal and individual instruction is conducted.

118 Nursing / Obstetrics, Gynecology and Reproductive Sciences

119 Obstetrics, Gynecology and Reproductive Sciences / Occlusion

120. Applied Dental Morphology and Physiology of Occlusion. (1) Sp. Prerequisite: Concurrent enrollment in Oral Diagnosis 129. Lecture 1 hour.

R. Stefanou

A joint lecture and discussion series on the relationship of occlusion to the clinical phases of dentistry.


J. Parone

The etiology of functional disturbances, analysis of occlusal relationships of the opposing arches, and a rationale of theory are presented. The principles of occlusion and the problems commonly to adult clinical dentistry are also discussed.
Operative Dentistry

109. Clinical Operative Dentistry. (0.1L) F, W, Sp, Prerequisite: Third year standing in operative dentistry. Clinical Variable. Schuchard and Staff

Clinical instruction:

115A-B. Operative Techniques. (0.2, 0.2, 1.5S) F, W, Sp. Lecture 1 hour for 5 weeks Sp., Lab 3 hours F, W, Sp.

E. Watkins

Beginning techniques in operative dentistry. Five hours of instruction on the theory and principles of cavity design and preparation are included in the spring quarter.

125A-B. Operative Techniques. (0.6, 0.6) F, W, Sp. Prerequisite: Operative Dentistry 115A-B. Lecture 1 hour Lab 6 hours. E. Watkins

Continuing techniques in operative dentistry. One lecture of workshop each quarter; laboratory work; lectures reinforce principles taught in the laboratory. Clinic rotation is included.

130A-B. Operative Theory. (0.1-L, 0.1-L) F, W, Sp, Prerequisite: Operative Dentistry 115A-B and 125A-B. Clinical variable.

Clinical instruction for third year students.


Clinical instruction for fourth year students.

150. Advanced Operative Dentistry Theory. (1) F, W, Sp, Prerequisite: Operative Dentistry 120. Lecture 1 hour. Schuchard and Staff

Lectures and television demonstrations covering quadrants, radiography, restorations, filling materials, and others. Daily laboratory activity includes filling procedures, analysis of related research, and clinical applications of the various restorative procedures.

150.1. Advanced Operative Dentistry Theory. (1) W. Prerequisite: Operative Dentistry 120. Lecture 1 hour. Schuchard and Staff

Continuation of Operative Dentistry 180.

160.2. Advanced Operative Dentistry Theory. (1) Sp. Prerequisite: Operative Dentistry 180. Lecture 1 hour. Schuchard and Staff

Continuation of Operative Dentistry 180.

160.3. Advanced Operative Dentistry. (1) F, W, Sp, Prerequisite: Operative Dentistry 180. Lecture 1 hour. Schuchard and Staff

Continuation of Operative Dentistry 180. Prerequisite: Operative Dentistry 180.

Operative Dentistry 180.01. Organization of the material is planned in relation to progress of students enrolling in the 180 series. Schuchard and Staff

189. Direct Gold Restorative Procedures. (1) F, W, Sp, Prerequisite: Open to fourth year students with approval of the chairman of the division. 36 hours. Enrollment limited.

Schuchard and Staff

Techniques and procedures for Class III restorations using the conservative approach, as well as work and wedge matrix. Work also will be done on Class V direct gold restorations. Students learn to use various materials including fibrous gold, goldent, and electroless platinum.

189.01. Advanced Clinical Operative Dentistry. (2-L) F, W, Sp, Prerequisite: All previous courses in operative dentistry curriculum sequence. Clinical Variable.

Continuation of clinical experience at the level of Operative Dentistry 109.

189.02. Advanced Clinical Operative Dentistry. (6-L) F, W, Sp, Prerequisite: All previous courses at the level of Operative Dentistry 109. Clinic 0-12 hours. Schuchard and Staff

Advanced instruction in the field of clinical operative dentistry, utilizing procedures different from those presented at the level of Operative Dentistry 109, such as quadrants and plastics.

199. Laboratory Project in Operative Dentistry. (1.5-L) F, W, Sp, Prerequisite: Approval of the Dean Schuchard and Staff

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

Ophthalmology

First-Year Coordinated Instruction — Medicine 131A-B. Lecture-demonstrations and section work devoted to the supervised examination of patients. Core Clerkship — Surgery 110 and 111 in lectures and clinical experience in the diagnosis and care of eye diseases.

140. General Clinical Ophthalmology. (1.5 per week) Su, F, W, Sp, Prerequisite: Consent of instructor. Kimura Clinical observations of patients in clinic, wards, and surgery. Seminars on ophthalmologic pathology, microbiology, and optics at UC.

140.02. Clinical Clerkship. (1.5 per week) Su, F, W, Sp, Prerequisite: Consent of Instructor. S. Kramer and Staff

Clinical clerkship in approved hospitals by special arrangement and approval by the Dean and the chairman of the department.

140.03. Clinical Clerkship at SFSGH. (1.5 per week) Su, F, W, Sp, Prerequisite: Consent of instructor. Goodner and Staff

Clinical observation of patients in the clinics, wards and surgery at SFSGH.

140.04. Clinical Clerkship at L. (1.5 per week) Su, W, Sp, Prerequisite: Consent of instructor. Wergeland and Staff

Clinical observation of patients in the clinics, wards and surgery at L.

150.01. Ophthalmic Pathology. (1.5 per week) Su, F, W, Sp, Prerequisite: Consent of instructor. J.B. Crawford Seminars include gross and microscopic ophthalmic pathology with clinical correlation of cases from the Eye Clinic, wards, and other hospitals.

150.02. Research in Ophthalmology. (1.0 per week) Su, F, W, Sp, Prerequisite: Consent of instructor and chairman of the department. Schuchard; S. Kramer

A research project under the direction of a member of the faculty carried out in the Department of Ophthalmology.

150. Supervised Study in Ophthalmology. (1.5) F, W, Sp S. Kramer

Library research and directed reading under supervision of a member with the approval of the chairman of the department.

150. Laboratory Project in Ophthalmology. (1.5-L) F, W, Sp S. Kramer

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

400. Ophthalmology Staff Conference. (1) F, W, Sp S. Kramer

Residents prepare and present diagnostic and therapeutic problems to the faculty for discussion by faculty and visitors follows. Residents also present papers on various aspects of medicine and ophthalmology which are discussed by house officers.

401. Conferences at SFSGH and VA. (1) F, W, Sp, Prerequisite: First and third year residents. S. Kramer

Conferences include grand rounds and case presentations of hospital patients, review of recent literature in ophthalmology, and assigned reading with required reports.

402. Specialty Seminars at SFSGH and VA. (6) F, W, Sp, S. Kramer Seminars include didactic lectures in practical work covering pathology, neuro-ophthalmology, uveitis, photophysical optics, refraction, ocular motility, glaucoma, and microbiology.

403. Basic Ophthalmologic Science Course. (8) Su. Required for first year residents. S. Kramer

Didactic lectures and demonstrations cover the basic sciences as applied to ophthalmology. These include anatomy, histology, biochemistry, physiology, and pharmacology.

450. Clinical Ophthalmology at UC. (1.5 per week) Su, F, W, Sp. Kimura Residents, under supervision, are responsible for patients in the Eye Clinic. First year residents assist in eye surgery and the Eye Bank program. Specialty clinics include external diseases, extracutaneous muscles, medical genetics, ophthalmology, urologic surgery, refraction, cataract, glaucoma, neuro-ophthalmology, plastic surgery, and tumor.

451. Clinical Ophthalmology. (1.5 per week) Su, F, W, Sp Minas Residents, under supervision, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases.

454. Clinical Ophthalmology. (1.5 per week) Su, F, W, Sp UC Beard, CHMC E. Stern

Residents, under supervision, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases. Residents consult for other hospital services.

455. Fourth Year Residency. (1.5 per week) Su, F, W, Sp S. Kramer

Fourth year residency taken at UC or at any approved institution subject to the approval of the chairman of the department and the Dean.

457. Clinical Ophthalmology. (1.5 per week) Su, F, W, Sp. PH A. Schwartz, P. Hilton, STM R.N. Shaffer, KL. Rathman Residents or fellows, under supervision, are responsible for patient care, including diagnostic studies and treatment of medical-eye care, diagnosis, and surgery-eye cases. Residents and fellows consult for other hospital services.


Interns, under supervision of the attending staff, are responsible for patient care on wards and in the follow-up clinic, in reading clinic studies and consultation. This rotation is combined with patient-care assignments in the Otolaryngology Service.

Oral Diagnosis

109. Clinical Oral Diagnosis. (0.1) F, W, Sp. Prerequisite: Third year standing. Credit 30 hours. Braly and Staff

Credit is assigned on a point basis in independent case work-ups and case presentations.

109.01. Oral Diagnosis and Roentgenology Rotation. (0.5) F, W, Sp, Prerequisite: Third year standing. Clinic and Seminar Block rotation 60 hours. Braly and Staff

Clinical experience and small group instruction is provided in diagnosis, radiology, roentgenology, emergency dental care, clinical photography, and roentgenology.

109.02. Dental Emergency Clinic. (0.1) F, W, Sp. Prerequisite: Oral Diagnosis 109. Clinic rotation 30 hours. G. Hall

Experience in the provision of dental emergency care in the UC Clinics and in the initial evaluation of persons seeking dental care. Instruction is provided on an individual and small group basis.

116A-C. Clinical Diagnosis. (0.4, 0.4, 0.1) F, W, Sp, Lecture 1 hour F, W, Clinic 3 hours F, W; 4 hours Sp.

Braly

An introduction to concepts of dental health and disease and a recognition of these through a multidisciplinary clinical orientation program.

129. Diagnosis and Treatment Planning. (2) Sp. Prerequisite: Oral Diagnosis 116A-C. Clinic, and Seminar 6 hours. Maxwell

Small group instruction is provided in comprehen-
Oral Medicine and Hospital Dentistry

109.01. Oral Medicine. (0.2) F, W, Sp. Prerequisite: Oral Medicine and Hospital Dentistry 120, 126, and 127. Lecture and Clinic 2 hours.

Chinn, Caswell and Staff

Course rotation through two five-week sections: clinical diagnosis — patient presentation entailing history-taking, examination, diagnosis, treatment, and follow-up; and medicine — introduction to interventional diagnostic and therapeutic procedures.


Caswell, Pitts, and Staff

Handling of patients is introduced by emphasizing history-taking, differential diagnosis, medical implications, and physical therapy laboratory in dental practice, and fundamentals of treatment. Classification, etiology, pathogenesis, diagnosis, and treatment of oral lesions occurring in the oral cavity are covered.

126. Oral Biology. (5) F. Prerequisite: Anatomy 118. Lecture 4 hours, Lab 4 hours.

Christie and Staff

This course covers the basic structure and function of the oral cavity, and the role of the oral cavity in health and disease.

127. Introduction to Oral Pathology. (3) Prerequisite: Oral Medicine and Hospital Dentistry 126. W, Lecture 2 hours, Lab 3 hours.

Greenspan, T. E. Daniels, Merrell

Course correlates clinical oral pathology with histologic changes. Emphasis is placed on the microscopic and laboratory interpretation of cellular, tissue, and chemical alterations.


Carles and Staff


Oral Diagnosis / Oral Medicine and Hospital Dentistry


Chinn, Caswell, and Staff

Clinical oral medicine involves the treatment of diseases of the oral cavity, including dental hygiene. Diagnosis and management of some common oral lesions are covered. Use of diagnostic aids and methods of treatment are emphasized.

170. Temporomandibular Joint Seminar. (1) F, W, Sp. Prerequisite: D.D.S. degree. With consent of instructor, fourth year students may take this course as an elective.

Taylor

Seminar series covering differential diagnostic techniques and treatment approach to temporomandibular joint diseases.


Christie (F), Savostin-Ashing (W, Sp)

Advanced study of the oral tissues, with emphasis on their histophysiological aspects.


L. Hansen and Staff

A seminar designed to acquaint postdoctoral students with current advances, techniques, trends, and developments in the field of oral pathology.

175A. Oral Immunology and Immunopathology. (0.4) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Two-quarter course.

J. Greenspan

Lectures and seminars on immunological mechanisms involved in oral diseases. Topics to be covered include the immunology of periodontal disease, oral microbial diseases, oral autoimmune disease, and discussions of the face of immunopathology and inflammation.


L. Hansen

Lectures and seminars on diseases of the oral regions. Disease entities are studied from a clinical and histopathological standpoint with emphasis on etiology.

179. Oral Medicine. (0.2-1) F, W, Sp. Prerequisite: D.D.S. degree. With consent of instructor, fourth year students may take this course as an elective. Due to patient commitment, the clinic, students, once selected, may not withdraw. Clinic 10-20 weeks.

Taylor

Participation in the Temporomandibular Joint Clinic applying knowledge of history-taking and differential diagnosis and utilizing such diagnostic techniques.

180A-B. Clinical Pathology Conference. (1-1.1) F, W, Sp. Prerequisite: Fourth year standing. Lecture 11 hours, Seminar 7.5 hours.

Staff

Clinical pathology conference; biology, diagnosis, and treatment of various oral lesions and associated patient problems. Some oral clinical problems are critically evaluated in current research advances. Specific medical knowledge is related to patient care.

181. Forensic Odontology. (1) Sp. Prerequisite: Fourth year standing and consent of instructor. Lecture 1 hour.

L. Hansen and Staff

Identification by means of dental characteristics, bone and teeth, as forensic odontology. Course includes discussions of identification procedures in single and multiple deaths, including homicides and mass disasters, forensic dental radiology, bite injury and bite marks, the medicolegal autopsy, fire research, and forensic anthropology.


Merrell

Advanced dental student participants in lecture-seminars, in which emphasis is placed on the diagnosis of oral disease correlating the history, clinical, operative, radiographic, laboratory, and histopathological findings.

183. Introduction to the Biological Sciences. (1) SS. Lecture, Laboratory and Demonstration 9 hours for three weeks.

Christie

Introduction to the biological sciences taught in the first year of dentistry: anatomy, biochemistry, and physiology. Course includes one-half day per week orientation to the campus community.


Silverman, Ware

Participation in the Oral Medicine Clinic: apply knowledge of history-taking and differential diagnosis and clinical techniques such as biopsy, cytology, and certain clinical pathology laboratory tests; interpret results, prescribe treatment and follow-up; hospital rounds and weekly seminar.

189.03. Advanced Clinical Clerkship in General Dentistry at UC. (1.5) F, W, Sp. Prerequisite: Four week standing and approval of the Clinic Review Committee.

Silverman, Ware

Students provide comprehensive dental care to patients and occasionally supervise assignment of staff in the medical and hospital environment. Students also attend seminars and conferences.


Laboratory Project in Oral Biology. (1-5) F, W, Sp. Prerequisite: Consent of instructor.

190. Lecture 1 hour, Lab 4 hours.

Staff

Lecture research project under direction of a member of the faculty with the approval of the chairman of the department.

206. Seminar in Oral Biology. (3) Sp. Prerequisite: Oral Biology 126 or equivalent. Lecture 1 hour, Lab 6 hours.

Staff

Principles and methods employed in studying oral tissues such as histochecry, autoradiography, localisation techniques, cytochemistry, and enzyme histochemistry will be presented.

207. Seminar in Oral Biology (1-4) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1-4 hours.

Silverman and Staff

A wide spectrum of selected topics related to oral biology are presented with emphasis on basic and applied research methodology, pertinence of problems, significance of findings, and critical evaluation of data.


Silverman

Considered advances in the field of histopathology. Application of newer techniques and concepts are extended to include correlations, oral cavity in health and disease. Etiology, diagnosis, and therapeutics are discussed.

208A. Oral Immunology and Immunopathology. (0.4) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Christie

Lectures and seminars on immunological mechanisms and their contribution to oral diseases. Topics to be covered include the immunology of periodontal disease, oral microbial diseases, oral autoimmune disease, and discussions of the interface of immunology and pathology.

209. Biological and Connective Tissue. (2) Sp. Prerequisite: Biochemistry 207 or consent of instructor. Lecture 2 hours.

A seminar course in connective tissue biology, concerned mainly with the development, differentiation, and pathology of connective tissues; includes such topics as regulatory controls of connective tissue macromolecules, fibrosis, wound healing, inflammation, tissue destruction, and selected genetic disorders.


Staff

A seminar series covering current advances in research in oral biology in a systematic manner. Current literature is critically reviewed by students under faculty supervision, or by faculty or guest lecturers.

250. Research. F, W, Sp. Prerequisite: Consent of instructor. Reading and conferences under the direction of a member of the staff.

256. Thesis. (0) F, W, Sp. Prerequisite: Advanced to candidacy and permission of the graduate advisor.

Staff

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

300. Practicum in Teaching. (1-4) F, W, Sp. Prerequisite: Consent of instructor.

Staff

Practice in teaching a course in oral biology under the supervision of an experienced faculty member.


Staff
A wide spectrum of selected topics related to oral biology are presented. A focus is placed on understanding basic and applied research methodology, pertinence of problems, significance of findings, and critical evaluation of data.

Lectures and seminars on diseases of the oral regions. Diseases treated are studied from a clinical and histopathological standpoint with emphasis on etiology and pathogenesis.

Participation in the Oral Medicine Clinic applying knowledge of history-taking and differential diagnosis; utilizing various diagnostic techniques such as biopsy, cytology, and certain clinical pathology laboratory tests; interpreting results, prescribing treatment and follow-up of hospital and outpatients; and weekly seminars.

Participation in the Temporomandibular Joint Clinic applying knowledge of history-taking and differential diagnosis; utilizes such diagnostic techniques as interocclusal X rays, occlusal analysis, and other specific joint tests; interprets results; prescribes treatment; and follows-up with patient reviews.

Oral Radiology

109.01. Oral Radiology. (0-1.5) SS, F, Prerequisite: Oral Radiology 121. Lab rotation 24 hours. Parks
A course in introral X ray technique, including instruction in the long cone paralleling method, and technique on skulls and mannequins. Objective of the course is to prepare the student for clinical experience during the diagnostic and a course rotation.

121. Radiographic Interpretation. (1) Sp. Lecture 1 hour. Parks
An introduction to the fundamentals of radiographic interpretation, some of the basic physics of X ray generation, and radiology biology.

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.

150. Oral Radiology for Dental Hygiene. (1/1-2) W. Lecture 1 1/2 hours. Parks
Course covers basically the same material as Oral Radiology 121, but is modified to meet the special needs of the dental hygienist.

159. Oral Radiology. (1) W. Lab 3 hours. Parks
A course in introral X ray technique including instruction in the long cone paralleling method and practice on mannequins and skulls.

Course offers, in addition to intraoral technique, instruction and experience in panoramic radiography.

Continuation of Oral Radiology 121 and 131 in a seminar teaching format.

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

Oral Surgery

Students learn to recognize and treat common emergencies, perform routine exodontia and minor oral surgical procedures, assist in major procedure in operating room setting; utilize common techniques of pain and anxiety control, admit, work-up, discharge hospital patients; perform cardiopulmonary resuscitation.

120. Local Anesthesia. (1) Sp. Khosla
Course covers local anesthesia technique as it pertains to the dentition and oral cavity.

130A. Oral Surgery. (1) F, W. Prerequisite: Anatomy 117A-B and Microbiology 126A-B. Lecture 1 hour. N. Gordon
An introduction to the basic principles of exodontia, post-operative care, hemostasis control, and medical emergencies.

130B. Oral Surgery. (1) F. Prerequisite: Anatomy 117A-B and Microbiology 126A-B. Lecture 1 hour. N. Gordon
A didactic course outlining the basic principles of removal of unerupted teeth, pre-surgical prophylaxis, prescription writing, maxillary sinus involvement, tooth transplantation, wound healing, referrals and consultations.

130C. Oral Surgery. (1) W. Prerequisite: Anatomy 117A-B and Microbiology 126A-B. Lecture 1 hour. R. A. Smith
A didactic course outlining the principles of pain control with nitrous oxide and I.V. sedation; management of medically compromised patient and medical emergencies, postoperative problems. Parks and Ward.

Procedural skills and academic knowledge of general dentistry should be familiar with; includes the treatment of cysts, infection, developmental deformities of the jaws and salivary glands, duct diseases, and tumors.

132. Medical Evaluation, Medical Emergencies, and Parenteral Administration of Drugs. (1/2) F. R. A. Smith

171. Applied Surgical Anatomy. (1) F, W. Sp. Prerequisite: Limited to interns and residents. Lab 3 hours. Courage
Relationships of gross anatomical structures on 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.

173. Surgical Orthodontics. (1) F, W. Sp. Prerequisite: Enrollment in oral surgery residency program. Lecture 1 hour. Ware
Orthodontic and oral surgery patients will participate in evaluating and defining treatment problems in relationship to facial and occlusal deformities which may require combined therapy. Review and presentation of previously treated patients and pertinent literature will be included.

175. Oral Surgery. (13) Su. Prerequisite: Limited to oral surgery interns. Hospital and Clinic 40 hours. Ware and Staff
Principles of surgery and local anesthesia as related to the mouth and clinical operations on patients.

175.01A-B. Oral Surgery. (2-7-2) F, W. Prerequisite: Limited to oral surgery residents. Lecture-Seminar 6 hours, Clinic 0-15 hours. Parks
Continuation of Oral Surgery 175.

175.02. Oral Surgery. (15) Su. Prerequisite: Limited to oral surgery residents. Seminar 2 hours, Hospital and Clinic 40 hours. Ware and Staff
Continuation of Oral Surgery 175.01A-B.

175.03. Oral Surgery. (13) F. Prerequisite: Limited to oral surgery residents. Hospital and Clinic 40 hours. Ware and Staff
Hospital procedures, ward rounds, and clinical practice in administration of drugs.

175.03C. Oral Surgery. (10-10) W. Sp. Prerequisite: Limited to oral surgery residents. Lecture 2 hours. Hospitals and Clinics of NAACOS. Ware and Staff
Continuation of Oral Surgery 175.03 with the addition of surgery of the jaws for correction of such facial deformities as proplif, sphenoplasty, and retrognathia. Instruction in temporomandibular joint surgery.

175.05. Oral Surgery. (13) Su. Prerequisite: Oral Surgery 175.01A-B and 175.02A. Limited to oral surgery residents. Hospital and Clinic 40 hours. Ware and Staff
Continuation of clinical oral surgery. Certain periods each week devoted to supervised instruction of undergraduate students.


Continuation of Oral Surgery 175.05.

Under oral surgery office conditions, and under immediate supervision of the staff, residents will be responsible for care and management of the ambulatory patient who is undergoing an oral surgery procedure under ambulatory anesthesia.

An elective didactic and demonstration course with practice sessions to insure the student's knowledge and capability of managing the psychomotor skills of cardiopulmonary resuscitation.

189.01. Advanced Oral Surgery Clinic. (0-9) Su. Prerequisite: Fourth year standing and consent of Instructor. Clinic Variable. Ware and Staff
Additional clinical experience in oral surgery.

189.02. Hospital Oral Surgery. (0-3) F, W, Sp. Prerequisite: Hospital Surgery 109, consent of instructor and approval of Clinic Review Committee. Clinic and Seminar at VA. Ware, Courage Involves supervised limited experience in oral surgery including assisting and performing oral surgical procedures, and aspects of premedication as related to the ambulatory patient; orientation in hospital decorum and operating room procedures.

189.03. Hospital Oral Surgery. (0-3) F, W, Sp. Prerequisite: Hospital Surgery 109, consent of instructor and approval of Clinic Review Committee. Clinic and Seminar at SFGH. Ware and Staff
Provides limited experience in hospital oral surgery including assisting and performing oral surgical procedures, and aspects of premedication as related to the ambulatory patient; orientation in hospital decorum and operating room procedures.

189.04. Advanced Clinical Clerkship in Oral Surgery at UC and SFGH. (1/1w) per week F, W, Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee. Ware, Courage, Khosla
Students participate in oral surgery care of hospital patients and outpatients. They also attend seminars and lectures.

199. Laboratory Project In Oral Surgery. (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.

Oral Surgery 125
Course is designed to teach the dental intern exten-
odontia procedures under close supervision in the or-
dental and orthodontic problems. Each intern takes re-
care of the oral surgery patient including preopera-
reviewing, surgery, planning, and post-

tive care.

Orofacial Anomalies

170. Orofacial Anomalies. (2) F.

Lawson

Normal development of speech, consideration of speech patterns, habits, and defects as related to dental and oral problems.

171. Diagnosis and Treatment of Orofacial Anomalies. (2) F, W, Sp. Lecture 1 hour, Seminar and Clinic 3 hours.

Harvard, Chierici

Diagnostic, preventive, and corrective methods relative to patients with congenital malformations of the orofacial region are discussed.

170B-C. Abnormal Facial Growth. (2W, Sp. Seminar 2 hours.

Lawson

Diagnosis of orofacial malformations. Emphasis is placed on the interrelationship of morphology and physi-

ology.


Lawson, Harvold

Normal development of speech, introduction to the acous-
tic and linguistic elements. Consideration of the speech patterns, habits, and defects related to dental and oral problems are discussed. Instruction in diagnosis and preventive and corrective treatment methods is given in the clinic.

180. Special Study for Advanced Undergraduates, (1) F, W, Sp. Prerequisite: Fourth year standing or consent of instructor of clinic. Seminar and Clinic 3 hours.

Harvard

Instruction in biomechanical technique and meth-
odology is given in connection with a selected research project.


Lawson, Chierici and Staff

A clinical survey, a clinical experiment, or an animal experiment is designed and analyzed.

401. Orofacial Prosthetics. (1-3) F, Prerequisite: D.0.S. degree or equivalent. Seminar and Lab 3-9 hours.

Chierici and Staff

Prosthetic habilitation of the patient with orofacial malformations includes principles and techniques of construction of obturators, speech ap-
pliances, and retention bridges.

406A-B.C. Orofacial Orthopedica. (1-3, 1-3) F, W, Sp. Prerequisite: D.0.S. degree or equivalent. Seminar, Lab and Clinic 3-9 hours.

Harvard, Chierici and Staff

Discussion of diagnostic techniques used in or-
odontics, limitations of orthodontic treatment, and

principles of treatment with edgewise appliance.


E. West and Staff

A discussion of recognition, etiology, and prin-
ciples of orthodontics for the dental hygienist.

170A-B. Fundamentals of Orthodontics. (3-2) F, W, Lecture 3 hours 2 hours W.

E. West

Classification etiology, and diagnosis of maloc-
clusion. Study of the dentition and the relationships of
dental and cranial structures.

170C. Fundamentals of Orthodontics. (2) Sp. Prereq-

uisite: Orthodontics 170A-B.

E. West

Continuation of Orthodontics 170A-B.

171B-C. Orthodontics in Periodontic Practice. (1-1) F, W, Sp. Prerequisite: Consent of instructor and enroll-
ment in a postdoctoral specialty program. Lecture 1 hour.

E. West

Course includes orthodontic principles and technics that are applicable in a periodontic practice.


Mathews

Research methods in the study of growth with find-
ings related to sites of growth, serial development of

pattern, and factors influencing facial growth.

171.02. Biology of Dentofacial Development. (2) Sp. Prerequisite: Orthodontics 171.01 A-B.C.

Mathews

Embryology, growth, biology of calci-
tilage and bone as applied to dentofacial develop-
ment of newborn babies, and physiology of tooth

movement.

171A-S-C-B. Orthodontics in Pedodontic Practice. (1-11) F, W, Sp. Prerequisite: Consent of instructor and

enrollment in a postdoctoral specialty program. Lecture 1 hour.

R. M. Meyer

Course includes orthodontic principles and technics that are applicable in a pedodontics prac-
tice.

171A-B-C. Orthodontics in Pedodontic Practice. (1-11) F, W, Sp. Prerequisite: Orthodontics 171.03A-

B-C. Lecture 1 hour.

R. M. Meyer

Continuation of Orthodontics 171.03A-B-C.

172A. Cephalometrics. (2) F, Seminar 2 hours.

Poulin

Use of lateral headfilms; reliability of landmarks

applications in dentistry. Technics of tracing, eval-
ua
tion of relationships, and of superpositioning are
demolished and illustrated.

172B. Cephalometrics. (2) W, Seminar 2 hours.

Poulin

Evaluation of various analyses used in orthodontic diagnosis including growth changes in serial studies.


W. Watson

Course describes growth concepts in the predic-
tion of facial growth as it applies to orthodontic treat-
ment.

172.01B-C. Introduction to Orthodontic Research. (2-1) W, Sp. Lecture 2 hours 1 hour W.

Baumrind

Introduction to design and analysis of clinical in-
vestigations. Special emphasis placed on critical

reviews of selected scientific literature in terms of

appropriate design, hypothesis testing, and

generalization.

172A-B-C. Supervised Orthodontic Research. (2-2) F, W, Sp. Prerequisite: 172.01B-C.

Baumrind

Analysis in clinical investigation including experi-
ences in hypothesis generation, sampling, measurement, data acquisition, and data analysis.


Poulin

Orthodontic and oral surgery residents will par-

ticipate in evaluating and defining treatment possibilities for patients with facial and occlusal deformities which may result individually or combinedly. Review and presentation of previously treated pa-
tients and pertinent literature will be included.

173A-B-C. Orthodontic Diagnosis. (1-1-1) F, W, Sp. Evalu-

ation and treatment planning of various types of malocclusion.


Baumrind

Research project and preparation of thesis.


Poulin and Staff

Staff seminar.

173.04. Treatment Planning. (3) Seminar 3 hours.

R. M. Meyer

Staff seminar.

173.05. Special Study. (1) Seminar. Research 3 hours.

Baumrind

Research project and preparation of thesis.

173.06. Treatment Evaluation. (3) Seminar 5 hours.

E. West

Evaluation of orthodontic treatment and prog-

nosed for stability of results of treatment.

174A-B. Biomechanics. (2-1) F, W. Lecture 2 hours 1 hour W.

Righi

Development of force systems and advanced or-
thodontic techniques.

174A-B. Primary and Mixed Dentition Diagnosis and Treatment. (1-1) SS 1, SS 2. Prerequisite: Enroll-
ment in postgraduate specialty program. Lecture 2 hours for six weeks.

R. M. Meyer

Orthodontics, primary, and mixed dentition is de-

sign to provide diagnostic information and treat-
ment planning for malocclusions in the primary and

mixed dentition periods of dental development.

174.02. Guest Lectures. (1) SS. Prerequisite: Enroll-

ment in postgraduate specialty program. Lecture 2 hours for six weeks.

Poulin

Orthodontics
199. Laboratory Project in Orthodontics. (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.

Orthopaedic Surgery

First-Year Coordinated Instruction — Medicine 131A-BC. Lecture-demonstrations and section work devoted to the supervised examination of patients. Core Clerkship — Surgery 110 and 111 includes seven to eight orthopaedic presentations, and outpatient clinic assignments. Students are given instruction in methods of examination of patients with musculoskeletal disorders with emphasis on diagnosis and principles of treatment.

140.01. Orthopaedic Surgery Clinical Clerkship at UC, SFGH and VA. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Students, assigned to inpatient and outpatient services, receive instruction and experience in examination and treatment of patients. Assistance in surgery and use of treatment modalities is required. Clinical demonstrations, seminars, and conferences form the basis for didactic instruction.

140.02 Orthopaedic Surgery Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Orthopaedic surgery clinic clerkships are offered in off-campus hospitals approved by the chairman of the department and the Dean.


402. Seminars in Physiology of Musculoskeletal System. (1) F. Seminars cover connective tissue metabolism; muscle, bone, and joint physiology; preoperative and postoperative management of patients; wound infections; microbiology; and surgical principles.

403. Demonstrations in Gross and Functional Anatomy. (1) F, W, Sp. UC Chapman Demonstrations include lectures by students and faculty on gross and functional anatomy, laboratory dissections of cadaver material, and demonstrations of surgical approaches.

404. Seminar in Orthopaedic Literature. (1) F, W, Sp. Residents at UC, RDMC, SFGH, SSF, UC and VA. UC Chapman Seminars are student presentations on selected orthopaedic surgery subjects featuring historical review complete with bibliography. They are moderated by an assigned faculty member.

406. Conference in Rheumatoid Arthritis. (1) F, W, Sp. UC W. Murray Clinical instruction in the care and management of orthopaedic problems in rheumatoid arthritis and allied diseases. Cases are presented by residents to attending staff and rheumatology consultants.

407. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. Includes seminar presentation of problem cases by residents for consideration of diagnosis, treatment, and discussion by the attending staff.

408. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. SF/GH Boliv St. Louis. Selected problems are illustrated by cases treated or under treatment. Cases are presented by the resident staff and discussed by members of the attendant staff.

409. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. VA M. Murray Conference with emphasis on children's problems in which residents make case presentations of inpatients for review and for consideration of diagnosis and therapeutic plan.

411. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. VA M. Murray Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.

412. Orthopaedic Clinical Seminars. (1 Su, F, W, Sp. CHMC Barer, H. T. Smith, W. Jackson 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.

413. Medical Staff Conference. (1) Su, F, W, Sp. UC W. Murray Residents prepare and present case histories of inpatients and outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up and problem cases (consultations).

450. Clinical Orthopaedic Seminars. (1½ per week) Su, F, W, Sp. UC W. Murray Clinical instruction in the care and management of orthopaedic problems in rheumatoid arthritis and allied diseases. Cases are presented by residents to attending staff and rheumatology consultants.

457. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. Includes seminar presentation of problem cases by residents for consideration of diagnosis, treatment, and discussion by the attending staff.

458. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. SF/GH Boliv St. Louis. Selected problems are illustrated by cases treated or under treatment. Cases are presented by the resident staff and discussed by members of the attendant staff.

459. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. VA M. Murray Conference with emphasis on children's problems in which residents make case presentations of inpatients for review and for consideration of diagnosis and therapeutic plan.

461. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. VA M. Murray Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.

462. Orthopaedic Clinical Seminars. (1 Su, F, W, Sp. CHMC Barer, H. T. Smith, W. Jackson 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.

463. Medical Staff Conference. (1) Su, F, W, Sp. UC W. Murray Residents prepare and present case histories of inpatients and outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up and problem cases (consultations).

465. Clinical Orthopaedic Seminars. (1½ per week) Su, F, W, Sp. UC W. Murray Clinical instruction in the care and management of orthopaedic problems in rheumatoid arthritis and allied diseases. Cases are presented by residents to attending staff and rheumatology consultants.

501. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. Includes seminar presentation of problem cases by residents for consideration of diagnosis, treatment, and discussion by the attending staff.

502. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. SF/GH Boliv St. Louis. Selected problems are illustrated by cases treated or under treatment. Cases are presented by the resident staff and discussed by members of the attendant staff.

503. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. VA M. Murray Conference with emphasis on children's problems in which residents make case presentations of inpatients for review and for consideration of diagnosis and therapeutic plan.

504. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. VA M. Murray Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.

506. Orthopaedic Clinical Seminars. (1 Su, F, W, Sp. CHMC Barer, H. T. Smith, W. Jackson 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.

507. Medical Staff Conference. (1) Su, F, W, Sp. UC W. Murray Residents prepare and present case histories of inpatients and outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up and problem cases (consultations).

550. Clinical Orthopaedic Seminars. (1½ per week) Su, F, W, Sp. UC W. Murray Clinical instruction in the care and management of orthopaedic problems in rheumatoid arthritis and allied diseases. Cases are presented by residents to attending staff and rheumatology consultants.

557. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. Includes seminar presentation of problem cases by residents for consideration of diagnosis, treatment, and discussion by the attending staff.

558. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. SF/GH Boliv St. Louis. Selected problems are illustrated by cases treated or under treatment. Cases are presented by the resident staff and discussed by members of the attendant staff.

559. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. VA M. Murray Conference with emphasis on children's problems in which residents make case presentations of inpatients for review and for consideration of diagnosis and therapeutic plan.

561. Orthopaedic Surgical Conference. (1 Su, F, W, Sp. VA M. Murray Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.

562. Orthopaedic Clinical Seminars. (1 Su, F, W, Sp. CHMC Barer, H. T. Smith, W. Jackson 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.

563. Medical Staff Conference. (1) Su, F, W, Sp. UC W. Murray Residents prepare and present case histories of inpatients and outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up and problem cases (consultations).

Otolaryngology

First-Year Coordinated Instruction — Medicine 131 A-B-C. Lecture-demonstrations and section work devoted to the supervised examination of patients.

Core Clerkship — Surgery 110 and 111 includes 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 ward and clinic patients with otolaryngological surgical diseases.

140.01. Clinical Otolaryngology Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B and Surgery 110. 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 at the following hospitals: UC, SFGH, VA, RMHC and L.

140.02. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B and Surgery 110. Clinical clerkships in off-campus hospitals approved by the chairman of the department and the Dean.
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.


Crumley 

Lectures cover the anatomical, physiological, and clinical aspects of otoaryngology.

401. Gross Anatomy of the Head and Neck. (1) F. 

Crumley 

A formal course in the anatomy of the head and neck.


Crumley 

Cadarver dissection and demonstrations given by members of the staff.

403. Ear, Nose, and Throat Histology and Pathology. (1/2) F, W. 

R. W. 

A review of ear, nose, and throat pathology from currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories.


Boles 

Weekly seminars are held with discussion of current problems concerning diagnosis and management of patients with references to current literature, modern theory, and controversial aspects.


UC Owens 

The seminar includes psychophysical background of audiometry, basic and advanced tests of hearing, functional hearing loss, hearing aids, testing of children, aural rehabilitation, and speech and hearing problems of children and adults.


Crumley 

Conference includes presentation of patients, study of histories, and discussion of the treatment of the patient in light of modern progress in the field.


Boles 

A review of all gross and microscopic cases conducted by the staff members in conjunction with the Department of Pathology.


J. J. Townsend 

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 staff instruction.


Crumley 

Review of surgical anatomy and dissection of fresh temporal bones conducted by members of the staff.


J. R. Ross 

Tumor cases are presented for diagnosis and recommendations for treatment.


J. R. Ross 

Combined Audiology and Otoaryngology Staff Conference where all patients evaluated for hearing problems are presented, and diagnosis and treatment recommendations are made.


J. R. Ross 

A review of all current ear, nose, and throat literature.


C. McCoy, SFGH Crumley, UC Boles, VA Furl, VMC Bell 

Residents, 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, angiometry, vestibular testing, and consultation. Senior resident has certain administrative, teaching, and clinical responsibilities.


J. R. Ross 

Residents, 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, angiometry, vestibular testing, and consultation. Officer-of-the-Day duties. Senior resident has certain administrative, teaching, and clinical responsibilities.

452. Tecomus Conference. (1) F, W, Sp. All residents except at VA. 

Crumley 

A study of the techniques of endoscopy and some practical laboratory study included and cadaver work.


Boles 

Residents, in off-campus hospital for surgical training to study Board requirements, are responsible under supervision, for patient care in wards and clinic and assistance at operations. Diagnosis and treatment of surgical conditions in the head and neck area are stressed.


Crumley 

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. Residents assist with patient-care assignments in the Ophthalmology Service.

Parasitology

135. Medical Parasitology. (3) W. Lecture 2 hours, Lab demonstration 2 hours. 

Heyneman and Staff 

An introduction to the protozoa and helminths that parasitize man. Parasite ecology and disease epidemiology, clinical and diagnostic aspects of parasitic diseases and their treatment are considered in lecture and laboratory. Emphasis in the laboratory is on demonstration.

Pathology

101. General Pathology. (4) § Sp. Prerequisite: Substantive courses in biochemistry, physiology, histology, microbiology (first quarter, concurrent) or an equivalent course in preparation of the student. Lecture 2 hours, Lab Seminar 4 hours.

102. Systemic Pathology. (6) § F. Prerequisite: Anatomy 103, Medicine 132A, Microbiology 100A and 100B, Pathology 101 and Physiology 101 or concurrent enrollment. Lecture 3 hours, Lab Seminar 6 hours.

103. Renal Biopsy Conference. (1/2) W. Sp. Prerequisite: Pathology 101. Lecture 1 hour.

Biological study of clinical and pathological aspects of current cases of renal disease. New material is presented each quarter during an academic year, therefore course may be repeated for credit.


Boles 

Presentation of selected current cases seen in the hospital pathology laboratory. Discussion of pathology findings and correlation to laboratory, physical findings, radiologic findings, and treatment.

108. Neuropathology. (2) W. Prerequisite: Pathology 102. Third or fourth year standing. Lecture and Seminar 2 hours.

J. J. Townsend 

Emphasis is placed on clinicopathologic correlation of neurological diseases by means of study of gross and microscopic material and participation in conferences.


Boles 

Studies in pathology at other institutions with the approval of the chairman of the department.

110. Surgery 110. Consent of instructor.

UC Rambo, VA S. H. Cho 

Students participate in the work-up of autopsies and surgical specimens actively involved, given responsibility, and work closely with the faculty and house staff. Preparation and participation in departmental conferences.

150.05. Research in Pathology. (1/2) Sp. 

F, W, Sp. Prerequisite: Consent of instructor and chairman of the department.

Biological research project under direction of a member of the faculty.

170.01. Clinical Cytology. (3) Sp. Prerequisite: Anatomy 107.

Boles 

Lectures on basic fundamentals of cytology, normal cells, malignant cells, abnormal nonmalignant cells, collection, and preparation methods. Microscopic examination of specimen and correlation of cellular and tissue pathology with colposcopic and clinical findings, examination of the patient.

170.02. Renal Biopsy Conference. (1) W. Sp. Prerequisite: Pathology 101. Lecture 1 hour.

Biological study of clinical and pathological aspects of current cases of renal disease. New material is presented each quarter during an academic year, therefore course may be repeated for credit.


Biological study of selected current cases seen in the hospital pathology laboratory. Discussion of pathology findings and correlation to laboratory, physical findings, radiologic findings, and treatment.

170.05. Neuropathology. (2) W. Prerequisite: Pathology 102. Third or fourth year standing. Lecture and Seminar 2 hours.

Biological study of neurological diseases by means of study of gross and microscopic material and participation in conferences.

170.08. Studies in Pathology. (1-5) F, W, Sp. Prerequisite: Consent of instructor and chairman of the department.

Biological study of pathology at other institutions with the approval of the chairman of the department.

180.01. Pathology. (3) F. Prerequisite: Anatomy 118. Lecture 3 hours.

M. L. Goldberg and Staff 

This course is identical to the lecture portion of Pathology 126. Elective in the dental hygiene curriculum.

180.02. Clinical Clerkship. (1/2) Su, F, W. Prerequisite: Pathology 101 and 109. Lecture 2 hours.

Biological study of selected current cases seen in the hospital pathology laboratory. Discussion of pathology findings and correlation to laboratory, physical findings, radiologic findings, and treatment.

180.03. Surgical Pathology and Post-Mortem Examinations at SFGH. (1/2) Su, F, W. Prerequisite: Pathology 102 and consent of instructor.

Biological study of surgical and post mortem examinations at SFGH. Emphasis on surgical pathology, histology, microbiology (first quarter, concurrent) or an introduction to the study of parasites and their treatment in the laboratory. Emphasis in the laboratory is on demonstration.
209. Applied Pathology. (3) W. Prerequisite: Microbiology 128A-B and Pathology 126 or equiv.
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 regularly review current literature in the field, under faculty supervision.

J. Greenspan
Faculty, members and visiting professors discuss recent developments in diagnosis and research in pathology.

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

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

400. Pathology Staff Seminars. (1) F, W, Sp. Interns and residents.
R. Rambo
Faculty members and visiting professors discuss recent developments in diagnosis and research in pathology.

401. Special Pathology Seminars. (Units to be arranged) Su, F, W, Sp. Interns and residents.
R. Rambo
Seminars focusing upon the pathology of special areas of the body are conducted by specialists in the area under discussion. Course emphasizes correlation between the clinical manifestations of the disease and the gross and microscopic findings.

R. Rambo, SFGH, UC McKay, Margaretten
Students, under supervision, pursue original investigation in pathology and allied subjects. Investigators review the literature, make observations and collect data correlating physiological with pathological concepts. They are encouraged to make original contributions.

SFGH McKay, Margaretten
Conference includes the collection of data and materials, summary of histories, and citation of pertinent literature by faculty. Residents participate in clinicopathological conferences where emphasis is placed on the correlation of clinical manifestations of disease with clinical laboratory and autopsy findings.

SFGH, UC, VA Rambo
Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature.

R. Rambo, SFGH, UC, V.A. Rambo
Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature.

Pediatrics

100. Medical Genetics. (2) Lecture 2 hours.
C. Epstein
Basic aspects of human genetics are presented in a context relevant to the diagnosis, treatment, and counseling of genetic disorders and congenital malformations. Emphasis is placed on the application of genetic knowledge to actual clinical problems.

110. Required Clerkship in Pediatrics at UC, SFGH, C and L. (1.5 per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences.
R. Grumbach, M. Grossman
Practical experience in the ward, newborn nursery and outpatient clinics with emphasis on case assignments. Teaching and supervision by attending and resident staff. Required seminars cover aspects of pediatrics, infectious diseases, and child psychiatry.

140.01. Advanced Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach
Advanced clerkship including: Normal newborn nursery and IC Nursery; OPD: Acute Care Unit; Inpatient at UC; OPD at SFGH: Outpatient clinics at L, Inpatient and outpatient at KC; Inpatient and outpatient at CHMC; Inpatient and outpatient at NMCH.

140.01A. Advanced Clinical Clerkship - Inpatient at UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor.
R. Grumbach
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01B. Advanced Clinical Clerkship - Outpatient at SFGH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor.
R. Grumbach
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01C. Advanced Clinical Clerkship - Outpatient at L. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach, J. Stewart
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01D. Advanced Clinical Clerkship - Outpatient at CHMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach, G. Gersen
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01E. Advanced Clinical Clerkship - Inpatient at CHMC. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01F. Advanced Clinical Clerkship - Outpatient at K. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor.
R. Grumbach
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01G. Advanced Clinical Clerkship - Inpatient at K. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach, S. Robinson
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01H. Advanced Clinical Clerkship - Outpatient at NMCH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach, J. Hayes
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01I. Advanced Clinical Clerkship - Outpatient at NMCH. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach, J. Hayes
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.01J. Advanced Clinical Clerkship - Inpatient at Moffitt Nursery. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach, J. Hayes
Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend special conferences for discussion of patients.

140.02. Off-Campus Clinical Clerkship. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Grumbach
Clinical clerkship in off-campus hospitals as approved by the chairman of the department and the Dean.

R. Nilsson
Working with a pediatric house staff and pediatric nurse practitioner team and under the supervision of the attending pediatric clerk, provides primary care and health supervision responsibilities for selected well and acutely ill children in a clinic setting.

140.04. Pediatric Cardiology. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
A. Rudolph
Experience in cardiac evaluation and treatment including clinical work-up in the ward and clinic, cardiac catheterization, angiography, children's electrocardiograph, surgical management, and postoperative care.

140.04A. Cardiology Private Practice. (1.0 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
S. Robinson
Experience in clinical evaluation of children with cardiac abnormalities in a private office. Setting includes private practice, physical examination, pediatric catheterization, echocardiogram and any other procedures necessary for diagnosis.

140.05. Pediatric Private Practice. (1.0 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Open to UCSF students only.
L. F. St. Leger
Working experience with a pediatrician on the clinical faculty as the pediatrician sees patients in the office and in the hospital. Student may select time in single group, list or group subspecialty practice, or a combination of these.

140.06. Adolescent Medicine. (1.5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
D. Gareis
Clinical clerkship in adolescent medicine with emphasis on outpatient clinical experience in a wide range of health problems of the adolescent.

J. Granoff
Combined experience in pediatrics and internal medicine with exposure to management of usual and unusual infections occurring in a high-risk rural population. Daily conferences and rounds are held with hospital-based infectious disease consultants. Work in the clinical microbiology laboratory may also be arranged.

140.08. Ambulatory Pediatric Clerkship at MZ. (1.5 per week) F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.
R. Ballard, D. Bergman
Students participate as members of physician teams in the ambulatory pediatric program with Children and Youth Project. Night call includes pediatric E.R. and inpatient experience. Students will follow patients from their team on the inpatient service.

Berg
Supervised participation in clinical activities, both inpatient and outpatient, and all regularly scheduled conferences at the Child Neurology Division. Study of the developing nervous system and diseases of the nervous system affecting infants, children, and adolescents.

134.10. Pediatric Hematology and Oncology. (1.5% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Open to UCSF students only. Clinical and management aspects of UC, SFCH, and HMHC. Pursuit of special interests in the clinic or laboratory is encouraged.

134.11. Pediatric Cardiology at CHMC. (1% per week) Su, W, F, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Higashino Students participate in clinical experience including outpatient evaluation, instruction in the noninvasive methods of diagnosis, care of ward medical and surgical cardiac patients, cardiology laboratory and cardiovascular conferences. Emphasis is on the physiological principles of diagnosis and management.


134.15. Pediatric Oncology. (1% per week) F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Ablin, Kushner, Zoger Participation in management of patients with solid tumors and leukemia. Clinical experience is provided at UCSD Children's Hospital on an inpatient and outpatient basis. Special emphasis on psychosocial problems; supervised reading and discussion.

134.16. Pediatric Nephrology. (1% per week) Su, W, F, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Holliday, Piel, Potter Introduction to general nephrology. Clinical experience in pediatric nephrology with children having nutritional problems, ESRD, and chronic renal failure. Potential nephrology care conferences, new cases from the nursery, and cases requiring TPN. Research projects may be arranged with instructors.

134.17. Genetic Clinical. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. C. Epstein, B. Haller Management of newborns and adults with hereditary (including cytogenetic) 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.

134.19. Externship in Inpatient Pediatrics at C. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Grammouna Students participate in patient care in close association with house staff, fellows, and senior staff in conferences conducted by senior staff.

134.20. Externship in Ambulatory Pediatrics at C. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Grammouna Students participate in comprehensive care of children. Experience with various illnesses is provided in appropriate specialty clinics. A wide variety of child care problems is seen during visits to offices of senior pediatricians participating in the program.

134.21. Pediatric Allergy. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Deamer Diagnosis and treatment of asthma, allergic rhinitis, and hay fever. Attendance at Pediatric Allergy Clinic daily. Participation in activities of allergy trainees.

134.22. Ambulatory Pediatrics. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Cohn Clinical experience in a busy community hospital. Ambulatory Pediatric Clinic to prepare the student for day, part-time responsibilities of pediatric or family practitioners. Teaching of patients in well and ill general pediatrics, well baby, preventive medicine, and pediatrics with reference to the literature, laboratory work and special studies. Faculty members and consultant staff from other departments as well as other universities discuss recent developments in their respective fields.

134.23. Neonatal Pediatrics at C. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. Students participate in the care of infants in the intensive care nursery in close association with the house staff, fellows, and senior staff and in conferences conducted by senior staff.

134.24. Neonatology at MZ. (1% per week) F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Consent of instructor. R. Ballard Experience in normal newborn and intensive care nurseries, according to student's interests and skills. Students participate in the care of transport infants, and on night call.


150.04. Research in Pediatrics. (1% per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach and Staff Student research projects under guidance of faculty members. Students may initiate or continue research programs under supervision of faculty members.

150.05. Clinical Correlation in Pediatrics. (2% per week) Su, F, W, Sp. Grumbach Students prepare case presentations weekly from patients on the pediatrics wards. Course correlates patients' problems with work in the required curriculum. Experience on the ward in the clinical setting.

150.06. Supervised Study in Pediatrics. (1% per week) F, W, Sp. Prerequisite: Consent of instructor. Grumbach and Staff Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

150.09. Laboratory Project in Pediatrics. (1% per week) F, W, Sp. Prerequisite: Consent of instructor. Grumbach and Staff A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

400. Pediatric Staff Conference. (1% per week) Su, F, W, Sp. In- terns and residents. Conference includes house staff preparation and presentation of patient case histories with reference to the literature, laboratory work and special studies. Faculty members and consultant staff from other departments as well as other universities discuss recent developments in their respective fields.

401. Pediatric-Neurology Conferences. (1% per week) Su, F, W, Sp. Residents and interns. Conferences include review and discussion of recent X ray studies of pediatric cases in the wards and outpatient service.

402. Pediatric Clinical Seminar. (1% per week) Su, F, W, Sp. Grumbach Seminar includes review and discussion of selected cases of unusual interest, reports on special topics with review of recent literature, and clinicopathological conferences on pediatric cases.

450. Clinical Pediatrics. (1% per week) Su, F, W, Sp. Interns and residents. Grumbach Residents, under supervision, are responsible for patient care in the wards and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment. Emphasis is on diagnosis and management of neonatal, infectious, and respiratory diseases.

451. Clinical Pediatrics. (1% per week) Su, F, W, Sp. SFGM H. Grossman Residents, under supervision, are responsible for patient care in the wards, communicable disease section, and outpatient clinic, including physical examination, laboratory tests, diagnosis, and treatment. Emphasis is on diagnosis and management of infecious disease, and pediatric emergencies.

462. Clinical Primary Care. (1% per week) Su, F, W, Sp. Prerequisite: Refer to Ambulatory and Community Medicine 463. Grumbach, Dower Interns in the Primary Care Track of Pediatrics are responsible for patient care in a multispecialty primary care clinic. Other rotations are selected from a regular class of clinical classes such as Dermatology, Otolaryngology.

463. Clinical Primary Care. (1% per week) Su, F, W, Sp. Prerequisite: Refer to Ambulatory and Community Medicine 463. Grumbach, Dower, Dower Interns in the Primary Care Track of Pediatrics are responsible for patient care in a multispecialty primary care clinic. Other rotations are selected from a regular class of clinical classes such as Dermatology, Otolaryngology.

490. Clinical Pediatrics at SFGH. (1% per week) Su, F, W, Sp. SFGM H. Grossman Interns rotate through newborn nursery, pediatric wards and clinic, critical care, and emergency ward and emergency room. They are responsible for the care of patients, under the direction of the attending staff, including physical examination, laboratory tests, and consultation.


Pedodontics


Clinical diagnosis, plan of treatment, dietary analysis and counseling, fabrication of appliances for and treatment of children requiring tooth guidance, space management, and preventive orthodontics. Units assigned upon completion of clinical requirements.

109.01. Clinical Pedodontics Rotation. (0-6% per week) F, W, Sp. Prerequisite: Third year standing. Clinical rotation 12 hours. Grumbach, Dower, M. Morris and Staff. Introduction to the examination of the child pa...
tient, treatment planning, prevention instruction, dietary analysis, and the performance of operative procedures. Proper management of the child patient will be stressful.

109.02. Pedodontics Rotation. (0-2) F, W, Sp. Prerequisite: Fourth year standing. Clinic rotation 60 hours. M. Morris and Staff

Course is broken up into two components: Mondays, Tuesdays and Wednesdays will be spent at the Dental Annex. Thursdays and Fridays at the Mobile Dental Clinic in Stockton.


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.

170.01A-B-C-D. Clinical Pedodontics. (0-3, 0-3, 0-3-0) F, W, Sp. SS. Variable. M. Morris and Staff


170.02A-B-C. Clinical Pedodontics. (3.4, 3.4, 3.4) F, W, Sp. Prerequisite: Pedodontics 170.01A-B-C. Clinic 9-12 hours. M. Morris and Staff

Continuation of Pedodontics 170.01A-B-C.


An overview of current and classical literature in pedodontics and allied specialty areas with review and discussion of each reading assignment to prepare the student to evaluate dental literature.

171.02A-B-C. Pedodontic Seminar. (2.3, 2.3, 2.3) F, W, Sp. Prerequisite: Pedodontics 171.01A-B-C. Seminar 2-3 hours. M. Morris and Staff

Continuation of Pedodontics 171.01A-B-C.

172.A-B-C. Clinic and Seminar. (2-2.2) F, W, Sp. Clinic and Seminar 60 hours. M. Morris and Staff

Hospital procedures: admitting, orders, histories, charts, laboratory tests, reports, and administrative considerations. Organizing and equipping the hospital operating room for comprehensive dental care of patients under general anesthesia. Clinical experience in treating chronically ill hospitalized patients.

173. Clinical Pedodontics. (0.4) SS. Prerequisite: Pedodontics 170.02A-B-C. Clinic Variable. M. Morris and Staff

Students provide dental care for a non-English speaking migrant population, utilizing facilities of the mobile clinic.

174. Pedodontic Seminar. (2) SS. Prerequisite: Pedodontics 171.01A-B-C. Seminar 4 hours. M. Morris and Staff

Seminar on problems attending the care and treatment of non-English speaking children. Modifications of treatment plans to ensure dental care which requires a minimum of professional supervision for maintenance.

175. Pediatric Oral Surgery. (3) F, S, GH 90 hours.

Hospital procedures, management of trauma and emergencies involving the primary and young succedaneous dentitions. Extraction, tooth replantation, pulp protection, stabilization of luxated teeth, management of infection, and supportive therapy are emphasized.

176. Pediatric General Anesthesia. (0-3) F. CHMC: 90 hours. K. Schroeder and Staff

An introductory course in general anesthesia to familiarize the student with general anesthesia, the attendant problems and risks, the agents used, and methods of delivery. Clinical experience under close supervision.

177. Pediatric Hospital Dentistry. (2) F, W, Sp. Hospital dentistry 6 hours. M. Morris, Weis

Students are assigned to an interdisciplinary health care team and are responsible for delivery of dental care for all in-house patients. Definitive dental care is provided on the ward as well as in the operating room.

180.B1-B. Pedodontic Seminar. (1-1.1) W. Prerequisite: Completion of third year pedodontic lecture series and approval of the Dean. Lecture 1 hour. B. Smith

Documented discussions on occlusion, mixed dentition analysis, malocclusions, missing incisors and premolars, traumatic injuries, and the manifestations of systemic disease. Designed for students considering pedodontics as a specialty. Counseling is provided for postdoctoral education.

185. Advanced Pedodontic Appliance Laboratory. (0.5) F, W, Sp. Prerequisite: Postdoctoral standing or approval of Clinic Review Committee and chairman of the division. Lecture and Lab variable. M. Morris and Staff

A laboratory course concerned with the fabrication of interceptive orthodontic appliances currently being employed in pedodontic and auxiliary clinics to aid the patient to self-care.

189.01. Clinical Practice in Pedodontics. (0-9) F, W, Sp. Prerequisite: Pedodontics 130A-B-C and completion of clinical pedodontics and all third year clinical and didactic courses in operative dentistry. Approval of Clinic Review Committee. Clinic Variable.

M. Morris and Staff

V. Cooper

Students provide additional clinical experience in pedodontics.

189.02. Community Pedodontics. (0-4) F, W. Prerequisite: Completion of all requirements for graduation or approval of Clinic Review Committee. Clinic 0-120 hours. M. Morris, Stark and Staff

An elective clinic course in pedodontics. Students provide care for children at selected migrant farm labor camps. Course includes preventive education, comprehensive operative procedures including pulp therapy and necessary minor dental surgery, taking and processing needed radiographs.

Periodontology


Introduction to the treatment of periodontal diseases. The pathogenesis of periodontal disease is discussed from clinical, histopathological, and biochemical points of view.


Introduction to the techniques of supragingival scaling and root planing.

121. Periodontal Therapy (Introduction). (1) F. Prerequisite: Periodontology 110. Lecture 1 hour. M. Parr

Introduction to the rationale and objectives of periodontal therapeutic procedures. Also considered are the recognition and treatment of periodontal disease in children, acute periodontal emergencies, and periodontal considerations in restorative dentistry.


Introduction to clinical techniques in oral prophylaxis including plaque control, scaling, root planing. During fall and winter quarters, students provide dental hygiene therapy for senior patients. The spring and summer quarters are utilized for treatment of their own patients.

131. Periodontics. (1) F. Prerequisite: Periodontology 121. Lecture 1 hour. M. Parr

The demonstration and rationale of surgical treatment of periodontal lesions.

150. Periodontics. (2) Sp. Lecture and Demonstration 2 hours. M. Horowitz

Introduction to the oral hygiene problems of the periodontal patient and the means and methods available to the dentist and auxiliaries to motivate the patient to self-care.

160. Periodontics. (1) F. Prerequisite: Periodontology 150. Lecture 1 hour. M. Miller

Classification of periodontal diseases and methods of their prevention. Principles of pathology are correlated with therapeutic procedures. A faculty panel discusses the role of the hygienist in dental practice.

161. Periodontics. (1) W. Prerequisite: Periodontology 160. Lecture 1 hour. M. Horowitz

The demonstration and rationale of surgical treatment of periodontal lesions. The role of the dental hygienist in dental practice, especially related to prevention, recognition, and aid in treatment of periodontal diseases.


Dynamics of inflammation and its role in the periodontal tissues.

171.A-B-C. Clinical Periodontics. (0-8-4) F, W, Sp. Prerequisite: Enrollment in periodontology program. Clinic 12 hours. M. Shribata, E. Green and Staff

Clinical procedures in periodontics.

172. Examination and Treatment Planning. (1) F. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. M. Parr

Lectures on examination and treatment planning.

172.01. Hospital Anesthesiology. (0) SS. Prerequisite: Consent of instructor. Seminar 10 hours. C. Chang

Practical course in operating room anesthesia. Instruction in hospital administration, physical and preanesthetic evaluation of the patient, monitoring of vital signs, administration of intravenous psychose- sedation, general anesthesia, and handling of resul- tant medical emergencies. Clinical instruction is sup- plemented by seminars.

172.02. Hospital Periodontics. (2) F, W, Sp. Prerequisite: Periodontology 171A-B-C. Lecture 4 hours given in alternate weeks. M. Shribata

Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, apprecia- tion for preventive dental care, and concept of total health care. Students are exposed to various medical conditions.

173.01. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 171A-B-C. Clinic 60 hours. M. Shribata

Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical ex- perience.

173.02A-B-C. Periodontal Therapy. (4-4-4) F, W, Sp. Prerequisite: Periodontology 171A-B-C. Clinic 12 hours. M. Shribata, E. Green and Staff

Advanced clinical procedures in periodontal therapy.

173.03. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 173.02C. Clinic 3 hours. M. Shribata, E. Green and Staff

Advanced surgical techniques in management of periodontal lesions.

174. Periodontics. (1) SS. Prerequisite: D.D.S. degree. Seminar 1 hour. M. Parr

A seminar to discuss and evaluate the problems common to the specialties of orthodontics and periodontics.

175.A-B-C-D. Treatment Planning and Surgery Seminar. (0-3, 0-3, 0-3, 0-3) F, W, Sp. Seminar 1 hour. M. Shribata and Staff
Students present and discuss management of their cases that are either planned for treatment or current-
ly under treatment. They are expected to defend their treatment plan and answers based on relevant literature and clinical experience.

175.01A-B-C-D. Advanced Treatment Planning and Surgery Seminar. (1-1-1) F, W, SS. Seminar 1 hour.
Shibata and Staff

Students present and discuss management of their cases that are either planned for treatment or current-
ly under treatment. They will be responsible for defending their treatment plan and therapeutic proce-
dures based on relevant literature and clinical experience.

176. Original Investigation in the Field of Periodon-
tology. (1-1) F, W. Prerequisite: Enrollment in postgraduate specialty program or consent of in-
structor. Lab 3-15 hours. J. Greenspan.


Study in depth with literature review and seminar discussions on surgical techniques used to treat le-
sions involving the hard and soft tissue of the periodontal.


Course provides a broad concept of the principles of occlusion, upon which definitive therapeutic proce-
dures can be based.

179A. Applied Biochemistry. (2) F. Lecture 2 hours.

Waddell

Course covers physiology as it relates to anes-
thesia and periodontal surgery.

180. Periodontics. (1-1) W. Lecture 1 hour.

Parr

Implementation of the skills and knowledge of periodontology in the private practice environment.

180.02A-B. Advanced Periodontics. (1-1) F, W. Prereq-
uitable: Periodontology 131 and consent of instructor. Lecture 1 hour.

Koffler, Kopic (W)

Study in depth, with literature review and seminar discussions of areas of periodontology having major clinical significance.

180.03. Periodontal Surgical Techniques. (1) F. Lecture 1 hour.

Prerequisite: Periodontology 131. Lecture 1 hour. Shibata

Selected procedures are presented which may be used to treat lesions occurring in the hard and soft tissues of the periodontium.

181. Seminar on Connective Tissue. (1) W. Prereq-
uitable: Biochemistry 110A-B and 111 or concurrent en-
rollment. Lecture 1 hour.

Staff

Biochemical and molecular biological basis of con-
nective tissue growth, development, and disorder. Topics discussed include cleft palate, TMJ, chondro-
dystrophies, wound healing, periodontal disease, ar-
thritis, and fibrotic diseases including arterioscle-
rosis, cirrhosis, and gingival fibroplasia.

189.01. Clinical Periodontics. (0-9) F, W. Prerequi-

E. Green and Staff

Continuation of clinical experience beyond the level of Periodontology 109.

190. Laboratory Project in Periodontology. (1-5) F, W, Sp. Prerequisite: Laboratory research project under direction of a member of the faculty with the approval of the chair-
man of the department.

Shibata, F. Green (W), J. Greenspan (Sp)

Elements of experimental design, statistical in-
ference, and methods of laboratory and clinical research.


Staff

Seminar designed to correlate basic sciences 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.

Pharmaceutical Chemistry

120. Principles of Pharmaceutical Chemistry. (3) F. Prerequisite: Chemistry 113, Lecture 3 hours.

A study of physicochemical and biological factors which contribute to drug action; in vivo and in vitro biotransformations of drugs and related organic com-
pounds.

121. Principles of Pharmaceutical Chemistry. (2) W. Prerequisite: Pharmaceutical Chemistry 120 and con-
current enrollment in Pharmaceutical Chemistry 121. Lecture 2 hours.

Jorgensen, M. Wolff

A systematic survey of the chemical features of
synthetic drugs, including correlations between
chemical structure and biological activity. Emphasis

on steroids, hormones, and drugs for metabolic dis-
orders.

122. Principles of Pharmaceutical Chemistry. (3) Sp. Prerequisite: Pharmaceutical Chemistry 120, Lecture 3 hours.

Brochmann-Hanssen, R. B. Meyer

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 system and
cardiovascular systems as well as renal function.

123. Principles of Pharmaceutical Chemistry. (3) F. Prerequisite: Pharmaceutical Chemistry 120, Lecture 3 hours.

Brochmann-Hanssen, R. B. Meyer

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.

134. Principles of Pharmaceutical Chemistry. (2) W. Prerequisite: Pharmaceutical Chemistry 120 and con-
current enrollment in Pharmacology 134. Lecture 2 hours.

R. B. Meyer

A systematic survey of the chemical features of
synthetic drugs, including correlations between
chemical structure and biological activity. Emphasis

on anti-convulsant and anti-neoplastic drugs.

151. Pharmaceutical Analysis. (3) W. Prerequisite: Chemistry 113 and 115. Lecture 3 hours.

Brochmann-Hanssen

Principles of pharmaceutical analysis used for eval-
uation of drugs and dosage forms, with special emphasis on modern separation techniques and in-
strumental methods of analysis.

152. Radiouclides in Biology, Medicine and Pharma-
cy. (2) F. Lecture 2 hours.

Peng, D. Price

Discussion of radionuclides in frequent use in biology and medicine including those used as phar-
macueticals, with emphasis on dosage form design, radiolabeled quality control, clinical application and other related aspects.

154. Pharmaceutical Quality Control. (2) W. Prerequis-
ites: Pharmacy 165, Pharmacy 166 or concurrent en-
rollment. Lecture 2 hours.

Brochmann-Hanssen, Sadee

General principles of total quality control applied to the manufacture of pharmaceuticals, introduction to statistical quality control, its application to pro-
cess studies, and in specification of drug forms. Con-
ideration given to simplified quality control systems for small-scale manufacturing and hospital phar-
armacy.

156. Pharmaceutical Analysis. (2) Sp. Prerequisite: Pharmaceutical Chemistry 151. Lecture 2 hours.

Brochmann-Hanssen

Experiments in pharmaceutical analysis applied to
drug entities, dosage forms, and samples of biolog-
ical origin.

2 hours, Lab 3 hours.

Analytical theory and techniques for drugs and metabolites in biological fluids.

158. Radioisotope Measurements. (1) W. Sp. Prereq-
uitable: Pharmaceutical Chemistry 153 or consent of instruc-
tor. Lab 3 hours.

Peng

Detection and measurement of radionuclides com-
monly used in biology and medicine.

160. Fundamentals in Radioactivity. (2) F. Lecture 2 hours.

This course will treat the principles of physical decay in radionuclides, characteristics of nuclear emissions, interaction with matter, and related aspects in radiopharmaceuticals.

162. Radiosotope Imaging. (1) F. Prerequisite: Pharmaceutical Chemistry 153 or consent of instruc-
tor. Lecture 1 hour.

D. Price

This course will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.

170. Group Studies Course. (1-4) F, W, Sp. Prerequi-
site: Consent of instructor.

Staff

Group studies of selected topics in pharmaceutical chemistry.


Library research and directed reading under super-
vision of a member of the faculty with the approval of the chairman of the department.


A laboratory research project under direction of a member of the faculty with the approval of the chair-
man of the department.

200. Physical Chemical Properties and Biological Ac-
tivity. (1) W. Prerequisite: Consent of instructor. Lecture 1 hour.

Kollman

Lectures and conferences dealing with the rela-
tionship between physical properties and biological activity, with special emphasis on the use of
molecular orbital calculations in this connection.

201. Advanced Survey of Medicinal Chemistry. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours.

Jorgensen

Basic principles of medicinal chemistry and a survey of the relationships between structure and biological action for major drug classes.

202. Macromolecular Structure. (2) W. Prerequisite: Consent of instructor. Lecture 2 hours.

Kurtz, Langridge

A review of protein and nucleic acid structures. Emphasizes the general principles which govern secondary and tertiary structure, with an introduction to the current approaches to this problem for pro-
teins and transfer RNA.

203. Drug Metabolism. (1-2) F. Prerequisite: Consent of instructor. Lecture 1.2 hours.

Castagnoli, Sadee

Study of the in vivo and in vitro biotransformation of foreign compounds, with particular emphasis on drugs. When possible, detailed chemical and bio-
chemical mechanisms are considered.

204. Hormones. (3) W. Prerequisite: Consent of in-
structor. Lecture 3 hours.

Jorgensen

Lectures and conferences dealing with structure-
function relationships and action of hormones at the molecular level. Special emphasis is given to steroids and peptide hormones.

205. Analogs of Nucleic Acid Constituents. (3) W or Sp. Prerequisite: Organic chemistry and biochemistry recommended. Lecture 3 hours.

R. B. Meyer

The chemistry and mechanism of action of purines, pyrimidines, their nucleosides and nucleotides, and related derivatives, anticancer and an-
timicrobial activity are discussed in detail.

206. Modern Techniques in Pharmaceutical Chem-
istry. (3) W. Prerequisite: Chemistry 113 and 157 or equivalents. Chemistry 165 recommended. Lecture 2 hours.

J. Craig
207. Experiments in Modern Pharmaceutical Chemical Techniques. (2) § W. Prerequisite: Chemistry 113 and 157 or equivalents. Chemistry 165 recommended. Lab 6 hours.

208. Advanced Survey of Pharmaceutics. (2) § F or W. Lecture 2 hours. Benel and Staff

Basic principles underlying the area of pharmacuetics directed at the needs of graduate students with limited familiarity with pharmaceutical sciences.

211. Selected Topics in Pharmaceutical Chemistry. (2) § Sp. Prerequisite: Pharmaceutical Chemistry 150.

Jorgensen

Reports and discussion of topics of current interest in pharmaceutical chemistry, with emphasis on relationships between chemical structure, physical properties, and biological response.

212. Fortran IV Programming and Scientific Software Usage. (3) F. Lecture 2 hours, Lab 3 hours. P. Pedersen

Elements of the Fortran IV language. Scientific programming in the digital computer with emphasis on terminal usage. Demonstration of and exercises with various software packages of statistical and kinetic interest.

213. Basic Considerations in the Kinetics of Drug Absorption and Disposition. (3) § F. Prerequisite: Chemistry 115. Calculus background is recommended. Lecture 2 hours, Lab 3 hours.

Tozer, Oie, C. Hunt

A basic study of the concentration-time courses of drugs and their metabolites, methods of pharmacokinetic analysis, and the design of dosage regimen. Laboratory emphasizes the application of electronic calculators and analog computers.

214. Advanced Aspects of the Kinetics of Drug Absorption and Disposition. (3) § Sp. Prerequisite: Pharmaceutical Chemistry 213 and Biochemistry 202 or equivalents. Lecture 2 hours, Lab 3 hours.

Riegelman, Benel, and Staff

Advanced consideration of pharmacokinetics including multicompartment models, assessment of intravenous and digital computer methods, and correlation of pharmacological response with the concentration-time course of a drug. Laboratory will include analog and digital computational methods.

217. Physical Pharmacy of Solid Dosage Forms. (3) § W. Prerequisite: Pharmaceutical Chemistry 160 or consent of instructor. Lecture 3 hours. Staff

Problems of solids, solid-solid interactions, solid dosage forms, and stability of solid dosage forms are discussed.

218. Physical Pharmacy of Liquid Systems. (3) § Sp. Prerequisite: Pharmaceutical Chemistry 217. Lecture 3 hours. Staff

Solubility, solution, diffusion, properties of solids of solutions, and drug stability.


Selected topics on enzyme mechanisms. General survey of enzyme catalysis: general acid-base catalysis and transition state theory. Enzyme microenvironment and principles in the use of radionuclides as tracers in biological systems. Emphasis is on the design of experiments and data evaluation.

220. Graduate Seminar Program. (1-2) F, W, Sp. Staff

A program involving the presentation of core material in pharmaceutical chemistry in the medicinal chemistry and pharmacuetics pathways. The presentations are made by graduate students and examination is by a series of cumulative examinations.

221. Research Conference in Pharmaceutical Chemistry. (1) F, W, Sp. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry. Lecture 1 hour. M. Wolf

A series of weekly research conferences in medicinal chemistry given by visiting lecturers, faculty, and advanced graduate students.

222. Seminar in Physical Chemistry. (1) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Kuntz and Staff

Topics of current research interest in physical and biophysical chemistry.

230A. Spectroscopy. (4) § Sp. Prerequisite: Chemistry 162 or equivalent. Lecture 3 hours, Lab 3 hours. Offered in alternate years. Offered 1978-79.

Kuntz, Kollman

The theory and application of molecular electronic and vibrational spectroscopy; optical rotatory dispersion and circular dichroism.

230B. Spectroscopy. (3) § Sp. Prerequisite: Chemistry 162 or equivalent. Lecture 3 hours. T. James

Theory and application of nuclear magnetic resonance and electron-spin resonance; mass spectrometry. Lab 3 hours.

230C. Spectroscopy. (1-2) W. Lab 5 hours. T. James

Laboratory work in nuclear magnetic resonance and electron-spin resonance; mass spectrometry.

231. Spectroscopy. (1-4) § Sp. Prerequisite: Pharmaceutical Chemistry 230B. Lecture 1-4 hours. T. James

Selected topics in spectroscopy and related areas. Content of the course varies, as in the case of seminars. Course may be repeated for credit.

240. Radiochemical Synthesis. (1-2) F, W. Sp. Prerequisite: Consent of instructor. Lab 3-6 hours. P. Eng

Theory and techniques related to the synthesis of isotopically labeled organic compounds. Course may be repeated for credit.

241. Radiochemical Analysis. (1) § W. Prerequisite: Consent of instructor. Lab 3 hours.

Peng

Experiments related to various aspects of radioassay of biological specimens, biochemical compounds, and drugs isotopically labeled with tritium and/or radio-carbon.

242. Radiotracer Methodology. (1) § W. Prerequisite: Pharmaceutical Chemistry 152 or 160, or consent of instructor. Lecture 1 hour. Peng, J. W. Harris

Licko

Laboratory work on the theory and principles in the use of radionuclides as tracers in biological systems. Emphasis is on the design of experiments and data evaluation.

243. Chemical and Biological Effects of Ionizing Radiation. (1) § Sp. Prerequisite: Pharmaceutical Chemistry 152 or 160, or consent of instructor, Lecture 1 hour.

Effects of ionizing radiation on chemical and biological systems will be discussed.

250. Research and Thesis. Staff


Langridge

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.

266. Conferences in Research Planning. (1-2) F, W, Sp. 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.

278. Thesis. (3) F, W, Sp. Prerequisite: Advance to candidacy and permission of graduate adviser.

Staff

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

299. Dissertation. (0) F, W, Sp. Prerequisite: Advance to candidacy and permission of graduate adviser.

Staff

For graduate students engaged in writing dissertation for the PhD.

300. Practicum in Teaching. (1-2) F, W, Sp. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry and participation in the on-going teaching program.

Conferences and discussion dealing with the teaching of courses in the School of Pharmacy under the direction of the faculty.

Pharmacognosy


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


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

Pharmacology

100A-B. Medical Pharmacology. (3-5) § W. Prerequisite: Biochemistry 120A-B and Physiology 120A-B and 125 or equivalents. Lecture 3 hours W, 5 hours Sp.

Trevor, Apple

A systematic presentation of pharmacologic agents based on drug group classification. Major emphasis is on clinically significant aspects of therapeutic effects, toxic effects, and evaluation of drugs.

121. Pharmacology and Toxicology. (1) § W. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 121. Lecture 1 hour.

Systematic survey of action and uses of drugs with emphasis on steroids, hormones and drugs for metabolic disorders.

125. Pharmacology and Toxicology. (4) § Sp. Prerequisite: Biochemistry 120A-B and Physiology 120A and 125. Lecture 3 hours. Lab 3 hours.

Hondeghem, Burkhalter

Systematic survey of action and uses of drugs acting on autonomic nervous and cardiovascular systems and the kidneys.

126B-C. Dental Pharmacology. (2-4) W. Sp. Prerequisite: Physiology 110. Lecture 2 hours W, 3 hours Sp. Lab 2 hours Sp.

F. Meyers and Staff

Objective of the course is to acquaint dental and dental hygiene students with the fundamentals of pharmacology of various dental drugs which are examined in regard to actions, absorption, fate, excretion, and toxicity. Agents useful in dentistry are emphasized.

130. Toxicology. (2) § W. Prerequisite: Pharmacology 125 and 136. Lecture 2 hours.

Hine, Hodge, F. Meyers, Piper, Vore

The occurrence, mode of action, recognition, and treatment of poisoning by environmental chemicals and therapeutic agents.

131. Pharmacology and Toxicology. (1) W. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 134. Lecture 1 hour.

Trevor, Apple

Systematic survey of action and uses of anti-infective and antimicrobial drugs.

138. Pharmacology and Toxicology (4) § F. Prerequisite: Pharmacology 125. Lecture 3 hours. Lab 3 hours.

Hondeghem, Burkhalter and Staff

Systematic survey of action and uses of drugs acting on the central nervous system.
W. Sp. 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.


170.01. Experimental Techniques in Pharmacology. (1.0) SS. Prerequisite: Consent of instructor and completion of biochemistry, physiology, and pharmacology courses.
Loh, Trevor
Practical laboratory experience to acquaint the student with experimental and physiological techniques used in the study of drug action in systems from the subcellular level to the intact animal.

183. Special Topics in Pharmacology and Toxicology. (1-3) F, W, Sp. Prerequisite: Consent of instructor. Seminar 1-3 hours.
Staff
A seminar course covering various aspects of pharmacology and toxicology.

184. Supervised Study in Pharmacology. (1-5) F, W, Sp. Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

189. Laboratory Project in Pharmacology. (1-5) F, W, Sp. Staff
A laboratory research project under direction of a member of the faculty with approval of the chairman of the department.

206A-B. General Pharmacology. (3-3-3) F, W, Sp. Prerequisite: Consent of instructor. Lecture 7 hours.
Trevor, Katzung
Lecture-conference dealing with fundamental aspects of interactions between chemical complexes, pharmacological agents and the physiological systems. Mechanisms of drug action at molecular, biochemical, membrane, tissue, and organ levels of the cardiovascular, muscular, and central nervous systems are considered.

208. Biochemistry of Oxidative Drug Metabolism. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours. Vore-İwamoto, Ortiz de Montellano, Corrêa
The biochemical, regulatory and chemical aspects of mixed-function oxidases with particular emphasis on the role of oxygen.

209. Molecular Mechanisms of Action of Biologically Active Substances. (3) F, W, or Sp. Prerequisite: Consent of instructor. Kwon
Advanced biochemical experimentation and theoretical concerns concerning the mechanism of action of biologically active substances on a macromolecular level. The content of the course, beyond certain theoretical material, varies with each participant and consists of guided experiments in novel subjects.

210A-B. Advanced Toxicology. (1-1-1) F, W, Sp. Prerequisite: Consent of instructor, Lecture 1 hour.
Hine, Hodge, F. Meyers, Piper, Vore-İwamoto
Introductory toxicology divided into the following three components: toxicology testing procedures; environmental toxicology: ponds; and clinical toxicology, current developments.

211A-B. Advanced Toxicology. (1-1-1) F, W, Sp. Prerequisite: Consent of instructor, Lecture 1 hour.
Hine, Hodge, F. Meyers, Piper, Vore-İwamoto
A detailed examination of the field of toxicology as it relates to agricultural, environmental, forensic, industrial, military, regulatory and therapeutic problems. Emphasis is placed on mechanism of action of toxic substances. Current advances and classical conceptual methods of toxicology are presented.

Staff
Seminar to discuss present methods and problems in current teaching and research in pharmacology and toxicology.

Staff
Research techniques in pharmacology and toxicology or consent of instructor, Lab hours.

Honkemeyer, Katzung
Principles and applications of physiological techniques used in the study of drugs. Emphasis is placed on the study of cardiovascular and autonomic systems.

260. Laboratory Techniques in Toxicology. (2) F, Sp. Lab 6 hours.
Hodge and Staff
Principles and applications of experimental techniques in the evaluation of the toxicologic hazards of drugs and environmental chemicals: techniques for testing acute and chronic toxicity, skin irritation, pattern sensitization, mutagenesis and carcinogenesis will be covered.

280. Thesis. (0) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser.
Staff
For students engaged in writing the thesis for the master's degree.

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

Staff
Opportunity is provided to participate in a formalized way in the teaching of pharmacology or the direction of the faculty.

Pharmacy

111. Non-Prescription Products. (1) F. Conference 3 hours.
Staff
Evaluation and comparison of non-prescription medications. Emphasis on the terms of use in the community is included. Emphasis is on oral communications.

112. Non-Prescription Products. (1) W. Prerequisite: Pharmacy 111. Conference 3 hours.
Staff
H. Spencer and Staff.
Continuation of Pharmacy 111.

H. Spencer and Staff.
Continuation of Pharmacy 112.

114. Introduction to the Analysis of Clinical Data. (3) F. Lecture 2 hours, Lab and Conference 3 hours.
K. Jacoby
An applied statistics course where basic data analysis research techniques and computer applications are considered. Topics include problem design, sample size, choice of estimates, and probability densities, including normal, t, F, and Chi-Square.

115. Biopharmaceutics and Physical Pharmacy. (4) F. Prerequisite: Chemistry 115 and concurrent enrollment in Chemistry 116. Lecture 3 hours, Lab 3 hours.
Hoefer, C. Hunt, R. Day
A study of the physical, chemical and biological factors which influence drug release from dosage forms. As drug delivery systems. Course includes laboratory preparation of basic drug delivery systems.

H. Spencer, R. Day, H. Spencer
Continuation of Pharmacy 115.

127. Prescription Study and Practice. (4) F. Prerequisite: Pharmacy Administration 112. Lecture 2 hours, Lab 6 hours.
H. Spencer
Application of philosocial, ethical, and legal principles to the practice of the profession of pharmacy. Due consideration is given to the dispensing of prescriptions.

128. Pharmacokinetics. (3½) W. Prerequisite: Pharmacy 116. Lecture 3 hours, Conference 1-2 hours.
Ole, Tozer
Course covers the pharmacokinetic basis of variability in the therapeutic, pharmacologic and toxicologic effects of drugs.

129. Pharmacokinetics. (3½) Sp. Prerequisite: Pharmacy 128. Lecture 3 hours, Conference 1-2 hours.
Ole, Tozer
Continuation of Pharmacy 128.

130. Biologic Products. (3) Sp. Prerequisite: Third year standing. Lecture 3 hours.
K. H. Lee
A study of food and nutrition for all age groups. Diet therapy is discussed.

151. Community Health Education. (2) Sp. Lecture and Discussion 15 hours. Participation in at least 4 community health education programs. H. Spencer
Course is designed to train students for participation in community health programs dealing with drug abuse education and allied related areas, such as poison prevention, venereal disease, and birth control. Course may be repeated for credit.

155. External Drug Products. (4) F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.
T. Carson, R. Stewart
Discussion and laboratory exercises on the formulation of products for external use, including ointments and creams. The course deals with the properties and ingredients of such products.

161. Biologic Products. (2) W. Prerequisite: Third year standing, Lecture 2 hours.
A discussion of the pharmaceutical aspects and evaluations of the therapeutic values of biologic products in current therapy. Topics include enzymes, blood and its derivatives, plasma substitutes, hemolytic preparations, and biologic products.

164. Veterinary Products. (3) Sp. Prerequisite: Microbiology 125, Pathology 130, Pharmacology 136 and Pharmacy 116. Lecture 3 hours.
Spinnell
Course is designed to familiarize the student with common alimentary 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 dispensing.

165. Pharmaceutical Technology. (3) F. Prerequisite: Pharmacy 116. Lecture 1 hour, Lab 6 hours.
R. Gibson, Cooper, Blake
An introduction to the application of solid dosage forms, especially tablets and capsules. Emphasis is placed on problems encountered in preparation of this type of medication.

167. Pharmaceutical Technology. (3) Sp. Prerequisite: Pharmacy 166. Lecture 1 hour, Lab 6 hours.
R. Gibson, Cooper, Blake
An advanced study of the relationship of the art and science of pharmaceutical technology to solid dosage forms.

168. Seminar in Clinical Pharmacokinetics. (2) F, W, Sp. Prerequisite: Fourth year standing or consent of instructor. Reports and Conference 6 hours. Enrollment limited.
Tozer, Riegelman
Discussion and review of the literature on the clinical application of pharmacokinetic principles in drug therapy.

Staff
Group studies of selected topics in pharmacy.

170.01. Listening and Talking to Patients. (2) Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours.
K. Jacoby, G. Stone
An introductory course emphasizing active listening and viewing. Small group techniques are used to develop and test communication skills. Observation of
numerous patient communication and social problems with opportunities to video tape student interactions and reviewing responses.

170.02. Special Topics in Pharmacology. (2) Sp. Prerequisite: Pharmacy 116 or concurrent enrollment. Lecture 2 hours.

P. Pedersen

An intermediate course offering an opportunity to explore, in greater depth, special drug delivery systems and some fundamental relationships involved in their design and function.

180. Drugs and Society. (3) W. Prerequisite: Basic course sequence in pharmacology and consent of instructor. Lecture 3 hours. Enrollment limited to Pharmacy students.

M. Silverman

An analysis of the roles of the drug industry, pharmacy and medical professions, trade associations, governmental agencies, the Congress, consumer groups, and the press in the development, safety, efficacy, quality, advertising, prescribing, and pricing of selected drugs.


Staff

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

190. Laboratory Project in Pharmacy. (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.

475. Parenteral Products. (3) W. Prerequisite: Third year standing, Lecture 2 hours, Lab 3 hours.

J. R. Nielsen

Introduction to the formulation and technology of parenteral preparations. Laboratory includes participation in hospital activities in which parenterals are made and administered.

Pharmacy Administration

111. Pharmacy Laws. (2) F. 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 liability and responsibility of the practitioner to the patient.

112. Pharmacy Laws. (2) W. Lecture 2 hours.

J. R. Nielsen

A detailed examination of Federal and State drug, cosmetic, and narcotic laws; their promulgation, enforcement, and effect upon the practice of pharmacy. Course involves some administrative work.

150. Marketing. (4) W. Lecture 4 hours.

Staff

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.


Staff

Principles of management, especially 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.

155. Accounting. (3) F. Lecture 1 hour, Discussion 2 hours.

Staff

Consideration of the fundamental concepts of accounting, and its applied uses, with special emphasis on the accounting requirements of the community pharmacy. Problem cases and demonstrations are presented.


J. R. Nielsen

A survey of law relating to landlord-tenant dissolution, property division, support payments, probate and decedent’s estates, with particular emphasis on how the pharmacist may expect his practice to be affected by these laws, and some practical preventative legal techniques.


Staff

Group studies of selected topics in pharmacy administration.

190.8-C. Legal Problems Related to Health Care. (0-2-2) F, W, Sp. Prerequisite: Third year standing, Pharmacy Administration 190A is prerequisite to 190B, and 190B to 180C, but completion of entire sequence is not required.

J. R. Nielsen

Conducted in cooperation with law students who are teamed with students from professional schools on this campus to research related problems on their respective disciplines, with particular emphasis upon the legal implications arising therefrom.


Staff

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

Physical Therapy

100A. Anatomy. (4) F. Prerequisite: Anatomy 102 or equivalent. Lecture 2 hours, Lab 6 hours. Nordschow

Course is designed to present the foundation of the structure and function of the human body with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Dissection of the upper limb, neck, and trunk are emphasized.

100B. Anatomy. (2) W. Prerequisite: Physical Therapy 100A. Lecture 1 hour, Lab 3 hours. Nordschow

Course is designed to present the foundation of the structure and function of the human body with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Dissection of the lower limb is emphasized.

101A. Pathology. (3) F, Lecture 3 hours. Biava

A general survey of the fundamentals of pathology with special emphasis on the relationship between pathological processes and the clinical signs, symptoms, and course of diseases. Gross pathology is demonstrated and autopsy material is available.

102A. Physiology. (3) F. Prerequisite: General human physiology or equivalent. Lecture 3 hours.

Bivins

A review of selected concepts of human physiology, with special emphasis on the cardiovascular system and metabolism. Specific aspects of pathological physiology are considered, especially in relation to stroke and heart disease. Applications of physical principles to physiology are discussed.

130A. Neuroanatomy. (2) F. Lecture 1 hour, Lab 3 hours.

Garonet

The development of the human nervous system with special reference to structure and functional relationships.

104A. Physical Therapy Procedures I. (1) F, W. Prerequisite: Introductory physics. Lecture 3 hours, Lab 9 hours.

Puglisi

Lectures and laboratory practice in electrotherapy, kinesiology, and tests and measurements. Emphasized are therapeutic uses of electricity in certain pathological conditions; electrotherapy as a function in normal and abnormal states, methods of performing, recording and interpreting testing and measuring procedures.

104B. Physical Therapy Procedures II. (6) W. Prerequisite: Physical Therapy 104A. Lecture 3 hours, Lab 9 hours.

Puglisi

Lectures and demonstrations, and laboratory practice in hydrotherapy, massage, and therapeutic exercise. Emphasized are therapeutic uses of water and massage techniques applied to various pathological problems and techniques of administration of exercises commonly used in orthopaedic, medical, and neurological conditions.

104C. Physical Therapy Procedures III. (6) Sp. Prerequisite: Physical Therapy 104A and 104B. Lecture 3 hours, Lab 9 hours.

Puglisi

Lectures and laboratory practice in therapeutic exercise. Emphasis is on evaluating the patient and planning his program, use and care of assistive devices in rehabilitation of the handicapped, use and evaluation of changing concepts, and special techniques of exercise.

105B. Physical Medicine and Rehabilitation. (3) W. Lecture 3 hours.

Ranallo

Lectures and clinical demonstrations concerning peripheral vascular problems, geriatric patients, various types of arthritis, muscular dystrophy, spinal cord injury, accidents, the brain-damaged child, neck pain, and back pain.

106B. Clinical Medicine I. (5) W. Lecture 5 hours.

F. Schiller, J. Schneider

Lectures and clinical presentations of medical and neurological problems to give the student an understanding of the basic interrelationship of structure and function of the various body systems. Confidence in recognizing physical therapy treatments is fully discussed.

106C. Clinical Medicine II. (5) Sp. Prerequisite: Abnormal psychology or equivalent. Lecture 5 hours.

J. Strange

Lectures in orthopaedic surgery, pediatrics, psychiatry, surgery, obstetrics, gynecology, geniatrics, and dermatology are presented by physicians in these specialties.

107B. Neuromuscular Physiology. (2) W. Lecture 2 hours. Garonet

A study of the physiology of striated muscle and peripheral nerve in relationship to controlling mechanisms within the central nervous system. Special emphasis is given to the physiological disturbances which occur in various types of human motor disabilities.

108. Basic Medical Procedures. (2) Sp. Lecture 1 hour, Lab 3 hours.

Nordschow

The study of procedures necessary for the total care of patients.


Gilbert

A study of professional attitudes and obligations and the organization and administration of a department of physical therapy. Laboratory work includes evaluation of physical therapy in an approved hospital by special arrangement of the clinical supervisor.

170.02. Survey of Congenital Defects. (2) W. Prerequisite: Gross anatomy course and consent of instructor. Monie

This elective course is designed to provide physical therapists with information on the more common human congenital defects. Environmental and genetic factors that produce malformations are discussed, as well as possible mechanisms discussed.

410D. Clinical Clerkship. (14) Su. Prerequisite: Completion of all physical therapy courses in curriculum sequence.

Gilbert and Staff

Clinical clerkships consisting of 12-14 weeks of assignments in three different institutions or agencies. Under supervision, students participate actively in clinical evaluation and care of patients. Clinical clerkship lectures are also included.

Physiology

100. Organ System Physiology. (6) W. Prerequisite: Anatomy 100 and 102, and concurrent enrollment in Biochemistry 100A-B; or consent of instructor. Lecture 4 hours, Conference 2 hours, Lab 4 hours.

Ramsay
Normal function of the cardiovascular, respiratory, renal, and gastrointestinal systems and the metabolic functions of the body as a whole are studied in lecture, laboratory, and clinical exercises, demonstrations, and clinical illustrations.

101. Endocrinology. (4) S. Sp. Prerequisite: Anatomy 100 and Biochemistry 100-A, or consent of instructor. Lecture 3 hours. Lab 3 hours. M. Dalman

The structure and function of the endocrine glands and selected aspects of endocrinology and pathology are studied in lectures, demonstrations, and clinical conferences.

110. Integrative and Nutritive Systems. (8) Sp. Prerequisite: Consent of instructor. Lecture 5 hours. Lab 3 hours. Conference 3 hours. Rothman and Staff

Introduction to organ systems with emphasis on nervous, endocrine, circulatory, respiratory, and alimentary function in vertebrates. Importance of organ systems for the success of multicellular forms serves as focus. Fundamental cell processes are also discussed, emphasizing differentiated function.

120. Mammalian Physiology. (3) W. Prerequisite: Physiology 125 required for students in School of Pharmacy; may be taken separately by graduate students with consent of instructor only. Lecture 3 hours. S. Sampson

Study of the integrative systems of the mammalian organism, particularly the nervous and endocrine systems.

125. Mammalian Physiology. (1) F. Prerequisite: Consent of instructor. Lecture 1 hour. Conference 2 hours. Lab 4 hours. Minnes

Introduction to mechanisms by which mammals, especially man, maintain homeostasis. The interaction of internal and external environments and their relationship to the functions of cells and muscular, circulatory, respiratory, renal, and excretory systems is considered.

150.01. Research in Physiology. (1-10) per week Su, F, W, Sp. Prerequisite: Consent of instructor. Lecture and Lab to be arranged. Individualized study. Dalman

Research in physiology carried out in the Department of Physiology.

180. Supervised Study in Physiology. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Letter grades only. M. Merz

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

200. Tutorial in Physiology. (0) F, W, Sp. Prerequisite: Consent of instructor. Lecture 0.5 hour. Lecture 2 hours. Gehring and Staff

Directed reading organized in seminar or tutorial fashion to review aspects of physiology under supervision of a member of the staff.

201. Physiology of Vision. (2) S. Prerequisite: Anatomy 103 or Physiology 110 or equivalent, or consent of instructor. Lecture 2 hours. C. Berry

Study of mechanisms underlying visual sensation. Consideration is given to chemistry and anatomy of the visual system, but the emphasis is on neurophysiology, with coverage of the visual system from the photoreceptors to the visual cortex.

204. Seminar: Topics in Physiology. (1-2) F. Prerequisite: Minimum of six units of introductory physiology. Conference 1 hour. Rothman

This seminar discusses selected topics in cellular and integrative physiology. Readings are drawn from primary and secondary sources.

205. Functional Neuroanatomy Projects. (4) S. Prerequisite: Consent of Instructor. Lecture 3 hours. Lab 3 hours. Enrollment limited. Heuser

Each year a different neuroanatomical project is undertaken in order for students to learn a variety of techniques used in neuroanatomy, including histological and electron-microscopic fracture. Students will be able to complete a three-hour section on a basic aspect of electron-microscopic neuroanatomy.

206. Advanced Kidney and Electrolyte Physiology. (3) S. Prerequisite: Physiology 125 and 126. Consent of instructor. Lecture 4 hours. C. Berry

Current theories regarding renal hemodynamics and the transport mechanisms operating across renal tubular membranes are discussed, with emphasis on their role in the regulation of whole body, acid-base, electrolyte, and fluid balance.

207. Neuroendocrinology. (1-3) S. Prerequisite: Endocrinology and neural sciences or consent of instructor. M. Dalman

Mechanisms for regulation of endocrine function by the central nervous system and the influence of hormones on the brain are considered in view of anatomical, biochemical, physiological and behavioral data in the literature. Course may be repeated for credit.

210. Physiology of the Auditory, Vestibular, and Other Sensory Systems. (2) S. Prerequisite: Anatomy 103 or Physiology 101 or consent of instructor. Gehring and Staff

Lecturers and demonstrations provide basic information on the physiology of the auditory system, vestibular system, and other sensory systems. Material includes historical and current concepts derived from relevant psychophysics, neuroanatomy, and neurophysiology.

210. Cellular Mechanisms of Nervous System Secretion. (2) S. Prerequisite: Physiology 101 or consent of instructor. Lecture 2 hours. J. A. Williams

Discussion of current literature pertaining to the mechanism of hormone synthesis, packaging, and release.


Seminar presentations by guest speakers, alteration of vision of a member of the staff, and reading of the current literature. Each quarter a different topic of physiological interest is the subject of guest presentations. Course may be repeated for credit.

221. Advanced Cardiovascular, Renal, and Pulmonary Physiology. (2) S. Prerequisite: Physiology 102 or equivalent. Lecture 2 hours. Gehring

Course includes critical review of topics of current importance, presentation of unsolved problems by staff, and critical evaluation of published articles by the group. The total program is presented over six successive quarters.

222. Endocrinology Seminar. (1) F. Seminar 1 hour. Gehring

Guest lectures alternating with reports of research in progress by members of the graduate group in endocrinology. A different topic of endocrinological interest is the subject of guest presentations each quarter. Course may be repeated for credit.

250. Research. (1-8) F, W. Prerequisite: Consent of instructor. Gehring and Staff

Research in endocrinology carried out in the Department of Physiology.

298. Thesis. (0) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser. Gehring and Staff

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

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

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

300. Practicum in Teaching Physiology. (0) F, W, Sp. Prerequisite: Previous training in physiology and consent of instructor. Gehring and 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 assigned according to the individual's stage of development.

301. Scientific Writing. (0) F, W, Sp. Prerequisite: Consent of instructor. Seminar 3 hours. Gehring and Staff

A seminar workshop designed to show the pre-CR process of putting ideas into words, tables, and figures. Work done in the laboratory, and how to do so in a concise, precise, and logical form.

302. Group Practice in the Art of Lecturing. (0) F, W. Prerequisite: Consent of Instructor. Lecture 1½ hours. Enrollment limited. Gehring and Staff

A course in teaching techniques. Students present short lectures, and video tapes of these presentations are analyzed by self- and group-criticism.

Preventive Dentistry and Community Health

109.01. Community Health Problems and Practice. (0-10) W. Prerequisite: Clinics-Seminar 99 and Community Health 2. J. Fine

Students work in community clinics with the deprived areas. Both seminars and supervised clinical experience will be designed to provide students with the opportunity to relate economic, social, and cultural theory to the people they will be treating.

111. Changing Aspects of Dental Practice. (1) F. Lecture 1 hour. Wycoff

A survey course to acquaint the student with current and social problems and professional problems in dentistry. Includes identifying the patient, community, national and professional needs, and how they are met.

120. Behavioral Sciences. (1) W. Lecture 1 hour. Wycoff

A survey of the basic principles of biostatistics. Includes introduction to the basic concepts, theories, and methods of reasoning to pressing social problems and the delivery of health services.

121. Research Design. (1) F. Lecture 1 hour. Wycoff

Course presents basic principles of biostatistics. Includes introduction to the basic concepts, theories, and methods of reasoning to pressing social problems and the delivery of health services.

168. Community Health Methods. (2) F. Silverstein

Dental hygiene students work in the North Oakland community with children and youth Program staff. Students are assigned to areas where oral screening is done. Students also make home visits.

180.01. Practice Management of Doctor and Patient Relationships. (1) F. Seminar 1 hour. S. Gold

Participatory seminars utilizing role playing, open discussions, and exercises to study interpersonal relationships in dentistry. The covered topics include active listening, effective ways of communicating, and negotiation and conflict-solving.


Students work in the Guadalupe Health Center, providing direct services to a community setting of comprehensive health care.


A collaborative project in the skills of dental hygiene, the practice of dental hygiene, and the role of the dental hygienist in patient care. The course includes instruction on the health care delivery systems, health policy, and the practice of dental hygiene.

180.03. Community Health Methods. (0) F, W, Sp. Seminar and Clinic Variable. Tardiff

Students work at the South of Market Health
140.01. Advanced Clinical Clerkship in Psychiatry, (110) per week Su, F, W, Sp. Prerequisite: Psychiatry 110 and consent of instructor. Boatman Participation, with supervision of Department of Psychiatry attending and resident staff, in psychiatric ward and other facets of care in association with adult or child inpatients or outpatients. Seminars, assigned reading and case presentations may be required.

140.02. Clinical Clerkship, (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Boatman Clinical clerkship in off-campus hospitals, approved by the chairman of the department and the Dean.

140.04. Psychiatric Clerkship at VMC, (1½ per week) Su, F, W, Sp. Prerequisite: Psychiatry 110-G. Solomon Course provides clinical clerkships in psychiatry within the Fresno community mental health system, and includes inpatient, crisis, and rural services with individualized supervision. A limited number of housing accommodations or stipends are available.

140.05. Clinical Psychiatry, (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Boatman Participation, under close supervision in accordance with students’ level of experience and special interests, in clinical psychiatric treatment of patients. Murphey Clinical experience in inpatient, outpatient, and community mental health settings, and community health agencies.

150.01. Psychiatric Research, (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Callaway Participation according to students’ level of experience in experimental research, such as neurophysiology, operator conditioning, psychophysiology, immunology, and non-contact electrical activity. Oswald Research directed toward the close supervision of members of the faculty.

150.02. Block Elective in Human Development, (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Fiske and Staff Guided reading and research in human development. Topics may include: biological aspects of human experience, with emphasis on personality, and the development of personal identity. S. Goldstein Research topics may include: life-span development, cognitive development, and social development.

150.03. Clerkship in Human Sexuality, (1½ per week) Su, F, W, Sp. Prerequisite: Psychiatry 180 and consent of instructor. S. Goldstein An introduction to sexual functioning, sexual dysfunctions and their treatment, the spectrum of human sexual experiences and normal sexual values. A paper or project will be required.

160.01. Psychopathology of Speech and Language, (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 2 hours. Boatman A clinical course focusing on speech and language pathology. Students’ eligibility depends on previous experience with psychiatric and neurologic groups and specific problems of communication. Patients with characteristic syndromes will be interviewed and suitable treatment procedures are performed under supervision.

160.02. Clinical Psychiatric Rounds, (2) W, Sp. Prerequisite: Consent of instructor. Seminar and clinic 2 hours. Berblingerd Psychiatric inpatients are interviewed and their clinical history is reviewed, and their diagnosis established as the basis for discussion of psychiatric diagnosis. A seminar format allows for free discussion between students and instructor.

160.03. Demonstration of Psychotherapy with Outpatients, (2) W, Sp. Prerequisite: Psychiatry 131A-B or consent of instructor. Lecture 2 hours. Berblingerd Students observe psychotherapeutic session with outpatients who are under intensive treatment. The observation session is followed by a seminar discussion. The purpose of the course is audio-visual participation in and viewing of models of intensive psychiatric treatment.

160.07. Psychotherapy for Outpatients, (3-7) Su, F, W, Sp. Prerequisite: Psychiatry 130 and consent of instructor. Lecture 3 hours, Lab 0-12 hours. Amini Practical experience in psychotherapeutic work with outpatients to increase students’ understanding of psychotherapy, psychodynamics, and psychotherapeutics. Students are assigned patients under supervision of a member of the faculty. Assigned reading, seminars, and chart writing.

160.08. Psychosomatic Case Conference, (1½) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1½ hours. Cases are presented in rotation by social work students. Emphasis is placed on the interrelationship between psychological, social, and somatic factors. Oswald Although primarily intended for social work students, course may be taken by psychiatric residents and other mental health professionals. Supplementary reading materials may be assigned.


160.13. Hysteria, (2) F, W. Prerequisite: Consent of instructor. Lecture 2 hours. Berblingerd Seminar course designed for students who intend to enter psychiatric or related specialties. Emphasis is on the diagnosis and management of the hysterical personality in medical practice. Clinical case material will serve as a basis for assigned reading.


160.15. Introduction to Sex Counseling Principles, (4) § Su, F, W, Sp. Prerequisite: Psychiatry 160 or 180. Consent of instructor. Lecture 30 hours, Lab 20 hours. Course is given over a weekend. D. H. Wallace and Staff A didactic experimental overview of the etiology and nosology of a fundamental aspect of the principles underlying treatment. Lectures, clinical demonstrations, and group process are included.

160.17. Sexuality and Disability, (1) Su, F, W, Sp. Prerequisite: Psychiatry 160 or 180, or consent of instructor. Lecture 12 hours. Course is given over a weekend. Course covers the role of sexuality in rehabilitation of the physically and mentally handicapped, and principles of sexual counseling of the handicapped. Lectures, films, seminar, and community resource people will be involved.

160.18. Videotape Demonstration of Psychotherapy, (10) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1½ hours. Nellen Videotapes of psychotherapy are shown after each therapy session. Therapist is eclectic and emphasis is on essentials of psychotherapy and the overlapping of various theoretical views. Discussion is encouraged, and ranges widely.

170.01 Introduction to the Study of Suicide, (2) F. Prerequisite: Consent of instructor. Lecture 2 hours. Motto Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field.

170.03. Behavioral Specialist Pathway Elective, (2-6) F, W, Sp. Prerequisite: Psychiatry 110. Boatman Students in the Behavioral Specialist Pathway elect individual or group topics not included in other formal courses. Supervised reading, research, field-work, and clinical assignments are given in accordance to the student’s level of interest and experience.

170.04. Pediatric Psychiatry, (1) F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. Phillips and Staff Seminar sketches normal development from infancy through adolescence, to point out potential psychopathogenesis in the various phases of development.

170.06. Research in Human Sexuality, (2) Su, W, F, Sp. Prerequisite: Research 160 or 180, and consent of instructor. Lecture 1 hour, Lab 3 hours. D. H. Wallace Seminar and/or research in various topics related to human sexuality.

170.07. Mental Health Aspects of Social, Physical, and Sensory Deprivation, (2) W. Prerequisite: Consent of instructor. Lecture 2 hours. I. Schlesinger, Meadow, Brinch
184. The Social Organization of the Hospital. (J. F. W. Sp. Open to registered students for credit. Other members of the campus community may audit. Course. Seminar 3 hours.)

Gerson
Analysis of work organization in large hospitals, with special emphasis on structural imperatives to effective performance; conduct of the relationships among health workers and patients, and impact of the hospital organization on the health worker and patient quality of life.

185. Women’s Sexual Health Education Seminar. (J. F. W. Sp. Lecture 16 hours given over two terms.)

D.H. Wallace
Female sexuality is studied as an entity of its own, rather than merely a distillation. Emphasis is on increasing personal knowledge through the study of physiological, psychological, social and cultural influences on sexuality, both historical and current.

186. Supervised Study in Psychiatry. (1-5 J. F. W. Sp. Prerequisite: Consent of instructor. Library and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.)

187. Laboratory Project in Psychiatry. (1-5 J. F. W. Sp. Prerequisite: Consent of instructor. Laboratory 15 hours.)

J. E. Epstein and Stein
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

2004-A-B-D-E-F-G-H-I-Mental Health Practicum — Outpatient Services. (3-3-3) F. W. Sp. Prerequisite: Graduate standing in the Doctor of Mental Health Program. Other students may enroll with consent of instructor. Lecture 1-3 hours. Lab 6-15 hours.

211. Theoretical Bases of Psychotherapeutic Inquiry. (1-5 J. F. W. Sp. Prerequisite: Consent of instructor. Lecture 15 hours.)

Wanerman
Supervised practicum in diagnosis and treatment of psychiatric outpatients. Students are responsible for diagnostic evaluations, treatment planning, psychiatric consultations, and ongoing psychotherapy. Course includes observation concerning appropriate use of psychopharmacologic agents, outpatient clinic meetings, rounds, case conferences and seminars.

2012-B-C-D-E-F-G-H-I-Mental Health Practicum — Children’s Service. (1-5-5) F. W. Sp. Prerequisite: Graduate standing in the Doctor of Mental Health Program. Other students may enroll with consent of instructor. Lecture 0.2 hours. Lab 3-9 hours.

Spielman
Supervised practicum in provision of psychiatric services for children. Course includes diagnostic evaluations, treatment planning, ongoing psychopharmacotherapy of children and their families, consultative work with school personnel, pediatricians, case conferences and seminars relating to child psychiatric services.

2024-B-C. Mental Health Practicum — Inpatient Services. (5-5-5) F. W. Sp. Prerequisite: Graduate standing in the Doctor of Mental Health Program. Other students may enroll with consent of instructor only. Lecture 1 hour. Lab 11 hours.

Under supervision, students assume responsibility for care of psychiatric inpatients. Course includes individual psychotherapy, group, family and milieu therapy, instruction in the use of psychotropic medications, administrative issues in patient management, working with other ward staff and related seminars.

2034-B-C. Mental Health Practicum — Psychiatric Emergency Services. (3-3-3) F. W. Sp. Prerequisite: Graduate standing in the Doctor of Mental Health Program. Other students may enroll with consent of instructor only. Lecture 1 hour. Lab 4.5 hours.

Zatzkin
Supervised practicum in psychiatric emergency services. Course includes crisis evaluation, triage, disposition and treatment planning, crisis intervention, brief psychotherapy, instruction in the use of psychotropic medications, case conferences and seminars on consultation in the office of the Doctor of Mental Health.

2044-B-C. Mental and Psychological Issues in Patient Care. (3-3-3) F. W. Sp. Prerequisite: Graduate standing in the Doctor of Mental Health Program. Other students may enroll with consent of instructor only. Lecture 1-1.5 hours. Lab 4.5 hours. D. Rosen, H. T. Stein
Exploration of psychiatric and psychological issues in medical and biological issues in psychiatric care. Course includes varied, supervised experiences such as rounds in the general hospital, consultations in medical and biological units, and lectures and seminars on related topics.

212. Mental Health Consultation. (1-2) F. W. Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Field work and readings.

M. R. Harris
Course will focus on history, classification, concepts and theory as well as practice considerations relating to mental health consultation. In addition to seminars and related readings, students will have proper arrangements supervised field experience in mental health consultation.

213. Advanced Mental Health Consultation. (1-3) F. W. Sp. Prerequisite: Psychiatry 212 and consent of instructor. Lecture 1 hour. Field work optional 5 hours.

Participants in this seminar have current or recent responsibility for a mental health consultation. Focus is on advanced techniques of mental health consultation. Consultation experience provide the major content for discussion.

214. The Practice of Clinical Social Work. (1-1) F. W. Sp. Prerequisite: Consent of instructor. Lecture 1 hour.

Abern
Theoretical background for trainees in psycho-social diagnosis; individual and group therapy, family therapy, brief therapy and crisis intervention, cross-cultural treatment, and other related techniques. Emphasis on clinical social work with geriatric patients, the physically ill, and others.

249. Special Studies in Mental Health. (1-5 J. F. W. Sp. Prerequisite: Graduate standing in the Doctor of Mental Health Program. Other students may enroll with consent of instructor only. Lecture 0.2 hours. Lab 3-9 hours.

Steadman
Students, with faculty approval, select special areas of the mental health field for advanced or intensive study. Areas chosen are primarily clinical or nonclinical, but in most instances will combine clinical and nonclinical issues.


R.S. Wallerstein
Members of the Department of Psychiatry make clinically centered presentations reflecting all areas of the department. Presentation involves a two-session sequence, with the second week consisting of formal discussion of the previously presented work from various viewpoints.

402. Orientation to Psychiatric Research. (3-6) Su. Callaway
Guided tours through the research facilities of the Psychology Institute and introductory presentations of research projects by individual investigators.

Individual consultation with psychiatric residents and other advanced trainees concerning treatment and management problems. Diagnostic questions, indications for somatic and psychological interventions, the course of therapy, and research issues are emphasized.

404. Theories of Personality. (1-5) F. W. J. Fisher, Burke Focusing on personality theories other than Freudian, such as Piagetian, Skinner and Rogers. Course includes an examination, study and discussion of contemporary personality theories, their concepts, systematic applications to the behavioral sciences, and research potentials. Parallel reading is required.

505. Personality Assessment (1-5) W. Sp. Cantor, L. Davison
Seminar presents techniques of assessing personality and intellectual functions in relation to psychiatric and psychological assessment. Discussion of use of self-diagnosis with psychotherapy. Discussion of development, design, and theory of clinical psychological methods and clinical applications and demonstrations with appropriate case material.


Ostwald
Individual consultation is provided for psychiatric residents working with medical students in Psychiatry 110. Technical and theoretical issues in supervision and learning are analyzed, together with selected teaching assignments.
   Callaway
   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.

   Malamud
   Discussion of the neuropsychology of neurological and psychiatric disorders with illustrations from gross and microscopic material.

411. Jungian Psychoanalytic Theory. (1-1) F, W, Sp. Lec-
   ture 1 hour. Brookes
   Seminar presents a review of digital computing and its applications in psychiatry. Residents explore these concepts through their own programming ef-

414. Issues of Diagnosis and Treatment Planning. (1-10) F, W, Lecture 1 hour. R. S. Wallerstein
   Individual cases are presented by students for assessment. Goals are discussed and the rationale for the particular psychotherapeutic approach is con-

   Binger
   Survey of the literature in child development and child psychiatry. Parallel reading is required.

   Discussion of readings on major problems in contem-

429. Research in Computer Simulation and Analysis of
   (1-10) F, W, Sp. Starkweather
   Submitted research with computer methods for the simulation of behavior in clinical interactions. Ap-

430. Child Development and Personality. (1) Su, Pre-
   requist: Consent of instructor.
   F. Conrad, Friedlander, D. Morrison
   Course is focused on the most common and prevalently used methods of assessing intelligence, perceptual-motor integration and personality in children. Research is taken as it's performed and corresponding research are covered. Participation is re-

420. Issues and Research in the Treatment of
   Substance Abuse. (2) W, Sp. Prerequisite: Consent of individual students. Equivalent to Psychology 181.04. Enrollment limited.
   S. Hall, Havassy
   Survey of research on issues concerning treatment of substance abusers and of theories of etiology and treatment. Substances covered are heroin, alcohol, barbiturates, amphetamines, and cocaine. Obesity will also be included.

421. Cultural Sources of Western Concepts of Man.
   (1) F, W, Sp. Prerequisite: Third year resident standing,
   or one year of graduate experience, or consent of instructor. Seminar 1 hour. E. Burke
   Examination of religious, philosophical and scien-

   requisites: Prerequisite: Graduate or advanced resident standing. One year of advanced psychological or psychiatric work.
   Guided research using experimental, field, and
   clinical modes of investigation into the typical and
   idiosyncratic human responses to external stressors.
   The focus is on conscious and unconscious idea-
   tional, emotional, and defensive processes.

425. Mental Health Consultation. (1-2) F, W, Sp. Pre-
   requisites: Consent of instructor. Lecture 1 hour, Fieldwork and readings. M. R. Harris
   Course will focus on history, classification, con-
   cepts and theories of stress in relation to mental health consultation. In addition to seminar participation, students may, where ap-

   Participants in this seminar have current or recent
   responsibility for a mental health consultation. Focus is on the practical applications of mental health consultation. Consultation ex-

427. Advanced Psychotherapy. (2-4) Su, F, W, Sp. Pre-
   requisites: Consent of instructor. Observation of the con-
   duct of outpatient psychotherapy or equivalent. Lec-
   ture 2 hours, Lab 4-10 hours.
   M. Horowitz
   Course covers psychotherapy of selected cases with recordings of the process, supervision during treatment, and group seminars in which the therapy is reviewed in retrospect utilizing microanalytic and macroanalytic levels of abstraction.

428. Practicum in Sex Counseling. (8) Su, W, Prereq-
   uisites: Psychology 160.14 and 160.15, or 160, or con-
   sent of instructor. D. H. Wallace
   Six month rotation in the Sex Counseling Unit in-

429. Practicum in Sex Counseling. (8) B, F, Sp. Prere-
   quisites: Psychology 160.14 and 160.15, or 160, or consent of instructor. D. H. Wallace
   Must be taken in order and consecutively with 429. D. H. Wallace
   Six month rotation in the Sex Counseling Unit invol-

430. Clinical Conferences of the Child and Adoles-
   Members of the faculty and visiting professionals present clinical discussions and new developments related to the field of child and adolescent psychiatry.

431. Program Evaluation in Mental Health and Other
   Human Service Organizations. (2) F, W, Sp. Equi-
   valent to Psychology 221. Seminar 1 hour. M. B. Attiksson, Hagreaves
   A seminar course designed to provide a basic over-
   view of the organizational context of program evalua-
   tion; design and implementation of information systems; assessment of community needs; evaluation of program quality and effectiveness, and train-

   Consent of instructor. Consent of instructor. Methods of medical and medical practice; methods of intervention and pre-
   vention will be presented in a therapeutic model emphasizing psychological factors in stress disorders. Biofeedback instruments are demonstrated and applied. Course is intended for clinical practitioners.

433A-B-C. Special Seminar in Physiological—
   Callaway
   An ongoing seminar devoted primarily to the research interests of the group studying human event related potentials. It includes visiting scientists, as well as presentations by staff and postdoctoral fellows.

434. Cerebral Hemispheric Specialization and In-
  tegration. (2) Sp. Prerequisite: Background in neurophysiology, anatomy, cognitive psychology; inten-
   ded for advanced graduate students in the Department of Psychology. Seminar 2 hours. Equivalent to Psychology 181.02.
   Gain
   Group discussions of readings in seminar format on the hemispheric lateralization of functions and their clinical implications; evaluation of data from study of brain lesions, electrophysiological recordings, and brain damage.

437A-B. Proseminar in Psychological Research. (2) (2) F, W, Prerequisite: Background in statistics and
   graduate or postgraduate standing and/or consent of instructor. Seminar 2 hours. Equivalent to Psychology 266A-B.
   H. Peake, Salamy
   Students propose an original experiment, survey the literature, and present a written and oral report. A revised paper, written in proper journalistic style complete with charts, graphs, or simulated data and conclusions is also required.

438A-B-C-D. Intermediate Family Therapy. (2) (1-3) F, W, Sp. Seminar 2 hours. Lecture 2 hours. Lab 3 hours. Four-quarter course. Equivalent to Psychology 285A-B-C-D.
   Hatcher Studies in family development, communications analysis, role definition, family, marital and
   resistance systems, growth models of family therapy, and intervention techniques. Emphasis on clinical and practical issues, video presentations of families in treatment, clinical supervision of ongoing cases.

439. Psychological Development and Assessment of the
   Background in psychological assessment: intended for residents and postdoctoral fellows. Consent of in-
   structor. Lecture 110, Seminar 1 hour. Lab 0.15 hours. Equivalent to Psychology 181.06.

439. Psychological Development and Assessment of the
   Background in psychological assessment: intended for residents and postdoctoral fellows. Consent of in-
   structor. Lecture 110, Seminar 1 hour. Lab 0.15 hours. Equivalent to Psychology 181.06.

440. Impact of Health Insurance and Legislation on
   Practice. (2) F. Equivalent to Psychology 290. Lecture 1 hour.
   J. B. Robertson, Dorken
   Review of the nature and types of health insurance as economic forces in practice; discussion of health care delivery models; manpower resources and peer review systems with utilization data; proposals for national health insurance; studied; legislation of the legislative process.

441. Social and Psychological Factors in Medicine. (2) W. Equivalent to Psychology 181.05. Seminar 2 hours.
   J. B. Henderson
   Overview of the major concepts and approaches in health education, focusing on chronic disease, primary and secondary prevention of health risks and problems, societal determinants; specific techniques for helping people modify life styles.

442. Current Topics in Biological Psychology. (2) F. Equivalent to Psychology 233A-B-C. S. Hall, Salamy, H. Peake
   Seminar course focusing on a current topic in biological psychology such as neurochemistry, lateral-
   ization of brain function, psychophysiology of stress, or physiology of attention. Individual presentations and discussions are required.

443. Psychosocial Care of the Dying Patient. (2) F. Equivalent to Psychology 180. Seminar 2 hours.
   F. Waxman
   Models for dealing with psychosocial issues in-
   volved in caring for the dying patient. Emphasis on
the sequence of events encountered by the health professional and patient from diagnosis through death. This feedback instrument is intended for medical, nursing and mental health students.


Residents are responsible for the study and treatment of psychiatric patients and consultation of non-psychiatric patients under the supervision of senior staff members of the faculty. Parallel reading is required.


Program planning and consultation concerning administrative, teaching and research roles of chief residents.


I. Phillips

Residents in child psychiatry are responsible for the diagnosis and treatment of children with psychiatric problems and for therapeutic work with their parents under the supervision of the senior staff.


I. Phillips

In addition to clinical work, the residents in child psychiatry are required to supervise the work of others and to preside over treatment reviews and in-training conferences.

456. Community Mental Health. (3) Su, F, W. Sp. Prerequisite: Open to third, fourth and fifth year residents. Lecture 4 hours.

Lectures in the theory and practice of mental health consultation, program evaluation and administration of mental health services. Supervision of related field experiences by senior faculty in seminar setting. Interdisciplinary interaction emphasized.


Aminl

Introduction to the basic psychiatric syndromes; required for psychiatric residents.


Aminl

Introduction to the theory and practice of the psychiatric group and behavior therapy; required for second year psychiatric residents.


Aminl

Seminar offers instruction in the theoretical bases of psychoanalysis.


Aminl

Seminar offers instruction in the technique of psychoanalytic psychotherapy and its theoretical basis.

154 Psychiatry / Psychology

466. Interdisciplinary Seminar in Human Development. (3) F, W. Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Three-quarter course.

Fiske and Staff

Theory and research covering adolescence to old age from sociological, psychodynamic, psychological, sociocultural, and anthropological perspectives. Topics include stress, personality and cognitive change, time perspective values, socialization processes and adaptation. Reading and paper required.


Garfield

Diagnosis and treatment of psychiatric problems associated with speech, hearing, or language difficulty. Supervised clinical work with selected patients according to resident's level of experience. Instruction with such alternative audiovisual communication systems as manual signing and voice printing.


R.S. Wallerstein

Problems in psychotherapy conducted within a psychodynamic framework. Topics include: treatment indications, goals, motivation and treatability, resistance and defense, transference and counter-transference, dreams in psychotherapy, third party involvements, emergency and hospitalization, adjuvant drug management, note taking and recording, transfer and transference.


Neiken

Instructor's psychotherapeutic sessions with the patient are videotaped and played back and discussed with second and third year residents and other trainees. The material is objective and repeatable; the therapist is frank and self-critical; various theoretical views are compared.

475. Medical Decision-Making. (3) Sp. Prerequisite: Consent of instructor, Lecture 3 hours.

P.J. Hoffman

A review of selected studies drawn from decision analysis and judgment research literature. Subjective probability estimates; confidence, bias and diagnostic accuracy; Bayes-optimal strategies; computer-aided diagnosis: medical school admission decisions; judgments of clinical competence and administrative decision-making.

Psychology

113A-B. Human Growth and Behavior. (3) F, W. Sp. Prerequisite: First year standing or consent of instructor. Lecture 3 hours.

M. White

Examination of patterns and sequences of human development. Exploration of human behavior and maturation with a view to the influences affecting the human condition through the span. Various theoretical bases are explored in conjunction with biological and psychological concepts.

170. Patient Compliance. (2) W. Lecture 2 hours.

G. Stone

Patients' cooperation with health regimens contributes significantly to outcomes of health care. This course reviews factors that affect degree of compliance from sociological and examines results of attempts to improve compliance. Stress is placed on tailoring methods to specific clinical circumstances.


Garfield

Models for dealing with psychosocial issues involved in caring for the dying patient. Emphasis on the sequence of events encountered by the health professional and patient from diagnosis through death. Course is intended for medical, nursing and mental health students.

180.01. Seminar in Psychology. (1) W. Seminar 1 hour.

Plainfield

Weekly discussions in which students' clinical cases are analyzed by dynamic application of behavioral theory.

180.02. Psychological Aspects of Treatment Planning. (1) S. Seminar 1 hour.

Plainfield

This course integrates students' basic training from the specialty courses in dentistry with knowledge of the psychological considerations necessary to individual treatment. Appropriate treatment may then be planned to the practitioners' awareness of the unique needs of patients.

180.03. Advanced Psychology for Dental Hygienists. (1½) S. Seminar 1 hour.

Plainfield

Seminar discussions on the emotional aspects of interpersonal transactions among office personnel, therapists, and patient.


Consideration of psychological processes utilized by patients under stress and of alternative constructive methods for coping, with practice in using these techniques. Course is designed to help student handle stress and apply such principles to management of patient's stress.

181.02. Cerebral Hemispheric Specialization and Integration. (2) Sp. Prerequisite: Background in neuropsychology, anatomy, cognitive psychology; intended for advanced students. Consent of instructor. Seminar 2 hours. Equivalent to Psychiatry 434.

Galln

Group discussions of readings in seminar format of neuropsychology of hemispheric specialization for cognitive function, and integration of the two hemispheres; developmental, psychiatric and educational implications; evaluation of data from study of brain lesions, electroencephalographical recordings, and behavioral testing.

181.03. Clinical Biofeedback. (2) W. Sp. Seminar 2 hours.

Pelletier

Integration of biofeedback with psychotherapy and medical practice; methods of intervention and prevention will be presented in a therapeutic model emphasizing psychological factors in stress disorders. Biofeedback instrumentation is demonstrated and applied. Course is intended for clinical practitioners.

181.04. Issues and Research in the Treatment of Substance Abuse. (2) W. Sp. Prerequisite: Consent of instructor.

Galn

Survey of research on issues concerning treatment of substance abusers and of theories of etiology and treatment. Substances discussed are heroin, alcohol, barbiturates, amphetamines, caffeine and nicotine. Obesity will also be included.

181.05. Social and Psychological Factors in Medicine. (1) F. W. Seminar 1½ hours. Equivalent to Psychiatry 441.

J.B. Henderson

Overview of the major concepts and approaches in health education, focusing on chronic disease and primary and secondary prevention of health risks and problems; societal factors and individual determinants; special techniques for helping people modify lifestyles.


Brinch, H. Schlenger

Cognitive, linguistic, and emotional development of handicapped children and adults, with emphasis on sensory disabilities. Review of psychological assessment techniques, supervised experience.


Reading messages from the face and body; what patients reveal without words about their feelings and personality, and what you are revealing to them.

190A. Introduction to Teaching Communication Skills. (2) W. Sp. Prerequisite: Pharmacology 170 or equivalent. Consent of instructor. Lecture 2 hours, Lab 3 hours.

K. Jacoby

Course provides the basis for a supervised practical experience in communication skills to students in the health professions. Theory and techniques are presented through reading and classroom discussion. Students participate in exercises to gain practice in techniques.

190B. Practicum in Teaching Communication Skills. (2) Sp. Prerequisite: Psychology 190A and consent of instructor. Lecture 2 hours. Lab 2½ hours. Building on principles learned in Psychology 190A, students lead small groups of beginning students of communication skills in discussions and laboratory exercises. Students attend lecture sessions in the subsite course and meet weekly with instructor to discuss any issues.

198. Supervised Study in Psychology. (1-)F, S, W. Staff

Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.
200. Theory and Research in Learning and Cognition. (3) § Sp. Prerequisite: Graduate standing in Health Psychology. Division of courses by semester. The psychology of learning and cognitive psychology, and consent of instructor. Seminar 3 hours. Offered in alternate years. Not offered 1978-79. G. Stone

Course provides a basis for continuous reading of current research and theory in learning and cognition, and preparation for presentations in health psychology. The psychology of learning and cognitive psychology, and consent of instructor. Seminar 3 hours. Offered in alternate years. Not offered 1978-79. G. Stone

202A-B. Computer Simulation of Personality and Human Behavior (2, 3-3) § W, Sp. Prerequisite: Psychology 257 or equivalent. Lecture 1 hour, Lab 6 hours. J. Fain

Starkweather

The development and testing of theoretical models of personality are explored by means of computer programs. Students program the computer for simulation and symbol manipulation.

203. Medical Decision-Making. (3) § Sp. Prerequisite: Graduate standing or consent of instructor. Lecture 3 hours. Equivalent to Psychiatry 475. P. J. Hoffman

A review of selected studies drawn from decision analysis and judgment research literature. Subjective probability estimates; confidence, bias and diagnostic accuracy; Bayes-optimal strategies; computer-aided diagnosis; medical school admission decisions; judgments of clinical competence and administrative decision-making.

210. Personality Psychology (3) § F. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. F. Cohen

Galen and attachment issues in the study of personality; evaluation of major theories and points of view; developmental issues; theoretical and methodological issues in the study of personality; evaluation of research methods.

211A-B. Theories of Personality. (2-2) § W, Sp. Prerequisite: Graduate standing and consent of instructor. Psychology 211A is prerequisite to 211B, but may be taken independently of 211B. Seminar 2 hours. Enrollment limited. J. Fajher

Survey of major contemporary theories of personality, including some more recent, selected philosophic points of view; study of their structure, how they conceptualize personality development, how they evaluate personality phenomena, and what research is generated by them.

212. Psychological Stress and Coping. (3) § F. Prerequisite: Psychology 252 or equivalent. Lecture 3 hours. Offered in alternate years. Offered 1978-79. F. Cohen

Counsel course examines theory and research from clinical, biological, physiological, psychological, and sociological measures of stress; coping reaction patterns; coping processes; and development of effective coping strategies.

219. Health Psychology: Basic and Related Areas. (3) § W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour. E. N. Ellman

The course in basic research on subjective related issues consists of contemporary research in the areas of neurochemical, neurophysiological, and social psychological measures of stress; coping reaction patterns; coping processes; and development of effective coping strategies.

221. Program Evaluation in Mental Health and Other Human Service Organizations. (2) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 2 hours. E. Atkinson, J. Hargreaves

A seminar course designed to provide a basic overview of the organizational context of program evaluation. An overview of program quality and effectiveness, and training of evaluators.

230. Physiological Aspects of Health Psychology. (3) § F. Prerequisite: Graduate standing in Health Psychology Program or consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. Z. Stone

An overview of the regulatory system of the human body and its physiological impacts on the function and psychological consequences of abnormality. Course will provide for student reading medical literature and interacting effectively with health professionals in planning research.

231. Basic Physiological Psychology. (3) § Sp. Prerequisite: Basic courses in experimental psychology and consent of instructor. Lecture 3 hours. Lecture 1 hour. E. P. H. Poon

Central nervous systems involved in the regulation of behavior will be emphasized. Elementary neuropsychology, anatomy and neurochemistry will be discussed as background material. Focus is on the substrates of behavior of the intact organism.

232. Current Topics in Biological Psychology. (2) § Sp. Prerequisite: Basic courses in biological psychology, experimental psychology, and consent of instructor. Seminar 2 hours. J. Fajher

S. Salamy, J. H. Poon A seminar on current topics in biological psychology such as neurochemistry, localization of brain function, psychophysics of stress, or physiology of clinical sciences. Individual presentations and discussion are required.

233A-B-C. Special Seminar in Physiological-Biological Research in Psychopathology. (1-1-1) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. E. N. Ellman

An ongoing seminar course devoted primarily to the research and study of human beings in event-related potentials. It includes visiting scientists, as well as presentations by staff and postdoctoral fellows.

234. Neurochemical Basis of Abnormal Psychology. (3) § W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Seminar 1 hour. E. N. Ellman

The course in physiological psychology will consist of contemporary research on neurochemical, neurophysiological, and social psychological measures of stress; coping reaction patterns; coping processes; and development of effective coping strategies.


Survey course will be designed to provide a basic overview of subjective experience and physiological processes, including autonomic and central nervous. Review of methods of achieving increased awareness and control of physiological activity. Demonstrations, laboratory.

236. Social Psychology. (3) § F. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. N. Adler

A survey of fundamental topics in social psychology and research. Topics to be covered include attitudes, motivation and change, decision-making, role theory, group dynamics, conformity, social influence, person perception and attribution theory.

238. Independent Study. (1-6) § F, W, Sp. Prerequisite: Consent of instructor. Independent study under the supervision of a member of the faculty.

239A. Special Seminar in Cognitive-Information Processing. (1-1-1) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Special seminar in the area of cognitive information processing. Topics to be announced.

239B. Special Seminar in Personality. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Staff

Special seminar in the area of personality. Topics to be announced.

239C. Special Seminar in Developmental Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Special seminar in the area of developmental psychology. Topics to be announced.

240. Special Seminar in Evaluation. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Special seminar in the area of evaluation. Topics to be presented.

240E. Special Seminar in Physiological-Biological Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Special seminar in the area of physiological-biological psychology. Topics to be announced.

249F. Special Seminar in Social-Organizational Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Staff

Special seminar in the area of social-organizational psychology. Topics to be announced.

249G. Special Seminar in Statistics-Methdology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Special seminar in the area of statistics-methodology. Topics to be announced.

249H. Special Seminar in Health Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Staff

Special seminar in the area of health psychology. Topics to be announced.

249I. Special Seminar in Communication-Change Methods. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Staff

Special seminar in the area of communication-change methods. Topics to be announced.

249J. Special Seminar in Clinical Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Staff

Special seminar in the area of clinical psychology. Topics to be announced.

249K. Special Seminar in Other Areas of Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. F. Cohen

Staff

Special seminar in other areas of psychology. Topics to be announced.


Staff

251A-B-C. Statistics for Psychology. (3-3-3) § F, W, Sp. Prerequisite: Undergraduate courses in statistics and consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1978-79.

Introduction to statistical techniques appropriate for analyzing outcomes of experiments and field studies; analysis of variance; introduction to the general linear model, including regression; multivariate techniques; nonparametric methods; outliers and missing data sample size and statistical power.

254A. Research Methods. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. N. Adler

An overview of research designs and their associated strengths and weaknesses: experimental and quasi-experimental designs, correlation approaches, and the design of research projects, survey and questionnaire construction, use of archival data, simulations, evaluation research, participant observation and other observational techniques.

254B. Research Methods. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. N. Adler

An overview of major research approaches: experimental research, quasi-experimental research, field and evaluation research. Problem design, artifact, and issues of research design and survey questionnaire construction, use of archival data, simulations, evaluation research, participant observation and other observational techniques.

255. Tests and Measurement. (2) § W. Prerequisite: Consent of instructor. Lecture 2 hours. O. Sullivan

Psychological test construction, including item analysis, standardization, reliability, and validity.

255A-B. Proseminar in Psychological Research. (2-2) § F, W, Sp. Prerequisite: Background in statistics and graduate or postgraduate standing and consent of instructor. Seminar 2 hours. Equivalent to Psychology 437A-B. E. P. Poon, J. H. Poon

Students propose an original experiment, survey the literature, and present a written and oral report. A revised paper, written in proper journalistic style
complete with data analysis, using original or simulated data and conclusions is also required.

257. Computer for Behavioral Sciences. (3) F. Prerequisite: Elementary statistics and consent of instructor. Lecture 1 hour. Lab 6 hours. 

The computer is studied as a useful tool for data analysis and controlled experiment. Students will learn to make use of existing program systems.

260A. The Health System. (3) § W. Prerequisite: Graduate standing in Psychology Program or consent of instructor. Lecture 1 1/2 hours. Seminar 1 1/2 hours. Offered in alternate years. Not offered 1978-79.

260B. The Health System. (3) § W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. F. Cohen

An examination of research and theoretical perspectives in certain problem areas within the health system where psychological knowledge is of direct relevance, such as psychological problems of chronic illness, psychological factors predisposing illness, compliance, depersonalization among health professionals.

263A-B. Research Placement and Seminar. (3-3-3) § W, F, Sp. Prerequisite: Consent of instructor. Seminar 1 hour. Lab 6 hours. Offered in alternate years. Not offered 1978-79. F. Cohen


265. Stress and Bodily Diseases. (3) § W. Prerequisite: Consent of instructor. Seminar 3 hours. Offered in alternate years. Not offered 1978-79. F. Cohen

266. Behavioral Psychology. (3) F. Prerequisite: Introduction to psychology and psychological and physiological models and empirical research linking stress and other psychological factors to the development of disease and unsuccessful therapeutic treatments; links between personality dimensions and health-related behaviors.

267. Reproductive Behavior. (3) § W. Prerequisite: Consent of instructor. Seminar 3 hours. Offered in alternate years. Offered 1978-79. N. Adler

270A-B-C. Communication Skills in Health Transactions. (2-2-2) F, W, Sp. Prerequisite: Graduate standing in Psychology Program or consent of instructor. Lecture 1 hour. Lab 3 hours. Offered in alternate years. Not offered 1978-79. G. Stone

Communication skills are critical in the health care environment. This course will provide students with the skills necessary to effectively communicate with patients, families, and healthcare professionals. Topics include: listening skills, questioning techniques, active listening, and assertiveness.

270A-B-C. Intermediate Family Therapy. (3-3-3) § W, F, Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Lab 2 hours. Four-quarter course. Equivalent to Psychiatry 438A-B-C-D.

Stages in family development, communication and conflict resolution, family roles and relationships, family therapy processes, and ethical issues in family therapy.


Theories and research on small groups are used to develop communication skills in various settings. Topics include: group dynamics, group norms, and group decision-making processes.

280. Clinical Approaches to Psychological Disorders. (2) F, W. Prerequisite: Psychology 280B or consent of instructor. Lecture 3 hours. Offered in alternate years. Not offered 1978-79. F. Cohen

Clinical evaluation of current models of behavior pathology including psychological and psychiatric disorders; problems of labeling and stigmatization; issues of prevention; theory and method of clinical assessment; techniques of therapeutic intervention, defenses and coping.

281A-B-C-D. Seminar in Clinical Psychology. (1-1-1-1) F, W, Sp, Prerequisite: Consent of instructor. Seminar 1 1/2 hours. Steinheilber

Seminar discussions of clinical work in clinical psychology and psychiatry, with emphasis on current literature by students and staff, and conferences by faculty. Course is intended primarily for advanced students. Seminar 1 hour.


Nature, causes, development and treatment of major behavior disorders such as the brain syndromes, drug addiction, endocrine functioning, which result in disabling disturbances of interpersonal relations. Contemporary theories of personality development are discussed and their effects on prevention and clinical practice.

283A-B. Seminar in Clinical Neuropsychology. (1-1) F, W. Prerequisite: Consent of instructor. Seminar 1 hour. Steinhilber, Davison

Clinical investigations of human brain-behavior functions, emphasizing relationships between higher cortical functions and behavior disorders. The laboratory consists of supervised neuropsychological evaluations of brain damaged patients, treatment of behavior disorders, primarily for advanced students in clinical specialties.

285A-B-C-D. Intermediate Family Therapy. (3-3-3) § W, F, Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Lab 2 hours. Quarter course. Equivalent to Psychiatry 438A-B-C-D.

Hatcher

Stages in family development, communication and conflict resolution, family roles and relationships, family therapy processes, and ethical issues in family therapy.

290. Impact of Health Insurance and Legislation on Practice. (2) F, W. Lecture 2 hours. Review of the nature and types of health insurance as economic forces in practice; discussion of health care delivery models, manpower resources and peer review systems with utilization data; proposals for national health insurance study; illustration of the legislative process.

299. Dissertation. (0) § F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate chairperson. Staff

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

300. Practicum in Teaching Psychology. (0) § F, W, or Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Lab variable. Supervised classroom or tutorial teaching experience.

Radiation Oncology

140.01. Radiation Oncology Clinical Clerkship at UC. (11-11-11) 1st week Su, F, W, Sp. Prerequisite: Medicine 131A-B-C.

Participation in examination of cancer patients under treatment in radiation oncology. Students participate in rounds, conferences and clinics, and observe demonstrations on the use of newer radiotherapeutic techniques.

140.02. Clinical Clerkship in Radiation Oncology at L. (1/2-1/2-1/2) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. J. Castro

Participation in examination of cancer patients under treatment in the Claire Zellerbach Sarcoma and Bone Tumor Institute at UC. Students participate in rounds, conferences and clinics, and observe demonstrations on the use of newer radiotherapeutic techniques.

150.01. Research Selective. (1-1/2-1/2) Su, W, F. Prerequisite: Consent of instructor. T. Phillips

Individual research in radiation oncology by arrangement with the chairperson of the department.

Students work under close supervision of a member of the staff.

403. Radiation Oncology Grand Rounds. (1) Su, W, F, Sp. Prerequisite: Consent of instructor. T. Phillips

Round include presentation of probable case meetings with discussions of diagnosis and treatment as well as biologic implications. Frequent guest lectures are used to cover important aspects of oncology.


Seminars include discussions of the diagnosis, treatment and results of specialty oncology techniques, including head and neck, gynecologic, otolaryngologic, pediatric, dermatologic, lymphomatous and other malignancies.


Study of principles of radiobiology and their application to radiotherapy. Seminars deal in depth with textbooks, selected readings and prepared seminars leading to understanding of mechanisms of action of radiation in clinical radiotherapy. Oriented to radiotherapy fellows and residents.

423. Concepts of Treatment Planning and Dosimetry in Therapeutic Radiology. (3) Su. Prerequisite: Residents assigned to therapeutic radiology. V. Smith

A workshop course to provide residents in therapeutic radiology with the elements of treatment planning and dose calculations.

424. Physics of Therapeutic Radiology. (1) F, W. Prerequisite: Residents assigned to therapeutic radiology. Lecture-Seminar 1 hour. V. Smith

A lecture-seminar course with practical sessions to provide the resident with a basic knowledge of radiological physics with special reference to those aspects related to therapeutic radiology.


Residents, under supervision, are responsible for diagnosis, treatment, and follow-up of patients referred to radiation therapy from the wards and outpatient clinics. Radiation therapy round cases are discussed by newly referred patients; chart rounds include the discussion of patients under treatment.

460. Introduction to Clinical Radiology. (2) F, W. Prerequisite: Medical 123, 124, Pathology 102, and Psychiatry 130; concurrent enrollment in Medicine 131A-B-C. Lecture 1 hour. Lab 1 hour. S. Ross

Course provides instruction in basic aspects of therapeutic and diagnostic radiology and nuclear medicine. Illustrates principles and therapeutic modalities in specific disease states provides instruction in use of radiologic resources.

460.01. Roentgen Diagnosis. (1/2 per week) Su, W, F. Prerequisite: Medicine 110 and Surgery 110. Margulis
Clerkship in radiology. Observation of procedures, review of pathology, pathophysiology, diagnosis, and natural history of cases through study of roentgenograms with case histories. Potentials and limitations of radiologic method included.

140.02. Clinical Clerkship. (1 1/2 per week) Su, F, W, Sp, Prerequisite: Medicine 131A-131-B. Margulis. Clinical clerkship in approved hospital by special arrangement and approval of the chairman of the department.

140.04. Clinical Clerkship in Nuclear Medicine. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B. Hoffer. Observation of basic nuclear medicine procedures and participation in diagnostic tests employing radiisotopic tracers. Completion of Radiology 140.04, 140.12, 170.08, and 170.09 meet the State of California requirements for licensure to use radiocative isotopes in clinical medicine.

140.05. Diagnostic Radiology MG. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Third or fourth year standing. A. Davidson. Rotation through each service in the department of Radiology on a scheduled basis; participation in film interpretation with residents and medical students; and attendance at conferences; tutorials available with members of the faculty; role of radiology in clinical management emphasized.

140.08. Clinical Clerkship in Cardiovascular Radiology (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B. Carlsson. Cardiovascular radiology provides an opportunity to become familiar with the radiologic studies of the cardiovascular system through active participation in the examinations and their interpretation.

140.09. Clinical Clerkship in Diagnostic Radiology at SFGH. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B. Perez-Mendez. Students serve a clerkship in the Diagnostic Section of Radiology. They observe the performance of radiologic procedures and interpretation of films, attend conferences, and learn basic philosophy and radiologic examinations and the rules of interpretation.

140.11. Radiology Clerkship at C (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B. Burhenn. Course includes all types of radiologic procedures, pediatric radiology, and radiation therapy with emphasis on the radiologist as a consultant to other specialties as related to use and indications for all radiologic techniques.

140.12. Radioactivity Laboratory. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Consent of instructor. Perez-Mendez. Course is designed to teach accurate measurement radioactivity techniques for biomedical purposes.

140.13. Radiology and Medical Diagnosis. (1 1/2 per week) Su, F. Prerequisite: Medicine 131A-B-C. S. Ross. A clerkship for third year students to help acquire knowledge and attitudes that ease transition from preclinical studies to clinical diagnosis. Student presentations with case presentations are used to help learn mechanisms of disease and clinical judgment.

170.05A. B-C-D. The Anatomy of Anatomy. (1 1/2, 2-3, 1-2, 1-2) Su, F, W, Sp. F. Reiger. 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. For sophomores.

170.05A. B-C-D. Pathology of Internal Organs. (1-3, 1-3, 1-3) Su, F, W, Sp, Lecture 1-3 hours. S. Ross. A lecture course limited to small groups, with active participation on selected aspects of pathological anatomy and its usefulness in understanding disease, its origins, development, and clinical manifestations. For sophomores.

170.07A. B-C. Clinical Applications of Anatomy. (1-2, 1-2, 1-2) F, W, Sp, Lecture 1-2 hours. S. Ross. 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. For freshmen.”Gold” group.

170.08. Nuclear Medicine Physics. (3 1/2) Su. Prerequisite: Concurrent enrollment in Radiology 170.08. Perez-Mendez. Introduction to the physics of radioactivity, nuclear instrumentation and gamma ray imaging techniques.

170.09. Introduction to Nuclear Medicine. (3 1/2) Su, F, W, Sp. Prerequisite: Concurrent enrollment in Radiology 170.08. Hoffer and Staff. Introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radiopharmaceuticals.

170.10. Radiologic Aspects of Surgery at SFGH. (1 1/2 per week) Su, F, W, Sp. Prerequisite: This year only. Seminar 1 hour. Perez-Mendez, R. Lim, Laing. Weekly seminar covering the radiologic studies of surgical cases emphasizing clinical implications and information derived from procedures. Active participation in X ray interpretation is included.


198. Supervised Study in Radiology. (1-2) F, W, Sp. S. Ross. Margulis 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 in Radiology. (1-3) F, W, Sp. Margulis and Staff. A laboratory research project chosen by the member of the faculty with the approval of the chairman of the department.

200. Seminars in Biophysical and Biological Physics for Physicians. (2) F, W, Sp. Prerequisite: Bachelor’s or higher degree in the physical sciences. V. Smith, R. Baker. Seminars provide physicians with an in-depth knowledge of radiologic physics, nuclear physics, and computer sciences. Consent of instructor. Lecture 4 hours. L. Kaufman. Selected readings and seminars on nuclear medicine and imaging and counting instrumentation and techniques. Principles, design, performance, and evaluation of instruments, including gamma cameras, scanners, collimators and other counters. Students will be responsible for two presentations to the staff.

295A. New Developments in Nuclear Medicine instrumentation. (5) F, W, Prerequisite: Graduate course in quantum mechanics, electricity and magnetism, nuclear physics, and computer sciences. Radiology 295A and consent of instructor. Lecture 5 hours. L. Kaufman. Selected readings, techniques and seminars on recent developments in new instrumentation and computer use, including gamma cameras and scanners, semiconductor detectors, stable tracer techniques, computer systems and applications, high resolution detectors and tomographic reconstruction. Students will be responsible for two presentations to the staff.

400. Seminar in Diagnostic Radiology. (1) Su, F, W. Lecture 1 hour. H. Goldberg and other departments and other departments lecture and discuss various diseases of all systems of the body. Residents prepare case histories stressing roentgen findings and correlation of surgical and diagnostic work, special studies, library, and film research.

401. Diagnostic Case Rounds. (2) Su, F, W, Sp. H. Goldberg, M. Margulis, Gooding. 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 pathologic findings.


403. Emergency Radiology. (1) F, W. Prerequisite: Required for first year residents in radiology. Lecture 1 hour. Role of radiologist as consultant in the emergency room; head injuries, fractures, dislocations, blunt and penetrating chest trauma, blunt and penetrating abdominal trauma, trauma to genito-urinary system; management of contrast reactions; indications for, conduct of, interpretation of special radiologic procedures.

405. Radiological Research. (1-8) Su, F, W. Sp. Elective. M. Margulis. Numerous research projects are conducted in the department and facilities are available for new ones. Residents are encouraged to take advantage of these opportunities.

406. Elements and Clinical Applications of Radiation Physics. (2) Su, F, W, Lecture 2 hours. Seidlitz. The elements of radiological physics are studied in a series of lectures. The basic phenomena experienced in producing, measuring, and absorbing radiation are illustrated. Course is designed to give residents in radiology the necessary background to practice radiology.

408. Radiology in Specialty Seminars. (3) Su, F, W, Sp. SF Cahoulson, M. Margulis. Interdepartmental seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature is presented. Course includes special topics such as tube rounds, consultative tumor board, clinicopathological conferences, and other department grand rounds.

409. Radiology in Specialty Seminars. (3) Su, F, W, Sp. SF Cahoulson, M. Margulis. Interdepartmental seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature is presented. Course includes special topics such as tube rounds, consultative tumor board, clinicopathological conferences, and other department grand rounds.

409. Radiology in Specialty Seminars. (3) Su, F, W, Sp. SF Cahoulson, M. Margulis. Interdepartmental seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature is presented. Course includes special topics such as tube rounds, consultative tumor board, clinicopathological conferences, and other department grand rounds.

409. Radiology in Specialty Seminars. (3) Su, F, W, Sp. SF Cahoulson, M. Margulis. Interdepartmental seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature is presented. Course includes special topics such as tube rounds, consultative tumor board, clinicopathological conferences, and other department grand rounds.

410. Radiobiology: Radiation Effects on Genes and Chromosomes. (2) W. Prerequisite: Consent of instructor. Lecture 2 hours. S. Wolf. Concepts and mathematics of target theory related to damage of gene and chromosomal. Basic physical and biochemical studies on induction of inherited and intergenic mutations that give insight into the structure and interaction of radiation with biological material.

411. Introduction to Nuclear Medicine. (2) Su, F, W, Sp. Prerequisite: Concurrent enrollment in Radiology 420. Introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radiopharmaceuticals. V. A. Otvos. Course includes review of surgical pathology material and attendance at autopsy rounds.
141. Pathology. (1) Su, F.W., Sp. SFGH Minagi
Course includes presentation of pathological material of selected internists to radiologists with emphasis on the correlation of diagnostic X rays and pathological findings and a study of the pathology of patients under treatment.

141. Physics of Diagnostic Radiology. (2) W, Sp, Pre-
requisite: Radiology 406. Lecture 1½ hours, Lab 2 hours
Seldinger
A seminar course with laboratory exercises designed to acquaint the student with current knowledge of physics of diagnostic radiology.
Topics include generation and extraction of radiologic images, image conversion, recording methods, and special purpose equipment.

(2) Sp, Prerequisite: Consent of instructor. Lecture 2 hours
Cleaner, Patt
An analysis of cell population growth in tissues, tumors, and cultures. Emphasis is given to radioactive tracers such as thymidine and its biochemistry, and experimental methods for studying cell prolifera-
tion in vivo and in vitro.

Rotating assignments of topics for discussion by residents in nuclear medicine training programs in all affiliated hospitals. Critical reviews of available in-
formation in limited areas are used to provide a broad review of nuclear techniques.

241. Nuclear Medicine Physics (2) Su, W, Sp. Pre-
requisite: Residents assigned to nuclear medicine section.
Peredo-Mendez, L. Kaufman
Introduction to physics of radiology, nuclear instru-
mentation, and gamma ray imaging techniques.

242. Basic Radiologic Sciences. (3) Su
Peredo-Mendez, L. Kaufman
Course intended for first year residents in radiology; provides an introductory survey of radiobiology, diagnostic X ray physics, radiocactivity, and radiation protection.

450. Clinical Nuclear Medicine. (1½ per week) Su, W, Sp, Prerequisite: Radiology 422. Hoffer and Staff
Course designed to provide a comprehensive review and therapeutic techniques in nuclear medicine to satisfy requirements of Ameri-
can Board of Radiology for certification in diagnostic radiology and radiation therapy.

Residents, under supervision, carry out radiological examination and interpretation of X rays of patients referred from wards and outpatient clinics. The chief resident has certain administrative duties relative to the resident training program.

452. Clinical Diagnostic Radiology (1½ per week) Su, F, W, Sp, Prerequisite: Radiology 450. V.A. Overons
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 resi-
dent has certain administrative duties relative to the resident training program.

453. Clinical Radiology. (1½ per week) Su, F, W, Sp, Prerequisite: Radiology 450. SFGH Coulson
Residents are responsible for the diagnostic and therapeutic activities of the department under the direction of staff radiologists including diagnostic consultations and reports, history-taking, physical examination, radiation therapy, and follow-up of pa-
tients referred for the therapeutic consultations.

455. Radiology Laboratory. (1½ per week) Su, F, W, Sp, Prerequisite: Residents assigned to nuclear medicine section and consent of instructor.
Peredo-Mendez
Course is directed to teach accurate measure-
ment radiovitricity techniques for biomedical pur-
poses.

120. Prophylactic Prosthetics and Dental Care. (1) W, Sp, Prerequisite: Third year standing. Clinic, Variable.
Firtell
Clinic.

120A. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 110A to 110B. Clinic, Variable.
Firtell
Clinic.

120B. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120C. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120D. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120E. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120F. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120G. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120H. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120I. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120J. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120K. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120L. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120M. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120N. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120O. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120P. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120Q. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120R. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.

120S. Prophylactic Prosthetics and Dental Care. (1) W, F, Sp, Prerequisite: 120A to 120B. Clinic, Variable.
Firtell
Clinic.
Review of social change in health care systems with particular attention to implications of change at all system levels such as patients, alternative curing practices, policies, new forms of health care. Debatable on evidence and key issues.

167. Social Organization of Health Care With Primary Emphasis on Hospitals. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours. Staff
An inquiry into the nature of the organizational forms by which health care is distributed, with particular reference to problems of structure and the interaction among health care personnel.

168. Contemporary Social Problems (3) F. Lecture 2 hours.
The genesis and natural history of social problems and a substantive survey of such leading contemporary problems as race relations, juvenile delinquency, the role of women in American society, and the distribution of health services in the United States.

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

203. Social and Psychological Aspects of Chronic Illness. (3) F. W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.
Problems faced by chronically ill persons and their families in the areas of personal management, handling symptoms, managing regimes, social isolation, phases of the disease, temporal difficulties, normalization, dying. Some policy implications, including those confronting health care personnel as well as the general public.

204. Sociology of Psychiatry. (3) § Sp. Lecture 3 hours.
Psychiatric practices, professional careers, and situations conceptualized as historic, symbolic, and interactional processes.

205. The Sociology of Health Professions and Occupations. (4) F. Lecture 4 hours.
The analysis of social processes in the occupational constellation in hospitals and clinics, the medical division of labor, specialties and specialization, professional identities, organizational, and the sociology of work relationships, careers.

206. Sociology of Devalued Occupations. (2-4) F. Prerequisite: Consent of instructor. Lecture 2-4 hours.
Review and analysis of occupational theory with special reference to the trends, both social and psychological, involved in job devaluation, jobs considered "devalued." Analysis of the organization of such work: the life styles of the persons who pursue hospital occupations, sociology of work relationships.

207. Microsociology. (2-4) W. Prerequisite: Consent of instructor. Lecture 2-4 hours.
Olesen Analysis of social behavior utilizing concepts of territoriality, provemix, social schemas, review of...
208. Social Psychology of Health and Illness. (3) W. Prerequisite: Required for graduate students in sociology. Lecture 2 hours. Lab 3 hours. A. Strauss.

The relationship of social class, ethnic identification, group membership, family structure, occupation and life style to the understanding of human interaction and health professionals.

212A-B. Sociological Theory. (2-2) J Prerequisite: Sociology 212A is prerequisite to 212B. Required for graduate students in sociology. Lecture 2 hours. A. Strauss, Olesen, Staples.

An examination and evaluation of classical and recent contributions to sociological theory. The major objective is the generation of a critical capacity with respect to received theory in both its formal and substantive varieties.

213. Studies in Participant Observation. (3) J Prerequisite: Consent of instructor. Lecture 3 hours.

Schatzman

A basic course in the logic and operations of social research in the field. Lectures, readings and discussion on research strategies; entries, watching, listening, data recording, and analyzing.

214A. Discovery of Social Reality. (3) J Prerequisite: Required for graduate students in sociology. Lecture 2 hours. A. Strauss, Olesen.

A practicum in sociological field observation; course is designed to sensitize students to the habitual and behavioral patterns of individuals in public places. Observation of human aggregates in varied neighborhoods of a metropolis. Instruction in observational techniques and data organization.

214B. Discovery of Social Reality. (3) J. Lecture 2 hours. Lab 3 hours. A. Strauss.

Sociological field observation. Instruction in observation, interviewing, the definition of data, descriptive analysis, and research writing. Continuation of Sociology 214A.

214C. Qualitative Analysis. (3) J. F. Prerequisite: Sociology 214A and 214B. Lecture 2 hours. Lab 3 hours.

Examination of modes of analysis applicable to qualitative data and their conceptual and properties exhibited in student presented data.

214D. Qualitative Analysis. (3) J. W. Prerequisite: Sociology 214A, 214B and 214C. Lecture 2 hours. Lab 3 hours. A. Strauss.

Qualitative analysis; the development of substantive and formal sociological theory. Emphasis on student presentation and conceptualization.


A graduate research seminar on selected problems in microsociology especially related to urban life, the urban environment, and its bearing on health care settings such as clinics. Application and critique of research and concepts in this area.

216. Comparative Organizational Analysis. (3) J W. Prerequisite: Consent of instructor. Lecture 3 hours. Staff.

A critical review of classical and recent contributions to the sociology of formal organizations. A variety of types of organizations will be considered, with special emphasis on service organizations.

217. Seminar on the Future of the Family. (3) J. Prerequisite: Sociology 212A.

A seminar to examine the role of the family in society. Exploration of changing dating, sexual, sex-role, marital and familial patterns in the United States. Discussion of the use of theoretical, methodological, empirical, and ideological content. Issues of actual and potential power of the aging considered in light of available data and the major paradigms discussed.

218. Seminar in Sociology. (2-4) J. F. W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 2 hours. Estes.

Major paradigms in the study of community and national power structures examined in terms of theoretical, methodological, empirical, ideological and cultural content. Issues of actual and potential power of the aging considered in light of available data and the major paradigms discussed.

219. Political Sociology of Aging. (2-4) J. W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 2 hours. Estes.

A seminar in political sociology of aging. The seminar will examine the role of the family in society. Exploration of changing dating, sexual, sex-role, marital and familial patterns in the United States. Discussion of the use of theoretical, methodological, empirical, ideological and cultural content. Issues of actual and potential power of the aging considered in light of available data and the major paradigms discussed. Staff.

220. Seminar in Sociology. (2-4) J. W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 2 hours. A. Strauss.

A seminar to discuss methods and problems in current research. Course may be repeated for credit.

221. Politics of Planning in the Human Services. (3) J. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 2 hours. Estes.

Examination of trends in planning for the human services, including the role of government organizations, professionals and consumers in generating and carrying out policies, programs and policies for improving the lives and health of the aging. Staff.

222. Epistemological Problems in the Social Sciences. (4) J W. Prerequisite: Consent of instructor. Staff.

Central epistemological problems in the social sciences with a focus on the problems of measurement, reliability and validity of research. Concepts of conceptualization, scientific communication, and public information.

223. Analysis of Symbolic Systems. (2-4) J Prerequisite: Consent of instructor. A. Strauss.

Critical inspection and analysis of American symbolic systems, such as educational institutions and media of communication with respect to the diffusion and alteration of values in specific sections of the society, such as health professions.

224. Advanced Seminars in Social Psychology. (4) J W. F. W. Prerequisite: Consent of instructor. Lecture 2 hours. A. Strauss, Olesen and Staff.

An advanced seminar dealing with theoretical and conceptual problems in various areas of social psychology. Recent developments in theory and concepts will be reviewed.

225. Seminar in Urban Social Relations. (3) J. F. Lecture 2 hours. Lab 3 hours. A. Strauss.

Research seminar on selected topics in the sociology of urban living and the sociology of cities.

226. Studies in Sociology. (1-8) J. F. W. Prerequisite: Required for graduate students in sociology. Lecture 2 hours. Lab 3 hours.

Students select special problems to investigate on an individual or self-directed basis. These studies may include research on the collection, analysis of empirical data, or the development of conceptual analysis or of methodologies.

227. Research. (1-8) J. F. W. Prerequisite: Admission to doctoral study and consent of instructor. Staff.

A seminar in research methods and procedure. Students participate in writing theses for the master's degree or for a comprehensive examination required for the master's degree.

228. Dissertation. (0-8) J. F. W. Prerequisite: Advancement to candidacy and permission of the graduate advisor.

A seminar for graduate students in writing the dissertation for the Ph.D. degree.

Speech and Hearing Science


An introduction to the study and treatment of language and communication disorders. Staff.

248. Auditory Processing in Hearing Impaired Children. (3) J F W. Prerequisite: Consent of instructor. Staff.

A seminar in the study of auditory processing in hearing impaired children. Staff.

249. Speech and Language Disorders. (3) J F W. Prerequisite: Consent of instructor. Staff.

A seminar in the study of speech and language disorders. Staff.

Surgery


Core general clerkship in surgery. Students assigned to wards and clinics at UC, SFGH, VA, and CMC. Application of basic sciences, pathology, physiology, radiology, and psychiatry to surgery is emphasized in ward rounds and seminars.

111. Required Core Clinical Clerkship in Advanced Surgery. (1-8) J W. F. W. Prerequisite: Medical 110 and Surgery 110.

Students work as interns on Surgical Service; they evaluate general surgical patients pre-operatively; work with patients intra-operatively; assume graduated, increasing responsibility in post-operative management. Rounds and conferences enhance clinical experience; interaction with staff in patient care emphasized.

140.09. Clinical Clerkship in Trauma Surgery. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111 and consent of instructor.

Sheldon Clinical clerkship in the trauma service of the Department of Surgery at SFGH. The student will work at intern level as an integral part of the service.

140.10. Clinical Experience in Cardiothoracic Surgery. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 or Surgery 110 or 111. Ellis As an integral member of the cardiothoracic team, the student directly and actively shares in preoperative evaluation, operative procedures, and postoperative care. Cardiac and thoracic conferences and daily ward rounds provide the didactic teaching.

140.11. Burn Care Elective. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. Trunkey 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.


140.13. Clinical Clerkship in General Surgery at VA and Community Hospital Joaquin Valley. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. O'Hara Course provides broad clinical experience in general surgery in close association with practicing surgeons in a variety of settings in Central San Joaquin Valley. Patients are drawn from the extensive populations. Clerkship is individually designed according to the student's interests.

140.03. Clinical Cardiopulmonary Surgery. (2 Sp. Prerequisite: Third or fourth demonstration in clinical anatomy, which may be attended separately or in conjunction with weekly rounds on cardiopulmonary patients. Trunkey A weekly seminar where previously assigned papers are discussed and critiqued. Papers representen

160.08. Total Parenteral Nutrition Clerkship. (5 Su, F, W, Sp. Prerequisite: Surgery 110 and consent of instructor. Lecture 3 hours. Lab 6 hours. Sheldon Course emphasizes nutritional and metabolic requirements for the patient under consideration. Clinical rotation involves methods of preparation, administration, and monitoring of patients receiving total parenteral nutrition.

170.01. Basic Surgical Techniques. (1 F, W, Sp. Prerequisite: Anatomy 110. Lab 42. Federuska Course emphasizes the basic principles of operative surgery including aseptic and operative techniques. Students function as surgeon, assistant surgeon, and anesthetologist in the performance of specific operations on anesthesitized dogs. Postoperative evaluation, management, and car- diopulmonary resuscitation are emphasized.

170.02. Emergency Medical Care at SFGH. (1 F. Lecture 2 hours given in alternate weeks. R. Lim and Staff Topics include first aid care with an introduction to splinting, resuscitation, psychiatric and civil emergency. Format includes lectures, discussions, ﬁlm, practice, and tour of Mission Emergency. Course is offered primarily for first and second year medical students.

189. Supervised Study in Surgery. (1-5 F, W, Sp. Pre-requisite: Consent of instructor. Ebert 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 in Surgery. (1-5 F, W, Sp. Pre-requisite: Consent of instructor. Ebert and Staff A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

400. General Surgical Staff Conferences. (1½ F, W, Sp. Pre-requisite: SFGH Blaisdell, UC Ebert, VA L Way. Conferences include preparation 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.

402. General Surgical Pathology Seminar. (1 F, W, Sp. Interns and residents. UC Rambo Seminars include case reports and demonstration of the currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories.

403. General Surgical Seminar. (2 Su, F, W, Sp. Interns and residents. RDMC Heer, SFGH Blaisdell, UC Ebert, VA L Way. Seminar is held in the surgical wards with discussion of current problems concerning the diagnosis and management of general surgical patients.

450. Clinical Surgery. (1½ per week) Su, F, W, Sp. UC Ebert, SFGH Blaisdell, VA L Way, RDMC Heer, C.V. Richards Residents, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postoperative care, and attendance at follow-up clinic. Senior residents handle additions to the daily rounds, teaching, and clinical responsibilities.

452. Experimental Surgical Laboratory. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 450 and 452 may not be taken concurrently. UC Ebert, SFGH Blaisdell, VA L Way Course includes experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in general surgery.

453. Clinical and Experimental Surgery. (10 Su, F, W, Sp. Assistant residents in off-campus hospitals approved by the chairman of the department and the Dean. Course includes clinical and experimental investigation of general surgical problems and the development of technical and laboratory methods to be applied in surgery.

490. Clinical Surgery. (1½ per week) Su, F, W, Sp. SFGH Blaisdell Interns rotate through the general surgical service, including the internal medicine service. Under the direction of the attending staff, experience is provided in vascular, chest, head and plastic surgery, and surgery of major injuries.

495. Clinical Surgery. (1½ per week) Su, F, W, Sp. UC Ebert Interns, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postoperative care, and attendance at follow-up clinic.

Teaching Methodology

170. Teaching Methods. (1) F, W, Sp. Prerequisite: D.D.S. degree. Seminar 2 hours. 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 course or project including a teaching skill.

175. Practice Teaching. (1) F, W, Sp. Prerequisite: D.D.S. degree. Clinic 3 hours. Staff Practical teaching experience in selected courses under supervision of members of the staff.

180.02A-B. Practical Teaching. (0-3, 0-3, 0-3) F, W, Sp. Prerequisite: Fourth year standing or consent of instructor. Lecture 1 hour. R. J. Miller Practical teaching experience in selected courses under supervision of senior members of the staff.

Urology

Core Clerkship — Surgery 110 includes clinical clerkships in the outpatient clinics and hospitals, assistance at operations, and participation in residents’ seminars.

140.01. Urology Clinical Clerkship at UC. (1½ 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 the intern staff.

140.02. Urology Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. Tanagho Clinical clerkship in off-campus hospitals approved by the chairman of the department and the Dean.

140.03. Urology Clinical Clerkship at VA. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. McAlinhey Students work as interns on the Urology Service at VA. They also attend rounds and scheduled seminars with residents and visiting staff.

140.04. Urology Clinical Clerkship at SFGH. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 100. McNally Students work as interns on the Urology Service at SFGH. They also attend rounds and scheduled seminars with residents and visiting staff.

170.01. Fundamentals of Urology. (2) F, W, Sp. Prerequisite: completion of UC. Tanagho and Staff Seminar and library research.

199. Laboratory Project in Urology. (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 chairman of the department.

400. Seminar. (1½) Su, F, W, Sp. Tanagho Seminar includes study of the basic sciences and urologic roentgenology with members of the attending staff.


402. Urologic Clinical Seminar. (2) Su, F, W, Sp. Tanagho Seminar includes discussion of diagnosis and treatment of patients in the urology wards with the attending staff.

Surgery/Methodology/Urology

168 Surgery

169 Teaching Methodology 180.01A-B. Students teach in selected courses under supervision.

180.01A-B. Practice Teaching. (0-3, 0-3, 0-3) F, W, Sp. Lab 3 hours. R. J. Miller Practical teaching experience in selected courses under the supervision of senior members of the staff.
OFFICERS OF ADMINISTRATION

The Regents
The Regents Ex Officio
Governor of California and
President of The Regents
Edmund G. Brown, Jr.
Lieutenant Governor of California
Mervyn M. Dymally
Speaker of the Assembly
Leo T. McCarthy
State Superintendent of Public
Instruction
Wilson Riles
President of the Alumni
Association of the University of
California*
Cheryl F. Biles
Vice President of the Alumni
Association of the University of
California
Forest A. Plant
President of the University
David S. Saxton

Appointed Regents**
De Witt A. Higgs (1982), Vice
Chairman of the Board
Glenn Campbell (1984)
William French Smith (1986)
Robert O. Reynolds (1986),
Chairman of the Board
Dean A. Watkins (1984)
Joseph A. Moore (1990)
John H. Lawrence, M.D. (1988)
Gregory Bateson (1988)
Vilma S. Martinez (1990)
Verne Orr (1988)
John F. Henning (1989)
Stanley K. Shenbaum (1989)

* George D. Kiefer and Lee B. Wenzel,
Regents-designate (non-voting).
** Terms of Regents appointed by
the Governor expire March 1 of the year
named in parentheses, with names ar-
ranged in order of original accession to
the Board. The student regent is ap-
pointed by the Board for a one-year term
beginning July 1, and ending June 30 of
the year named in parentheses.

Yuri Wada (1980)
Renee P. Turkell (1979)
Principal Officers of The Regents
General Counsel
Donald L. Reidhaar
Treasurer
Herbert M. Gordon
Secretary
Marjorie J. Woolman
Faculty Representative to the
Board of Regents
John S. Galbraith (September 1, 1977 to August 31, 1979)
William R. Frazer (September 1, 1979 to August 31, 1979)
University Officers
President of the University
David S. Saxton
Vice President of the University
William B. Fetter
Academic Vice President
Donald C. Swain
Vice President, Academic &
Staff Personnel Relations
Archie Kleingartner
Vice President, Agriculture and
University Services
James B. Kendrick, Jr.
Assistant President, Coordina-
tion & Review
Dorothy E. Everett
Associate Vice President
Thomas E. Jenkins
Executive Assistant to the
President
David A. Wilson
Special Assistant to the Presi-
dent for Governmental Rela-
tions
Lawell J. Paige

The Regents & University
Officers, Emeriti
President of the University,
Emeritus & Professor, Emeritus,
of Business Administration
Clark Kerr

President of the University,
Emeritus & Professor, Emeritus,
of Economics
Charles J. Hitch
Vice President of the University,
Emeritus, and Dean of the Col-
lege of Agriculture, Emeritus
Claude B. Hutchison
Vice President of the University,
Emeritus & Professor, Emeritus,
of Agricultural Economics, &
Agricultural Economist, Emeritus
Harry R. Wellman
Vice President — Educational
Relations, Emeritus, and Pro-
essor, Emeritus, of Economics
Frank L. Kidder
Vice President — Business and
Finance, Emeritus, and Pro-
essor, Emeritus, of Political
Science
John A. Perkins

University Provost, Emeritus;
Chancellor at Santa Cruz,
Emeritus; and Professor,
Emeritus, of Mathematics
Angus E. Taylor
Vice President, Emeritus, and
Secretary and Treasurer of The
Regents, Emeritus
Robert M. Underhill
Treasurer of the Regents,
Emeritus
Owsley B. Hammond
General Counsel of the
Regents, Emeritus
Thomas J. Cunningham
Associate Counsel of the
Regents, Emeritus
John E. Landon
Director of the University Press,
Emeritus
August Fruge

Chancellors
Chancellor at Berkeley
Albert H. Bowker
Chancellor at Davis
James H. Meyer