COURSES

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 (1) course number; (2) course title; (3) units in parenthesis; (4) session offered; (5) prerequisite; (6) lecture, laboratory, clinic, etc.; and (7) 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.
C Children's Hospital and Adult Medical Center, San Francisco.
CC Crippled Children's Hospital, Phoenix, Arizona.
CCP Center for Training in Community Psychiatry, Berkeley.
CCHMC Children's Hospital Medical Center of Northern California, Oakland.
CHS Community Hospital of Sonoma County, Santa Rosa.
CM Cowell Memorial Hospital, Berkeley.
FR French Hospital, San Francisco.
GS Good Samaritan Hospital, San Jose.
H Highland General Hospital, Oakland.
IMBB Irwin Memorial Blood Bank, San Francisco.
K Kaiser Foundation Hospital, San Francisco.
KP Kaiser Permanente Medical Center, Oakland.
KSSF Kaiser Foundation Hospital, South San Francisco.
L Letterman Army Medical Center, San Francisco.
LPI Langley Porter Institute, San Francisco.
MC Maricopa County Hospital, Phoenix, Arizona.
MG Marin General Hospital, Ross.
MM Mills Memorial Hospital, San Mateo.
MZ Mt. Zion Hospital and Medical Center, San Francisco.
NAT Natividad Medical Center, Salinas.
NRMCD Naval Regional Medical Center, Oakland.
OC O'Connor Hospital, San Jose.
P Perata Hospital, Oakland.
PH Peninsula Hospital and Medical Center, Burlingame.
PHMS United States Public Health Service Hospital, San Francisco.
PMC Pacific Medical Center, San Francisco.
Q Queen's Medical Center, Honolulu, Hawaii.
RDPMC Ralph K. Davies Medical Center, San Francisco.
RHA Rancho Los Amigos Hospital, Downey.
S Stanford Medical Center, Palo Alto.
SCC Santa Clara Valley Medical Center, San Jose.
SCCHM San Francisco Community Health Service, San Francisco.
SGFH San Francisco General Hospital, San Francisco.
SFGH San Francisco Medical Center, San Francisco.
SGH Scenic General Hospital, Modesto.
SH Shriners Hospital for Crippled Children, Honolulu, Hawaii.
SI San Joaquin General Hospital, Stockton.
SM Samual Merritt Hospital, Oakland.
SMH Santa Rosa Memorial Hospital, Santa Rosa.
SSF 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.
VAP Veterans Administration Hospital, Phoenix, Arizona.
VAP4 Veterans Administration Hospital, Palo Alto.
VAP9 Veterans Administration Hospital, 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 = postdoctoral professional course. The meanings of the second (items) 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

101. Fundamentals of Epidemiology. (3) W or Sp. Prerequisite: Microbiology 100A-B, or equivalent. Lecture 3 hours, Seminar 1 hour. Petakis Lectures and seminars dealing with distribution and determinants of diseases in population. Emphasis is placed on uses of epidemiologic concepts and techniques in clinical, investigative, 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, Pedi-
130. Introduction to Medical Practice — The Profession of Medicine. (2) F.
Malloy
An introductory course introducing concepts of medical practice including physician-patient roles, health care systems, medical economics, medical jurisprudence, and bioethics. In preceptorships, stu-
dents observe physicians, relationships and processes of care, practice basic maneuvers of ex-
amination, and talk with patients.

140.02. Clinical and Community Health Programs. (1.5 per week) S. W. S. Prerequisite: Determined by students' clinical experiences and elective for which they are applying.

140.03. Occupational Medical Practice. (1.5 per week) F. W. S. Prerequisite: Consent of instructor.

140.04. Preceptorship in Primary Care. (1.5 per week) Su. F. W. S. Prerequisite: Consent of instruc-
tor.

140.05. Social Medicine Pathway Selective. (1.5 per week) Su. F. W. S. Prerequisite: Consent of instruc-
tor.

140.06. Community Rehabilitation Medicine. (1.5 per week) F. W. S. Prerequisite: Consent of instruc-
tor.

140.07 Family Medicine Clerkship in Healdsburg (1.5 per week) Su. F. W. S. Prerequisite: Medicine 110 and Pediatrics 110.

140.09 Clerkship in Rehabilitation Medicine — The Team Approach (1.5 per week) Su. F. W. S. Prerequisite: Medicine 110 or Pediatrics 110.

140.10 Family Practice Clerkship at CHS (1.5 per week) Su. F. W. S. Prerequisite: Third or fourth year standing. Medicine 110 and Pediatrics 110. Obstetrics and Gynecology 110 and Surgery 110 recommended.

140.11 Primary Care Practice Clerkship at UCSF. (1.5 per week) Su. F. W. S. Prerequisite: Third or fourth year standing. Pediatrics 110, or Medicine 110, or Ambulatory and Community Medicine 110.

140.20. Family Practice Clerkship at FMC. (1.5 per week) Su. F. W. S. Prerequisite: Third or fourth year standing. Medicine 110 or Surgery 110, plus Obstetrics and Gynecology 110 or Pediatrics 110.

140.21. Emergency Medicine Clerkship at WMC. (1.5 per week) Su. F. W. S. Prerequisite: Fourth year standing. Medicine 110, Obstetrics and Gynecology 110, Pediatrics 110 and Surgery 110.

140.22. Problem-Oriented Clinical Clerkship at STJ. (1.5 per week) Su. F. W. S. Prerequisite: Third or fourth year standing. Ambulatory and Community Medicine 110 or Medicine 110, and working knowledge of problem-oriented medical records.

140.23. Rehabilitation Medicine Clerkship at Fresno Community Hospital. (1.5 per week) Su. F. W. S. Prerequisite: Tertiary or fourth year standing. Medicine 110 or Medicine 110.

140.24. Primary Care Clerkship in a Semi-Rural Community. (1.5 per week) Su. F. W. S. Prerequisite: Third or fourth year standing. Pediatrics 110, or Medicine 110, or Ambulatory and Community Medicine 110.

140.25. Clinical Clerkship in Primary Care at a Fresno Community Hospital. (1.5 per week) Su. F. W. S. Prerequisite: Medicine 110 or Pediatrics 110.

140.26. Clerkship in Primary Care and Community Health at the Fresno County Health Department. (1.5 per week) Su. F. W. S. Prerequisite: Basic clinical rotations.

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

140.28. Clinical Aspects of Community Medicine (1-5) F. W. S. Prerequisite: Consent of instructor. Seminar and Field work 2-4 hours.

Assignments to community health agencies where students have patient contact and choose an aspect of the agency's work. Field trips are used to clarify issues in community health. Faculty from Schools of Medicine, Pharmacy, Nursing, Dentistry participate.

140.02. Clinical Occupational Medicine. (1.5-5) F. W. S. Prerequisite: Consent of instructor.

140.03. Centro Latino Elective. (1-2) Su. F. W. S. Prerequisite: Consent of instructor. Sanchez, Pascoe

140.04. Preceptorship in Primary Care. (1.5 per week) Su. F. W. S. Prerequisite: Consent of instructor. Sanchez, Pascoe

140.05. Social Medicine Pathway Selective. (1.5 per week) Su. F. W. S. Prerequisite: Consent of instructor.

140.06. Community Rehabilitation Medicine. (1.5 per week) F. W. S. Prerequisite: Consent of instructor.

140.07 Family Medicine Clerkship in Healdsburg (1.5 per week) Su. F. W. S. Prerequisite: Medicine 110 and Pediatrics 110.

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

140.08. Family Practice Clerkship at CHS. (1.5 per week) Su. F. W. S. Prerequisite: Third or fourth year standing. Medicine 110 and Pediatrics 110, Obstetrics and Gynecology 110 and Surgery 110 recommended.

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

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.

Involvement in comprehensive primary medical care of families (inpatient and outpatient); experience in patient management, including minor lacerations, acutely ill patients, and experience with paramedic ambulance systems.

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

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

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Fieldwork to explore one area or more in social medicine or community health. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare participate where needed.
170.05. Rehabilitation Medicine. (1-5) F, W. Sp. Prerequisite: Consent of instructor. Sykes, Croce
Accounting for the patient's interest in care such as chronic or crippling disease in children, surgical specialties, or disorders of special senses, individualized programs will be arranged to investigate rehabilitation and related facilities.

Staff
The nature of information processing. Concepts of problem solving with the digital computer. Representation of information within a computer system. Introduction to programming and systematic programming methodology. Examples of present and potential applications of computers to the medical environment.

172. Legal Medicine (2) F Sp. Tennenhousen
Fundamental legal principles and procedures affecting medical practice including civil, criminal, administrative, business, and insurance law, with emphasis on medical negligence, the physician's role in litigation and the hazardous areas of medical practice which most frequently occasion litigation.

A seminar exploring various aspects of primary care as related to family medicine. A practicing family physician leads discussion of topics developed by the students. Introduction to the practice aspects as well as the issues and demands of primary care.

A structured experience in the use of group process and communication skills in facilitating team work. Both experiential and didactic material will be used to illustrate the development of functioning health care teams.

175.01. The Western Medical Attitude. (1) F, W, Sp. Prerequisite: Consent of instructor. Guttentag
An exploration of the ideological premises on which medicine rests, of medicine's relationship to other disciplines, of the structure of the patient-physician relationship, and of medicine's operational concepts as seen in the West versus inadequate or superfluous systems.

175.02. Philosophical Problems of Clinical Medicine. (1) Su, F, W, Sp. Prerequisite: Consent of instructor. Guttentag
Seminar on selected writings and of topics discussed in Ambulatory and Community Medicine.

175.01. Introduction to the Allied Health Professions. (1) F, Lecture 1 hour, Lab 1 hour. Byl, Schunk
Allied health professionals will describe their training, roles, responsibilities 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 social, political, economic, and environmental factors influencing community health and provision of care. Topics include: preventive health care, community health planning, and formulation of social health policy.

182. Public Health Programs. (1) F, W, Prerequisite: Third or fourth year standing for Pharmacy students (required course); consent of instructor for other students. Petakis
Survey of major world health problems, and programs and agencies concerned with their amelioration. Relationships of pharmacy to such topics 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. Sanchez
Investigation of selected theories of migrant integration, acculturation, assimilation, and conflict with emphasis on diverse Spanish-speaking populations in urban areas; relationships between this group and formal institutions such as education, law enforcement, and medical services.

Curriculum format is used to cover the organization and function of the health care system and its subsystems, including manpower, hospitals, ambulatory care, planning regulation and control, economics, government programs, and health services research.

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

187.01. Practitioner-Patient Relationship 1. (1) F, W, W. Prerequisite: Seminar 1 1/2 hours. Schroeder, Dienst
Exposure to the communication skills and variables of interviewing techniques in medicine and related fields. Direct observation of interviews conducted by physicians and other practitioners; post-interview discussion with providers and/or patients. Analysis of key elements in the practitioner-patient interaction through videotape review.

187.02. Practitioner-Patient Relationship II. (1) F, W, W. Sp. Seminar 1 1/2 hours. Schroeder, Dienst
Providing experience in various interviewing contexts through role playing and other simulation activities. Objective of the course is the development of self-awareness as well as recognition of basic skills in practising the professional role.

188.01. Health Policy Seminar 2 (3) F. 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. Lee and Staff
An introductory series relating health care issues to health policy and ethical analysis. Specifically, "Principles of Health Policy and Ethical Analysis — A Case Study Review."

188.03. Health Policy Seminar 2. (3) Sp.
Lee and Staff
An introductory series relating health care issues to health policy and ethical analysis, specifically, "Financing Health Care."

188.06. Health and Human Rights. (3) Sp. Jonsen, Parker
Concepts of patients' rights (right to care, right of informed consent, right to treatment) are analyzed in legal and ethical contexts. Objective is to increase awareness of "rights" and to discern "rights" which impose duties on providers of health care.

189. Bioethics Workshop. (1) F. 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 hopeless cases and testing of pharmaceutical products are discussed.

189.01. Workshop in Ethics and Medical Care. (1) F, W. Jonsen, P. Lee
Lecture and workshop discussion of several medical and ethical problems including: care of endangered and defective newborns, experimentaion using normal children, public funding of sterilization programs, and chronic disease and quality of life.

189.02. Workshop in Ethics and Biomedical Issues. (1) Sp.
Jonsen, P. Lee
Lecture and workshop discussions of ethical and policy dimensions of several current biomedical is-

ues: aging and health care, fetal research, behavior technology, and the role of the pharmaceutical in- dustry in health care.

Ransom, Schroeder
Students observe family therapy sessions on videotape. Role playing family situations and therapeutic strategies will be emphasized. Appropriate readings are assigned and discussed in seminar.

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

200. Scientific, Ethical and Legal Design of Clinical Research Involving Human Subjects. (1) W. Pre-
requisite: Graduate standing. Lecture 3 hours on four days during one week.

Jonsen, M. Parker, Sheiner
Analysis of protocols for clinical research in terms of criteria for scientific validity and legal suitability; description of current local and national review process for approval of funded research.

201. Ethical Theory. (4) F. Prerequisite: Consent of instructor. Lecture 3 hours, Independent study 3 hours.
Jonsen, Leboeuf
The basic concepts and methods of philosophical ethics, with particular emphasis on respect for persons and social justice. Both classical and modern authors. Emphasis will be placed on critical analysis of ethical argument.

200. Family Practice Seminars in Medical Literacy (1/2) Su, F, W. Guide
Monthly seminars are held on recent literature in the major clinical disciplines and subspecialties as pertains to the training and practice of the family physician.

201. Family Practice Seminar in Diagnostic Radiology. (1) Su, F, W, Sp. Scheibel, Fishbein
Radiologists on attending staff present systematic review of techniques of interpretation of X rays as needed by the Family Physician. Seminars on selected medical, surgical, pediatric, urological, obstetric, and orthopaedic problems are covered. Normal findings and their variants are stressed.

202. Family Practice: Office Counseling and Family Therapy at CHS. (1 1/2) Su, F, W, Sp. Ransom, Grace
Theory and techniques for working with common emotional, behavioral and interpersonal problems
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.

408. Introduction to Rural Health at CHS. (1/2) Su, F.W. Sp.

Rodnick
Resident physicians are exposed to problems in health care delivery with a clinic in New Mexico. Topics range from the management of specific cases to the role of the family physician in the health care system.


R. Barnett, Dervin

A seminar teaching a systems approach to the understanding of family dynamics and family therapy; utilizes lectures, case discussions, and techniques for demonstrations in seminar format.


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 auditors.

412. Family Practice: Clinical Conferences at SFGH. (1/2) Su, F.W. Sp.

Massad
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.


Barnes, Donsky
A series of seminars 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. (1/2 per week) Su, F.W. Sp. Prerequisite: Refer to Medicine.

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 as well as related clinical services, e.g., Dermatology, Neurology.

462. Clinical Primary Care — Pediatrics. (1/2 per week) Su, F.W. Sp. Prerequisite: Refer to Pediatrics.

Grumbach, Dower

Interns in the Primary Care Track of Pediatrics are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Pediatrics Internship Program as well as related clinical services, e.g., Dermatology, Otolaryngology.

463. Clinical Primary Care — Pediatrics. (1/2 per week) Su, F.W. Sp. Prerequisite: Refer to Pediatrics.

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 Internship Program as well as related clinical services, e.g., Dermatology, Otolaryngology.

Anatomy

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 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.

100C. Systemic, Regional and Developmental Anatomy. (6) SS. Lecture 4 hours, Lab 12 hours.

McDowell

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.
150.01. Gross and Regional Anatomy. (1 1/2 per week)  
§ Su, W, Sp. Prerequisite: Program must be approved by Department and advisor during quarter previous to enrollment.  
Asling  
Individual or group dissection; review of gross anatomy.

156. Survey of General and Head and Neck Anatomy. (6) F. Lecture 3 hours, Lab 9 hours.  
§ Su, W, Sp. Prerequisite: Consent of instructor.  
Lavall, M. Lavall, M. Dennis  
Coleman  
The systems of the body are studied by lectures and laboratory demonstrations. The structures of the head and neck, including the central nervous system, receive major consideration. Emphasis 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.  
§ Su, W, Sp. Prerequisite: Second and third year medical students.  
Lindner  
Lindner  
Living clinical anatomy is stressed; the diaphragm, complete review of the neck, and abdominal contents. Clinical congenital anomalies are discussed in detail regarding their relationship to clinical medicine.

170.09. The Language of Anatomy. (1) § Su, W, F. Prerequisite: Concurrent enrollment in Anatomy 100.  
Asling  
A three-component elective, fostering vocabulary-building in anatomically-medical terminology, selecting history of medical and cultural themes influencing development of anatomical nomenclature, and through student oral reports on eponymic terms, introducing some major figures in anatomy.

170.10 Surface Anatomy. (0-1) Su, F, W. Prerequisite: Anatomy 100 or concurrent enrollment.  
L. Glass  
Second quarter course. Lecture 1 hour.  
Surface landmarks used in medical physical diagnosis are demonstrated on cadavers, and correlated with the concurrent anatomical dissections and radiological instruction of Anatomy 100.

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

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

A. Jones, Long  
Course covers the principles of scanning electron microscopy as well as tissue preparative techniques and applications. Approximately two-hour laboratory sessions in which students will participate in the preparation and viewing of biological specimens.

Spreng-Mills Long  
Course introduces the literature and provides training in topics such as lipid, carbohydrate, peptidase, general enzyme histochemistry and ultrastructural cytotoxicity, immunoelectronoptics; immunocytochemistry, cell fractionation. Content of course will vary from year to year depending upon students' needs and interests.

Savostin-Asling  
Course is for students desiring to supplement required course work in anatomy (School of Dentistry) with additional dissection of the lower extremity.

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

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

210. Radiation Effects on Genes and Chromosomes. (2) § W. Prerequisite: Consent of instructor. S. Wolff  
Concepts and mathematics of target theory relating to damage of genetic apparatus, biologic effects, and biochemical studies on induction of intragenic and intergenic mutations that give insight into the structure of genes and the interaction of radiation with biological material.

220. Seminar Course on Tissue Culture Methods in Biological Research. (1) § W. Prerequisite: Basic knowledge of biological principles and consent of instructor.  
Elías, R. Armstrong  
Course covers potentials and limitations of culture methods, advantages of assessing effects of various agents (e.g., hormones and vitamins) in controlled environment and use of culture methods with other research tools (cytology and microscopy of electron microscopy). Papers will be discussed.

225. Brain Organization. (4) § W. Prerequisite: Consent of instructor.  
Ralsdon  
Anatomical and physiological organization of the nervous system, including microanatomy, development and plasticity of neural networks, the manner in which neurons form systems of the brain. Lectures, laboratory and product labs.  
Ralsdon  
Examination of the neuronal organization of the nervous system, including neuroanatomy, development and plasticity of neural networks, the manner in which neurons form systems of the brain. Lectures, laboratories and product labs.

226. Neuroanatomy Seminar. (1) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours, Lab 3 hours.  
Ralsdon  
A seminar series dealing with current literature in neuroanatomy and neurophysiology.

230. Comparative Placentaion and Fetal Endocrinology. (2) F.  
Contopoulos  
A series of discussions covering the comparative anatomical and physiological aspects of placentaion and its relation to fetal development and the physiology of the fetal endocrine glands.

231. Molecular and Cellular Analysis of Development (3) § W. Prerequisite: Consent of instructor.  
Caiaro  
Molecular and cellular events relating to differentiation and development. A variety of developmental phenomena will be surveyed and related to genetic and epigenetic control mechanisms.

250. Research. (1-8) § F, W.  
Staff  
Research.
298. Thesis (0) § F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser.

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

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

301. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

302. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

303. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

304. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

305. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff


307. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

308. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

309. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

310. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

311. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

312. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

313. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff


315. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

316. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

317. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

318. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

319. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

320. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

321. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

322. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

323. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

324. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

325. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

326. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

327. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

328. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

329. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff


331. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

332. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

333. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

334. Practicum in Teaching. (1-4) § F, W, Sp. Pre-requisite: Consent of instructor. Staff

335. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff


337. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff


339. Clinical Clerkship in Anesthesiology. (3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Course surveys principles and practice in the community mental health field. Emphasis is on the significance of sociocultural factors in the determination of community needs and the delivery of mental health services.

243. Interfaces between Law and Medicine: An Anthropological Perspective. (2-3) S. Prerequisite: Consent of instructor. Staff

Cross-cultural survey of problems at law-medicine interface, including medical determinants of legal status; complementary/conflicting approaches to addiction, drugs, sexual conduct; therapeutic functions of social control procedures (witchcraft, gossip); conflicts between religious beliefs and medical/legal practices.

244. Legal Gerontology. (2-3) S. Prerequisite: Consent of instructor. Staff

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

245. Health and Human Migration. (2-3) S. Prerequisite: Consent of instructor. Todd, Ruffini

Examination of a variety of human types of migration, including cross-cultural comparisons, research, methodology, and psychological, social and health implications of these population movements. Special emphasis is placed on migration of the North American continent.

246. Comparative Medical Systems. (2-3) S. Prerequisite: Consent of instructor. Staff

A comparative examination of traditional and contemporary systems of health care delivery with special attention to the differences in disease including notions regarding etiology, prophylaxis, treatment and treatment settings, and the therapeutic encounter. Staff

247. Seminar in Contemporary American Society. (3) S. Prerequisites: Consent of instructor. Staff

A comprehensive seminar on the social and psychological aspects of contemporary American society. Staff

248. Group Study. (1-5) S. F. W. Prerequisite: Consent of instructor.

Group Study will more closely relate to special problems in anthropology under the direction of faculty. Students may select areas related to their long-term interest and future research program.

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

Independent study.

250. Research (1-8) S. F. W. Prerequisite: Consent of instructor. Staff

Core seminar in medical anthropology offered in Berkeley in fall and spring, and 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. (2-3) S. W. Prerequisite: Consent of instructor. Lecture: 2 hours, plus 3 hours independent study for 3 units.

Dunn

A review of the interactions between epidemiology and medical anthropology. Emphasis is on the medi-cal epidemiological perspective on medical etiology. Particular attention is given to behavioral epidemiology and trans-disciplinary collaboration in research.

261. Human Evolution: An Introduction to Physical Anthropology. (3-3) S. W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Staff

Pawson

Overview of evolutionary mechanisms: evolution and the cell — DNA, the genetic code; evolution and the individual — growth and development; and the population — population genetics, natural selection; evolution and the species — evolution of the primates, origin of man.

262. Statistical Methods in Medical Anthropology. (2) S. W. Prerequisites: Consent of instructor. M. King

Experimental design and statistical methods; of data analysis applicable to medical anthropology. Discussion is based on proposed research projects of students in the course.

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

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, pre-natal, early postnatal development, adolescence, senescence; and developmental adaptation and racial differences in growth.

265. Principles of Human Variation. (2) W. Staff

M. King, Pawson, Petrikas

Exploration of the extent, origin, 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.

270. Research in Population. (2) W. Staff

Ernst, Population research; research methods, sources of demographic data and studies on family planning, evaluation of the impact of birth control programs on population and health, and considerations of its use and acceptability of contraceptive methods.

279. Special Study. (1-5) S. W. Prerequisite: Consent of instructor. Staff

Independent study.

299. Dissertation. (0) S. W. Prerequisite: Advancement to candidacy and permission of the advisor. Staff

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

Biochemistry

100A-B. Cell Structure and Function. (5-5) S. F. W. Prerequisite: Consent of instructor. Rutter

Lectures and conferences in biochemistry and molecular biology presenting fundamental knowledge of cell structure and function, its applicability to medicine. Primarily for medical students.

110A-B. Cellular Structure and Function. (3-3) F. W. Lecture 3 hours. Fineberg and Staff

Lectures in biochemistry including aspects of cell structure and cellular ultrastructure, with some emphasis on the area of connective and mineralizing tissues. Fundamental knowledge is presented in the context of the cell's ability to clinical health sciences. Primarily for dental students.

111. Special Study for First-Year Students. (2) S. Prerequisite: A general course in biochemistry. Lec-tures 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 structure and cellular ultrastructure, with some emphasis in the area of drug metabolism. Fundamental knowledge is presented in the context of its applicability to clinical medicine. Primarily for pharmacy students.

150. Research in Biochemistry. (1/4 per week) F. W. Prerequisite: Consent of instructor. Staff

Research in biochemistry.

170.01. Issues in Human Nutrition. (2) S. Prerequisite: Biochemistry 100A-B. Lecture 2 hours. Offered in alternate years. Staff

Course emphasizes the critical examination and analysis of the experimental evidence that relates dietary intake of specific nutrients such as fats, cholesterol, sugar, salt, vitamins and fiber to specific human diseases such as coronary heart disease, atherosclerosis, hypertension, cancer, colds.

188. Supervised Study in Biochemistry. (1-5) F. W. 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 Biochemistry. (1-5) S. F. 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.

200A-B-C. 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 group discussions concerning general biochemistry. This course alternates biennially with Biochemistry 200D-E-F.

200D-E-F. 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. Santi, Ramachandran

A comprehensive, year-long course of lectures, problems, and group discussions concerning general biochemistry. This course alternates biennially with Biochemistry 200A-B-C.

201A. Physical Biochemistry I. (3) S. Prerequisite: A year of organic and physical chemistry. Compen-sent of instructor.

Yang

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

201B. Physical Biochemistry II. (3) S. Prerequisite: A year of organic and physical chemistry. Compen-sent of instructor.

Cooper

202. Computation in Biochemistry and Physiology. (3) § F, W. Prerequisite: Consent of instructor. Lecture 3 hours. Martinez The use of general purpose digital computers at various research levels. Elements of parameter estimation — linear and nonlinear, and of equation solving — algebraic, transcendental and differential. Elements of mathematical modelling and error analysis, computer programming in BASIC and APL.


207. Biochemistry of Connective Tissues. (2) § W. Prerequisite: Biochemistry IIA-B or equivalent and consent of instructor. Offered in alternate years. Newburn Lectures and assigned reading on chemistry, structure, and metabolism of the connective tissues, collagen, and elastin. Principles of histochemical reactions of connective tissues.

210. Current Topics. (0-5) § F, W, Sp. Prerequisite: Consent of instructor. Staff Discussion of selected areas of biochemistry, biophysics, and biomatics.

211. Biological Transport Systems. (1) § Sp. Prerequisite: Biochemistry 100 A-B, Physiology 100, and Physical Chemistry 80, 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. (2-3) § F, W. Santl Biochemically important chemical transformations from the physical organic point of view, emphasizing catalytic mechanisms pertinent to enzyme reactions, and to the development of enzyme model systems. In- termolecular 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 9 hours. Guthrie A laboratory rotation course to familiarize new departmental graduate students with various approaches to biochemical and biophysical research.


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.

250. Research. (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) § 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.

Biomaterials

11B-C. Biomaterials Science. (1-1) W. Lecture 1 hour. Jendresen Students are introduced to the physics, chemistry, and metallurgy of materials used in dentistry and how these effects physical and clinical applications. The materials studied are glassy polymers, cements, resins, waxes, coils, and metals.

120. Biomaterials Science. (1) W. Lecture 1 hour. Jendresen Students are presented with the rationale for the use of clinical restorative materials. Each major restorative material system is studied in respect to material manipulation and clinical application.

130. Biomaterials Science. (1) Sp. Lecture 1 hour. Jendresen Students are taught to analyze accurately clinical and laboratory problems with respect to major material systems. Emphasis is placed on understanding why clinical failures occur with selected materials and what biological responses can be expected.

156. Dental Materials Survey. (1) W. Lecture 1 hour, Lab 1 hour. Jendresen An introduction for the dental hygienist to the basic concepts associated with selected dental materials. Emphasis is placed on the use and manipulation of materials commonly used in the practice of dentistry.

180. Biomaterials Science. (1) Sp. Lecture 1 hour. Jendresen A survey of current research in the dental materials field, including evaluations of recently introduced materials and a review of the limitations and indications for various classes of materials used.

199. Laboratory Project in Biomaterials. (1-5) F, W, Sp. Prerequisite: Third or fourth year standing and approval of the Dean. Lecture 1 hour, Lab 0-12 hours. Staff A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

Biomatics

193A-B. Advanced Calculus and Differential Equations. (3-3-3) § F, W. Sp. Prerequisite: Biomatics 190C or equivalent.

199. Computational Methods in Applied Mathematics. (3) § F. Prerequisites: Biomatics 190A-B and 193A-B, or equivalent.

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

214. Endocrine Dynamics. (3) § F. Prerequisite: Biomatics 213A, 193A-B, and 193B, or equivalent.

250. Research. (1-8) § F, W, Sp. Staff Reading and conferences for properly qualified students under the direction of a member of the staff.

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.

Biotisistics

151. Biotisistics. (2) Sp. Lecture 2 hours. Citron Course will cover frequency distributions, graphs, centroids, averages, variability, standard deviation, probability, the binomial distribution, standard scores, the normal curve, sampling, testing hypotheses, differences between the means, correlation techniques, and linear regression.

161. Research Design and Evaluation. (3) Prerequisite: Biotisistics 151. Lecture 2 hours. Staff Citron Chi-Square, analysis of variance, significance of correlation coefficients, reliability, validity, and other statistical tests. Introduction to research and research articles, individual research, and a written report.

180. Introduction to Statistical Treatment of Clinical and Laboratory Problems. (2-3) § F, W. Sp. Lecture 2 hours, Lab optional-0.3 hours. Zippin Basic concepts and techniques for the planning and analysis of clinical studies and scientific experiments. Introduces the principles and statistical techniques to summarize qualitative and quantitative data and to draw inferences, taking into account the design and execution of the investigation.

190. Introduction to Biostatistics. (3) § F. Zippin Principles of collection and tabulation of data; measures of morbidity, mortality, and health services; standardization techniques, planning surveys; descriptive and inferential statistics.

191B-C. Introduction to the Theory of Statistics. (2-2) § F, W. Prerequisite: Differential and integral calculus or consent of instructor. Zippin Introduction to probability, distribution theory, and stochastic processes in biology and medicine.

197. Introductory Statistics. (3) § F. Lecture 2 hours. Lab 3 hours. Bostrom An introduction to probability and statistical inference including topics such as analysis of variance, simple linear regression and correlation analysis of discrete data. The laboratory focuses on the use of computer in statistical computations.

202. Regression, Analysis of Variance, and Design of Experiments. (4) § F, W. Prerequisite: Biostisistics 197. Lecture 3 hours, Lab 2 hours. Zippin This course considers analysis of variance and covariance, regression, and the statistical design of experiments.

263A. Practicum in Biostatistical Consultation. (3) § F. Prerequisite: Consent of instructor. Zippin Supervision in statistical consultation.

263B. Practicum in Biostatistical Consultation. (3) § F. Prerequisite: Consent of instructor. Zippin Supervision in statistical consultation.

Chemistry

11. Organic Chemistry. (3) F. Prerequisite: Chemistry I A-B or equivalent. Lecture 3 hours. Casagrande
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 organic reactions and functional groups.

16. Organic Chemistry — Laboratory. (2) W. Prerequisite: Chemistry 11. Lecture 1 hour. Lab 3 hours. Oppenheimer Laboratory techniques in organic chemistry.


115. Physical Chemistry. (5) F. Prerequisite: Chemistry 5 or equivalent laboratory course in quan- tanative analysis and differential and integral calculus. Lecture 4 hours, Conference and Demonstration 3 hours. Crippen, Shafer Elementary physical chemistry with particular emphasis on thermodynamics.

116. Physical Chemistry. (2) W. Prerequisite: Chemistry 115 or equivalent. Lecture 1½ hours, Conference and Demonstration 1½ hours. T. James Elementary physical chemistry with emphasis on chemical kinetics.

117. Organic Chemistry — Laboratory. (2) F. 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.

150. Survey of Physical Chemistry. (2) F. Prerequisite: Differential and integral calculus or college physics. Lecture 2 hours. Shetlar, Kutz "Intend of course is to serve as background for Chemistry 160, 161, and 162 for advanced students who lack proficiency in basic physical chemistry.


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. Normally open to third and fourth year students.

157. Organic Chemistry — Laboratory. (3) Sp. Prerequisite: Chemistry 12 and 16, Conference 1 hour, Lab 8 hours. Craig and Staff A course with some flexibility depending on the student's interest in the area of quantitative analysis and organic reactions dealing in part with compounds of pharmaceutical interest.

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

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

160. Advanced Physical Chemistry. (3) 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. Shetlar 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. Labor 6 hours. Shetlar A study of the reactions of organic compounds by applying a system of qualitative analyses to the determination of characteristic groups.

170. Group Studies Course. (1-4) F. W. Prerequisites: Consent of instructor. Shetlar, Kutz Group studies of selected topics in chemistry.

198. Supervised Study in Chemistry. (1-5) F. W. Prerequisite: 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 Chemistry. (1-5) F. W. Prerequisite: Staff A research laboratory project under direction of a member of the faculty with the approval of the chairman of the department.


204. Organic Chemistry: Reactions and Synthetic Methods. (2) F. Prerequisite: Chemistry 113 and 157, or equivalent. Chemistry 165 recommended. Lecture 6 hours. Craig and Staff A course in advanced laboratory work exemplifying the major reactions and newer synthetic methods used in organic chemistry.


208. Advanced Organic Chemistry. (3) Sp. Prerequisite: Chemistry 113 and 157, or equivalent. Chemistry 165 recommended. Lecture 3 hours.

210A. B.-C. Clinical Chemistry. (2-2-2) F. W. Prerequisite: Degree in Chemistry or Medical Technology license. Nussenbaum Principles and evaluation of chemical laboratory methods used to diagnose abnormalities in metabolism and organ function.

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

209. Quality Control. (2) F. W. Prerequisite: Enrollment in Clinical Laboratory Science major's program. Barr 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 Seminar. (1-1) F. W. Prerequisite: Consent of instructor. Brecher, Loken Specialists on various established and proposed laboratory tests will present interpretation and evaluation of tests as related to pathophysiology.

211. Computer Applications in the Clinical Laboratory. (2) Sp. Prerequisite: Enrollment in Clinical Laboratory Science major's program. Lecture 2 hours.
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. (5) F. W. Sp. Prerequisite: Pharmacology 125 and Pharmacy 129. Lecture 4 hours, Conference 2 hours.

131. Clinical Pharmacy. (6) W. Sp. Prerequisite: Clinical Pharmacy 130. Lecture 5 hours, Conference 2 hours. Winter, Riegelman and Staff. Continuation of Clinical Pharmacy 130.


135. Prelcercleration Orientation and Drug Information Analysis Service (DIAS) Rotation. (3) F. W. Sp. Prerequisite: Third year standing.

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


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

148B. Inpatient Clinical Clerkship. (9) F. W. Sp. Prerequisite: Clinical Pharmacy 148A. Clinic 40 hours for six weeks. Gambergolino and Staff. Continuation of Clinical Pharmacy 148A.

149A. Outpatient Clinical Clerkship. (5) F. W. Sp. Prerequisite: Clinical Pharmacy 132 and 135, and Pharmacology 136. Clinic 36 hours for four weeks.

149B. Outpatient Clinical Clerkship. (5) F. W. Sp. Prerequisite: Clinical Pharmacy 149A. Clinic 36 hours for four weeks. Staff. Continuation of Clinical Pharmacy 149A.

152. Problems in Drug Induced Diseases. (3) F. W. Sp. Prerequisite: Pharmacology 135 and third year standing or higher. Lecture 2 hours. Conference and Special Project 4 hours.

Tong. The phenomena of iatrogenic diseases will be studied with an 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. Sp. Prerequisite: Third year standing or higher. Lecture 1 hour, Conference and Special Project 6 hours. deLeon, Herfindal, Besto.

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 major grading criteria. Evaluation will be based on the ability to implement a program.

154. Seminar in Intraprofessional Communications. (2) F. Prerequisite: third or fourth year of standing and consent of instructor. Seminar 1 hour. Discussion lead by deLeon.

156.01. Clinical Clerkship at Ross Valley Pharmacy. (5) F. W. Sp. Prerequisite: Clinical Pharmacy 130 and 132. Consent of instructor.

Kimbire, Lofholm, Wilson. Students interview patients, maintain medication records, learn and become familiar with medication usage to determine the answers drug therapy questions generated by physicians, pharmacists, and patients in a pharmacy located within a group medical practice.

156.02. Clinical Pharmacy Clerkship at the South of Market Health Center. (5) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor.

Kimbire, Wholley, Torjoe.

Students collect data for a problem-oriented medical record in a health center. Education: patients as to proper medication usage, and provide drug therapy recommendations for patients assigned to the pharmacist for chronic therapy management.

Clinical Pharmacy

110. Orientation in Pharmacy. (2) F. Conference and Field Observation 3-4 hours. deLeon, Herfindal, Besto.

145.01. Clinical Pharmacy 145A. Clinic 1 hour. Staff. Supervised clinical pharmacy experience in an outpatient setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education.

145.02. Clinical Pharmacy 145B. Clinic 1 hour. Staff. Supervised clinical pharmacy experience in an outpatient setting. Students develop and explore their roles in an interdisciplinary health team, take medication histories, monitor drug therapy, and provide patient education.


Cupit. Students participate in the activities of the inpatient Pediatric Service. Activities include routine review of patient charts, monitoring patient response to disease and therapy, attendance at conferences and rounds, and participation in selected therapeutic consultations.

156.22. Clinical Pharmacy Clerkship in Pediatrics Special Care Unit. (1-6) F. W. Sp. Prerequisite: Clinical Pharmacy 148A, 148B or 149A, 149B. Consent of instructor.

R. H. Levin and Staff.

Students work under supervision of a clinical pharmacist and physician in preparation for the appointment to 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 Renal Medicine at UC. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 148A, 148B or 149A, 149B. Consent of instructor.

Gambergolino.

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.

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

Dong.

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

156.27. Clinical Pharmacy Clerkship in Dermatology Clinic at UC. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 132 and Pharmacy 155. Consent of instructor.

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

156.30. Clinical Pharmacy Clerkship in Pediatrics at X. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131, 132, and 148A or 148B or 149A, 149B. Consent of instructor.

Kimbire, Pigeon.

Students participate in the activities of the inpa-
tient Pediatric Service. Activities include routine reviewing of patient charts, providing therapeutic consultations where appropriate, monitoring patient response to drug therapy, attending conferences, seminars, and rounds. Special projects are assigned.

156.35. Clinical Pharmacy Clerkship in Infectious Diseases at UC (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 148A, 148B or 149A, 149B. Consent of instructor.

Kimble, Barriere

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

156.40. Clinical Pharmacy Clerkship at Sunset Men- tal Health Center. Health Service. Activities include research conferences, seminars and selective teaching assignments in Clinical Pharmacy 135. Special projects are assigned.

Kimble, Wong, Cohen

Students work with the clinical pharmacist to evaluate psychiatric patients' response to drug therapy, and present consultations reviewing overall patient therapy management in weekly seminars.

156.42. Clinical Pharmacy Clerkship at Haight- Ashbury Heroin Detoxification Unit. (1-8) F. W. Sp. Prerequisite: Consent of instructor. Kimble, Inaha

Students work as co-therapists under the supervision of psychiatric technicians to develop individual therapy plans for drug detoxification. Where needed, students will develop detailed drug information reports appropriate to specific patient care.

156.50. Clinical Pharmacy Clerkship in Inpatient Medical Service at VA. (1-5) F. W. Sp. Prerequisite: Clinical Pharmacy 148A and 148B. Consent of instructor.

Kimble, Nagan, and Staff

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

156.52. Clinical Pharmacy Clerkship in Inpatient Medicine at VAPA. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 148A, 148B or 149A, 149B. Consent of instructor.

Kimble, Furtado

Experience in various medical services at VAPA. Activities include monitoring drug therapy, consultation with house staff, and participation in conferences, seminars and rounds. Students will provide selected therapeutic consultations where appropriate.

156.60. I.V. Additives and Parenteral Fluid Therapy at UC (1-4) F. W. Sp. Prerequisite: Clinical Pharmacy 148A and 148B. Consent of instructor.

Kimble, Chan

Students participate in I.V. fluid therapy selection and preparation, and monitor patients receiving intravenous medications. Conferences will be held on topics related to problems in the use of intravenous fluid therapy in various disease states.

156.70. Clinical Pharmacy Clerkship in Drug Information Analysis Service at UC. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131, 132 and 135. Consent of instructor. Copil and Staff

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 dis- semination of drug information. Conducted under drug information service. Activities include answering drug information requests from community practitioners.

156.78. Clerkship in Clinical Pharmacology at SFGH. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 148A, 148B or 149A, 149B or equivalent. Consent of instructor.

Tong

Students are assigned to an interdisciplinary setting, assessing clinical problems relating to the selection, pharmacodynamics, and therapeutic merits of drugs and drug products. Activities include participation in rounds and conferences, selected consultations, and evaluation and retrieval of drug literature.

165. Hospital Pharmacy. (1-5) F. W. Sp. Conference and special projects.

Beste, Oway, Herfindal

Course is intended and designed for a resident who plans to apply for the resident program in hospital pharmacy. Other students may enroll with consent of instructor.


Kimble, Rainey Staff

Group studies of selected topics in clinical pharmacy.

196.01. Clinical Clerkship at Co-op Pharmacy in Berkeley. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131, and 132. Consent of instructor.

Kimble, Kamli, Olayo

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

196.03. Clerkship in I.V. Additive Services at Mary's Help Hospital. (1-4) F. W. Sp. Prerequisite: Fourth year student, under the supervision of Koteba and Rupp

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

196.04. Clerkship in Unit Dose Systems at Mary's Help Hospital. (1-4) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131, 132 and 148A, 148B or 149A, 149B.

Kimble, Scarpase, Kahl

Practical experience in a community hospital pharmacy unit dose system. Conferences will be held on topics relating to the clinical use of the unit dose system, drug therapy problems encountered in monitoring, and interprofessional relationships.

196.27. Pediatric Specialty Clerkship at SFGH. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131, 132 and 148A, 148B or 149A, 149B. Consent of instructor.

R.H. Levin

Students participate with the pediatric staff in dealing with problems frequently encountered in general pediatric medicine, in addition to those which affect children from low income, overcrowded and substantial conditions. Activities include rounds, conferences and participation in special projects.


Ruggiero

Experience in various subspecialty areas in the Obstetrics and Gynecology Group. Students work with other health professionals, participating in conferences and seminars. They will prepare detailed consultations regarding drug therapy where appropriate.

196.42. Clinical Pharmacy Clerkship in Medicine at GS. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor.

Kimble, Tatro

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

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

Kimble, Mlya, Katcher, Rockwood

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.

196.48. Clinical Pharmacy Clerkship in Medicine at MM. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 148A, and consent of instructor.

Kimbie, 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.

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

Kimble, Levent

Students rotate through the Coronary Care, Chronic Dialysis and Communicable Disease Units where they participate in conferences, work rounds and attend selected inpatient drug therapy, practice therapeutic consults and drug information retrieval and analysis.


Kimble, Tatro Staff

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

196.76 Clinical Pharmacy Clerkship at S. I.S. F. W. Sp. Prerequisite: Clinical Pharmacy 148A, 148B or 149A, 149B. Consent of instructor.

Kimble, Nagan, and Staff

Students participate in the activities of the Division of Clinical Pharmacology. Activities include utilization of computerized patient record, adverse drug reactions, and participation in conferences and seminars. Special projects are assigned.


Kimble, Hirschman, Jinks, Spaulding

Participation in the peer review and quality assurance aspects of various health programs. Course includes selecting and preparing case histories for review, evaluating and making recommendations, and for- mulating presentation cases to the peer review committee. Didactic instruction is also included.

196.78. Drug Utilization Review at UC. (2-4) F. W. Sp. Prerequisite: Fourth year standing. McCray

Students will design a prospective drug utilization review study. After receiving 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 Board.

196.81. Clerkship in Outpatient Clinics at SF. (4) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132.

Kimble, R. Conte

Students practice in adult specialties, including those of anticoagulation, cardiac, chest, hypertension and medical screening. They consult with physicians and patients about drug therapy, provide limited patient care under supervision of pharmacist. Kimble, R. Conte

196.90. Extended Care Facilities in Marin County. (1-8) F. W. Sp. Prerequisite: Clinical Pharmacy 448A, 448B or 149A, 149B. Consent of instructor.

Kimble, R. Robertson

Students interview patients, monitor drug therapy, provide nursing in-service education, provide drug information, preparations to patients, and conduct drug utilization and adverse drug reaction studies. Documentation of activities and findings to be presented in a written report.

196.93. Clerkship in Hospitalized Nursing Facilities at Hampshire Convalescent Hospital and Central Gardens Convalescent Hospital. (3-6) F. W. Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132.

Kimble, R. Warren

Students practice in a convalescent hospital and gain exposure to the pharmaceutical services provided to such institutions by a community pharmacist. Students 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.

450. Pharmacy Clinical Work. (8-12) F. W. Sp. Prerequisite: Resident standing.

Herfindal, Beste and Staff

Residents provide pharmacy service to patients in the wards and outpatients including taking drug use histories, preparing and monitoring medication profiles, providing drug use information and consultation, and related activities. In addition, there are administrative and teaching responsibilities.


Herfindal, Mccart, Kayser

Residents provide pharmaceutical and consultation services on request. Activities include literature searches, preparing reports and other communications, and teaching 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, Beste 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, preparation of plans, and routine administrative assignments.

453. Pharmacy Clinical Research. (1-5) Su., F. W. Sp. Prerequisite: Resident standing and approval of program director.

Herfindal, Beste 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 resident program in Hospital Pharmacy.

Beste, Herfindal and Staff

Dental Auxiliary Utilization

109.01. Clinical Utilization of Dental Auxiliaries. (0-1.5) F. W. Sp. Prerequisite: Dental Auxiliary Utilization 130. Concurrent enrollment in General Dentistry 109.01. Clinic rotation 60 hours.

Ino

Clinical training in four-handed, shared dentistry using full time chairside dental assistants. Course is conducted in three weeks block of eight students at SFGH in conjunction with the general dentistry rotation. General Dentistry 109.01.

120. Introduction to Use of Dental Auxiliaries. (1/2) 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.

180. Managerial Aspects of Employing Auxiliary Personnel. (1) Sp. Prerequisite: Dental Auxiliary Utilization 120. Lecture 1 hour.

Ino

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

Dental Health Education

150B. Introduction to Patient Education. (2) Lecture 2 hours.

Francisco

The student is acquainted with theories and methods of the basic principles of education and learning. These are further applied to patient instruction, motivation, and attitude development. Students also participate in the design, research, and construction of table clinics.

150C. Chairside Dental Health Education. (2) Sp. Prerequisite: Dental Health Education 150A. Clinic 2 hours.

Francisco

Students are acquainted with theories and methods of education and motivational techniques that apply to their role as a private practitioner. Appropriate experiences are provided to utilize this knowledge.

160A. Community Dental Health. (2) F. Prerequisite: Dental Health Education 150B and 150C. Lecture 2 hours.

Francisco

Students are acquainted with theories and methods of education and motivational techniques that apply to their role as a school dental hygienist. Appropriate experiences are provided to utilize this knowledge in local junior high schools, colleges and universities.

160B. Community Dental Health. (2) W. Prerequisite: Dental Health Education 150B and 150C. Lecture 2 hours.

Francisco

Students are acquainted with theories and methods of education and motivational techniques that apply to their role as a professional resource person in the community. Appropriate experiences are provided to utilize this knowledge in local colleges and universities.


Francisco

Library research and directed reading under supervision of instructor.

199. Laboratory Project in Dental Health Education. (1-5) F. W. Sp. Prerequisite: Dental Health Education 150B, 150C, 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.

Dental Hygiene

109. Clinical Dental Hygiene. (1-2) SS. Prerequisite: Dental Hygiene 155A-B, 159, and approval of the chairman of the division. Clinic 3-6 hours.

Poupard

Provides additional clinical dental hygiene experience after entry into the second year clinic.


Francisco

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.

150.01. Dental Morphology. (2) F. Prerequisite: Conception of Form in Dental Hygiene 150A. Halstead.

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.

151. Orientation to Dentistry. (1) W. Lecture 1 hour.

Poupard

Students are familiarized with clinical dental procedures. Subject areas to be covered are those such as anesthesia, operative dentistry, oral surgery, pedodontics.

155A-B. Introduction to Clinical Prophylaxes. (2-2) F., W. Lab 3 hours, Clinic 3 hours.

Poupard

Manipulate, as well as practical and clinical, in the laboratory and clinic for the purpose of learning instrumentation techniques of oral prophylaxis in addition to taking medical histories and performing oral inspections.

159. Clinical Oral Prophylaxes. (2) Sp. Prerequisite: Dental Hygiene 155A-B. Clinic 6 hours.

Poupard and Staff

Continuation of clinical experiences from Dental Hygiene 155A-B with emphasis on improved proficiency in all areas.

160A-C Office Management and Ethics. (2-2) F. Sp. Lecture 2 hours.

Fallbot

Students identify their personal and professional roles as members of the dental health team and are informed of general office policies and procedures. Other subject discussions include: selection, retention, position, taxes, ethics, jurisprudence, and insurance.

161A-B. Orientation to Dentistry. (2-2) F. W. Prerequisite: Dental Hygiene 151. Lecture 2 hours.

Poupard

Continuation of Dental Hygiene 151.

169A-B.C. Advanced Clinical Dental Hygiene. (5-4-4) F. W. Sp. Prerequisite: Dental Hygiene 155A-B and 159. Lecture 1 hour Fall, Clinic 12 hours Fall, P.W. Sp. Syd.

Poupard

Combination seminar and 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.

189. Special Study. (0-4) F. W. Sp. Prerequisite: Fourth year standing and consent of instructor.

Poupard

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 Clinics. (0-3) SS, Clinic Variable.
R. Miller
Clinical experience in mobile dental clinics.

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

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

Dental Jurisprudence
180. Dental Jurisprudence. (3) W. Lecture 1 hour, five sessions.
The course broadens student insight into the legal problems and obligations of dental practice.

Dental Techniques
115A-C. Basic Dental Techniques. (1-1) F, Sp. Lab 3 hours.
Stark
The first year student is oriented to the necessity for organization and method in handling dental materials. Impression taking, pouring of casts, waxing technique, investing, casting, and soldering are covered. Manipulation of restorative materials will be demonstrated and practiced.

185. Introduction to Basic Dental Techniques. (2) SS. Lab 18 hours, for three weeks.
Brigante
Technical orientation to the basic techniques taught in the first year of dentistry such as morphology, prophodontics, biomaterials, operative dentistry.

Dermatology
First-Year Coordinated Instruction — Medicine 131A-B-C. Lecture-demonstrations and section 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. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Consent of instructor.
Cram
Activities of enrollees are determined after an initial interview with the instructor. Emphasis is placed on routine outpatient and inpatient care and research methods, according to individual interest.

150.01 Research in Dermatology. (3 1/2 per week) Su, 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. (1-5) Su, W, F, Sp. Prerequisite: Consent of instructor.
W. L. Epstein
Activities of enrollees are determined after an initial interview with the instructor. Emphasis is placed on routine outpatient and inpatient care and research methods, according to individual interest.

160.02 Inpatient Management. (1) Su, F, W, Sp. Prerequisite: Third or fourth year standing. Conant
Daily rounds of inpatient dermatology patients. Informal discussions of diagnosis and management of the hospitalized dermatology patients.

160.03 Introduction to Dermatology. (1) W. Prerequisite: Second year standing. Cram and Staff
Introduction to the basic language, diagnostic techniques, and recognition of common skin disorders seen by the practitioners. Course includes patient demonstrations followed by open discussions and color slides of the pertinent disease.

199. 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) F, W, Sp.
W. L. Epstein and Staff
Residents prepare and present case histories of patients at conferences making reference to appropriate literature, special studies, and laboratory work. Conferences include discussions of new developments and research investigations by staff members and professionals from other UC departments and other universities.

JC 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.

Fukuyama
Seminar covers recent literature in dermatology. Is included is assigned reading with required reports which are evaluated by members of the faculty.

W. L. Epstein and Staff
Seminars include discussions, required reading, and reports on dermatology and the related basic sciences: embryology, myology, histopathology, and pathology including relation to dermatologic conditions; and oncology as it relates to the skin.

404. Seminar in Clinical Dermatology. (1) F, W, Sp. 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.

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

W. L. Epstein and Staff
In-depth discussion of the sciences basic to an understanding of the functioning and dysfunction of skin, including anatomy, physiology, microbiology, immunology, biochemistry, genetics and pathology. Over a three-year period, course covers all aspects of basic sciences relevant to dermatology.

Aly
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.

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

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

452. Clinical and Experimental Dermatology. (1 1/2 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.
Staff
Consideration of the health service sector of the economy, study of its structure and the pricing, financing, and allocation of health services. Emphasis on questions of public policy.

Staff
An introduction to the principles of economic analysis. Investigates the forces determining the allocation of resources, the composition of output, and the level of income and employment in the American economy. Recommended for students who have received credit for either Economics 1A or B.

180A-B. Economics. (1-1) F, W. Lecture 1 hour.
Prerequisites
Lectures and group discussions related to dental practice. Subject areas covered include equipment selection, auxiliary personnel, consultation and financial considerations, records, recall, and accounting systems. 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.
Lostroh, Papko
Basic information on animal hormones, their structures, functions and interrelationships. Concepts regarding hormonal actions are derived from chemical structure-function and biological in vivo and in vitro studies. Where possible, mechanisms will be discussed.

191. Topics in Endocrinology. (1) W. Prerequisite: Endocrinology 190 or consent of instructor. Offered in alternate years.
Papko, Lostroh
Selected topics of current interest.
192. Structure and Function of the Hormones. (2) W. Prerequisite: Course in basic biochemistry recommended. Papkoff, Ramachandran

193. Reproductive Endocrinology Seminar. (1) F, W. Prerequisite: Consent of instructor. Weiner

194. Seminar in Experimental Endocrinology. (1) F, W. Prerequisite: Lecture 2 hours. Ginsburg, Braverman

195. Reproductive Endocrinology. (2) W. Prerequisite: Consent of instructor. Lectures and assigned readings in the reproductive endocrinology of the male and female. Topics include structure and regulation of hypothalamic-pituitary-gonadal, endocrine, and associated hormones, with special emphasis on human reproduction. Research (1-8) F, W, Sp. Staff
General Dentistry


An elective course in which the student performs patient treatment in a variety of settings.

109.01 Clinical Rotation at SFGRH. (0-4) F, W. Sp. Prerequisite: Fourth year standing. Clinic and Seminar.

Darko, Khosla

Provision of comprehensive and emergency dental care for the dental families. Concepts of clinical dental auxiliary utilization will be used while rendering treatment.

109.01 Advanced Clinical Clerkship in General Dentistry at SFGRH. (0-24) Su, F, W. Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee.

Krol, 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, W. Prerequisite: Consent of instructor. K. Jacoby

Course focuses on instructional techniques and strategies useful for the beginning teacher. Emphasis is on the development of an effective personal teaching style. Experiences are planned on the graduate and professional school level.

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

Considers 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 level as a learner.

221. Allied Health Sciences Seminar. (2) § F, W, Sp. Rostinski

Graduate seminar integrating clinical experiences and academic course work of students enrolled in Kellogg Education Project. Relationships of course work experiences to future roles as allied health professionals are examined. Individual professional problems are analyzed.

300. Evaluation of Clinical Performance. (2) § F, W. Sp. Prerequisite: Consent of instructor. Rostinski

A seminar to review and develop objective techniques in the clinical performance and competence of students and practitioners. Techniques will be developed and validated for a number of clinical disciplines.

History

180. History of Dentistry. (1) W. Lecture 1 hour. Hartman

Projections, based on a background of the growth and development of the profession, develop "cases 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 standing. Schwarz, Leake

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 care.

170.02. Medical History and Bibliography. (1-5) § F, W or Sp. Lecture 1 hour. 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 socioeconomic factors influencing that growth.

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

Stages of therapy of psychotics from earliest times to the present, in relation to the changing climate of thought on the nature of the psycho process and psycho dyes.

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 science 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) SS, Lecture 1 hour. Paper required for 2 units.

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

170.08. Supervised Study in History of Health Sciences. (1-8) § F, W. Sp. Prerequisite: Consent of instructor. Rostinski

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

170.09. History of Historical Method and Methodology of Medical History. (2-4) § F, W. Sp. Prerequisite: 170.01 or equivalent. Staff

Special readings and discussion on historiography and historiographical method with biweekly seminars designed to teach students to do independent medico-historical research and writing.

201. Introduction to the History of Biology. (1-2) § F, W. Sp. Lecture 1 hour. Leake

An introductory course broad scope on the evolution of biological thought.

202. Socioeconomic Factors in the Epidemiology of Medicine. (1-2) § F, W. van der Reijs

A survey of various social and economic patterns in various times and their influence on disease.

203. Introduction to History of Neurology. (1-2) § F, W or Sp. Lecture 1-2 hours. Schiller

Introduction to the history of neurological concepts.

204. History of Non-Western Medical Systems. (1-2) § F, W. Prerequisite: History of Health Sciences 170.06 or 201. Lecture 1 hour. Veith

Seminar and directed readings on the philosophy of Asian, Indian, and other Non-Western systems.

205.01. Philosophical Foundations of Clinical Thought. (1-3) § F, W. Prerequisite: Consent of instructor. Lecture 1-3 hours. Guttenig

Reading and conferences.

205.02. Philosophical Foundations of Clinical Thought. (1-3) § F, W. Prerequisite: Consent of instructor. Lecture 1-3 hours. Guttenig

Extended reading and conferences.

206. Introduction to History of Health Science—Nursing. (2) § F, W. Student nurse, instructors and graduate students.

History of the health sciences upon which nursing practice is based. Methods and examples for teaching history in the clinical setting.

207. History to the History and Bibliography of the Literature of the Health Sciences. (1-2) § F, W. Zinn

Historical survey of health sciences literature, illustrated by works from the special collections in the library. An introduction to historical and modern reference works and bibliographic methods useful in research in the history of the health sciences.

209. Medicine in the Victorian Age. (2) § F, W. Prerequisite: Consent of instructor. Blane

The course investigates medical facilities in London in 1830-1870 along with modes of practice, social setting, and levels of scientific knowledge in the middle 19th century.

Hospital Dentistry

107. Emergency Medical Care Seminar. (1) W. Prerequisite: Postdoctoral or fourth year standing. Seminar and 2 hours of clinical experience.

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

114. Physical Diagnosis. (2) Su. Prerequisite: Enrollment in a postgraduate specialty program or consent of instructor. Lecture 2 hours.

S. Parks

Designed to prepare the oral surgeon to conduct a physical examination as a preliminary evaluation before permitting the patient to undergo procedure. Techniques of examination are demonstrated and practiced in the classroom: examination of pathologic conditions conducted at bedside.

115. History of Medical Education. (1-3) § F, W. Sp. Lecture 1-2 hours, plus paper or research for 3 units. Brigger

Lectures, discussions, and readings on the development of medical theory and practice as taught from ancient times to the present. Emphasis will be on the 19th and 20th centuries.

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

Course examines how several classical and modern authors in the Western philosophical tradition define human nature. Various basic theories and their implications for contemporary science and medicine are developed.

220. Seminar. (1-3) § F, W. Sp. Staff

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

250. Research. (1-8) § F, W. Sp. Staff

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

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

228. Thesis. (0) § F, W. Sp. Prerequisite: Advance- ment to candidacy and permission of graduate advisor. Staff

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

299. Dissertation. (0) § F, W. Sp. Prerequisite: Advance- ment to candidacy and permission of graduate advisor. Staff

For students engaged in writing the dissertation for the Ph.D. degree.
Human Development And Aging

172. Oral Biology Courses. (1) W. Prerequisite: Postdoctoral standing. Silverman, W., and Staff

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

Human Development

200A. Cell Biology. (3) F. Prerequisite: Biochemistry 100A or equivalent, or consent of instructor.

200B. Cell Biology. (3) W. Prerequisite: Biochemistry 100A or equivalent, or consent of instructor.

201. Seminar in Neurobiology. (1) T. F. W. S. Prerequisite: Consent of instructor. Dennis

*Topic in neurobiology is selected such as development, anatomy and physiology of the visual system, biochemistry of membranes, and pertinent papers from the recent literature are read and discussed. Each student must participate regularly and present one seminar per quarter.

202A-B. Basic Concepts of Neuroscience. (4-4-4) F. W. S. Prerequisite: Admission to neuroscience program or consent of instructor. Lecture 4 hours. Steinberg and Staff

*Interdisciplinary introduction to nervous system function: membrane structure, biophysics, ion transport mechanisms, neurotransmission, synaptic transmission; biochemical and metabolic aspects, development of synaptic connections, plasticity, mainly invertebrate; sensory and motor systems, mainly vertebrate, autonomic and neuroendocrine regulatory mechanisms, higher functions.

202A-B. Advanced Seminar in Human Development. (3-3-3) F, W, S. Prerequisite: Consent of instructor. Fiske (F), Suzman (W), Kiernan (Sp)

*Theory and research covering adolescence to old age from sociological, psychological, psychoanalytic, and anthropological perspectives. Topics include socialization, stress, personality and cognitive change, time perspective, values, socialization processes and adaptations. Reading and paper required. Students enroll for all three quarters.

202A-B. Seminar in Analytic Methods. (3-3-3) F, W, S. Prerequisite: Consent of instructor.

Chiriboga, Fiske (F), Kiernan (Sp)

*One quarter on quantitative methods, including longitudinal; one quarter on the quantitative and qualitative manipulation of open-ended data; and one quarter on methods of survey research. Student research materials will be used where appropriate.

202B. Seminar in Problem Formulation and Research Design. (3) F. W. F. S. Prerequisite: Consent of instructor.

Rosow

*Students work on their own research interests in terms of problem formulation, research design, and/or operationalization. Emphasis dependent upon individual student needs.

204. Scientific and Literary Approaches to Personal Development. (2) F. Prerequisite: Consent of instructor. Kiernan

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

205. Seminar on Data Analysis. (3) F. W. S. Prerequisite: Consent of instructor. Rosow

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

206. Introduction to Research on Stress. (2.2-2.2) F, W. S. Prerequisite: Consent of instructor. Fiske, H., and Staff. Psychology UCB

*This pre-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. (2-4) F, W. S. Prerequisite: Consent of instructor. Banfield

*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.

209A-B. Interdisciplinary Seminar in Aging. (3) F, W, S. Prerequisite: Consent of instructors. Lecture 1 hour, Independent study 3 hours.

*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. S. Prerequisite: Consent of instructor. Lecture 3 hours.

Rosow

*A seminar on adult socialization theory, with problems of the aged as a special concern. Major issues involve norms for older people, the structure of socialization situations, and the pressure of variables normally effecting socialization in earlier status transitions.

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

Klier

*Exploration of important new developments in the philosophy of social science; emphasis is on works of Jurgen Habermas and Anthony Wilden.

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

Lennard, Kiernan

*Video tape analysis and viewing of families with long term physical or psychiatric illness as techniques for understanding family processes. Emphasizes development of language and concepts for understanding everyday events. A range of backgrounds and ethnic origins is represented in study problems.

220. Pro-Seminar. (1) F, W, S. 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.

222A-B. Life Stress and Adaptation. (3-3-3) F, W, S. Prerequisite: Consent of instructor.

Chiriboga, Fiske

*Qualitative and quantitative analyses of life history protocols focusing on stress and perceptions of stress in relation to a variety of indicators of adaptation such as psychological, physical, social at various life stages from adolescence to old age.

225. Introduction to Computer Processing. (1 or 2) W. S. Prerequisite: One course in computer science recommended. Consent of instructor. Lecture 1 hour. Lab 0.5 hour.

Pierce

*Introduction to the use of the computer in the analysis of social science research data, with emphasis on facilities and programs available at the UCSF Information Systems and Computer Center.

227. Biological Aspects of Aging and Old Age. (3-3-3) W. Prerequisite: Consent of instructor. Lecture 2 hours, Independent study 3-4 hours.

Ellman

*Physiological, biochemical, neurological, and anatomical changes occurring with aging are discussed. Important questions include the possible relationships to functional behavior of these changes in humans and the relevance of internal changes to psychological states.

232. Developmental Study of Kinship Structure. (3) S. Prerequisite: Consent of instructor. Lecture 3 hours.

Kinship structure in Western and non-Western societies with emphasis on the life cycle perspective of family roles and relations. Consideration is given to relevant empirical studies and case material.

233. Clinical Anthropology. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours.

Brodsky

*Clinical data is available in several forms, and anthropological concepts are applied to observations on adult life and medical interactions. Assigned readings and field study of a hospital unit or section are used to prepare written and oral reports.

234. Ego Development. (2-4) W. S. Prerequisite: Consent of instructor.

Ego development is often described as the master trait of adult development. An in-depth look at the theories in research in this area, such as that of Erikson and Levinson.

235. Social Aspects of Death and Bereavement. (3) S. Prerequisite: Consent of instructor.

Kalish

*An analysis of the social milieu in which dying and death occur, with implications for the dying person himself, his survivors, and those professionals who attend him.

236. Developmental Statistics. (3) W. Prerequisite: Consent of instructor.

A statistics course structured to the needs of students of the Human Development Program. Special emphasis is given to methods appropriate to analysis of developmental data and change, with more attention to the understanding of statistical ideas than to computation.

249. Special Studies. (2-8) F. W. S. Prerequisite: Consent of instructor.

*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.

250. Research. (1-8) F. W. S.

*Staff

Human Sexuality

159. Human Sexuality. (2) S. Lecture 1 hour, Seminar 1½ hours.

Day

*Social, behavioral, and clinical aspects of human sexuality are covered in a series of lectures and
140.04. Clinical Immunohematology in Transfusion and Transplantation. (3) W. Prerequisite: Completion of two core clerkships.

A week clerkship 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. (1.5 per week) Su. F., W., Sp. Prerequisite: Medicine 110.

Townsend will lead this small 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.

160.01. Diagnostic Use of Radiotopes. (2) Su., F., W., Sp. Prerequisite: One year of medical school. Lecture 1 hour, Clinic 4 hours.

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


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

170.02A-B. Immunohematology. (1-1) W. Prerequisite: Laboratory Medicine 170.02A is prerequisite to 170.02B. Two quarter course.

Vyas Blood banking and related topics of immunohematology will be covered by formal lectures, demonstrations, case discussions, and seminars on blood groups, compatibility test, tissue typing, hemolytic anemias, isoimmunization in pregnancy, blood component therapy, and transfusion reactions.

400. Clinical Pathology Staff Seminars. (2) Su., F., W.

SFGH Polyclinic, UC Brecher, VA Parekh.

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.

SFGH Polyclinic, UC Brecher, VA Parekh.

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

402. Research Problems in Clinical Pathology. (1-10)

Su., F., W., Sp.

SFGH Polyclinic, UC Brecher, VA Parekh

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


Brecher Seminars in clinical pathology including clinical chemistry, hematology, immunohematology, microbiology, parasitology, and blood banking conducted by faculty whose major interest is that under discussion. Residents do collaborative reading for discussion of problems of interpretation, diagnosis, techniques, and research approaches.

450. Clinical Pathology. (10) Su., F., W.

SFGH Polyclinic, UC Brecher, VA Parekh

Principles of laboratory tests in hematology, chemistry, microbiology, blood banking, as well as interpretation of results and correlation of clinical and laboratory data. Residents participate in performance of tests and certain administrative duties related to operation of clinical laboratories.


SFGH Polyclinic, UC Brecher, VA Parekh

Theory and methodology of clinical chemistry, serology, blood banking, hematology, microbiology, parasitology, and clinical microscopy. Emphasis on interpretation and correlation of data and study of literature.

Medical Diagnosis

445. Medical Diagnosis. (2) Su., F., W., Sp. Clinic 6 hours.

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


Stoeling, Wakerlin, Koetling Anatomic illustration; 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.


Stoeling, Wakerlin, Koetling Anatomic sketching and illustration from dissection and autopsy; individualized techniques development; graphic art for media; form and detail in rendering; illustration from pathologic specimen preparations; reproduction techniques for illustrations in print media.

203. Principles of Medical and Anatomic Illustration III (3) Su., F., W., Sp. Lecture 1 hour, Lab 6 hours.

Stoeling, Giovanniello, Wakerlin, Beindorf

Continuation of individualized techniques development; principles underlying visual representation of statistical data; selection of charts, graphs and diagrams from research data; graphics for projection; lettering systems; special graphics techniques utilizing photographic, diazo, JM and other processes.

204. Illustration of Pathology and Animal Surgery. (3) Su., F., W., Sp. Lecture 1 hour, Lab 6 hours.

Wakerlin, Stoeling, Wright, Feduska, Beindorf Sketching, illustration and photography of pathologic tissue; regular autopsy observation; observation, photography, sketching and illustration of procedures in animal surgery; study of normal colors and textures of tissue; illustration of instruments and their interaction with various tissues.

205. Introduction to Surgical Illustration. (5) F., W., Sp. Lecture 2 hours, Lab 9 hours.

Wakerlin, Stoeling, Beindorf

Organization in the operating room: procedures and roles; regular observation of surgical procedures. Emphasis upon developing skills of sketching from direct observation, photography, and consultation with physicians; and planning and development of illustrations.

206. Advanced Surgical Illustration. (5) F., W., Sp. Lecture 2 hours, Lab 9 hours.

Wakerlin, Stoeling, Beindorf

Continuing study of more advanced surgical illustration techniques; combined photography/illustration methods for room photography; finished illustrations in media of choice; emphasis on innovative approaches to communication of surgical concepts.

207. Specialty Surgical Illustration: Otolaryngology and Ophthalmology. (3) Su., F., W., Sp. Lecture 1 hour, Lab 6 hours.

Wakerlin, Stoeling

Review of anatomy and observation of the ear and eye through otoscope, ophthalmoscope 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) Su., F., W., Sp. Prerequisite: Consent of director. Lecture 2 hours.

Wakerlin and Staff

Readings and seminar in aspects of instructional design, including communication theory, psychology of learning, programmed instruction, systems design and methods for evaluation. Participation by guest lecturers.

411. Introduction to Instructional Design and Communications Theory. (1) F. Lecture 1 hour.

Bader, Pascoe

Overview of theory basic to the development of instructional media.

417. Introduction to Media. (3) F. Lecture 1 hour, Lab 6 hours.

Wakerlin, Beindorf, Banks

Survey of media production technology and formats, Black and white photography methods. Theories of media: perception, light, composition, color, contrast, emphasis, similarities and differences among media including appropriateness for different tasks.

418. Media II. (4) W. Lecture 2 hours, Lab 6 hours.

Beindorf, Stoeling


419. Media III. (5) W. Lecture 2 hours, Lab 9 hours.

Beindorf, Stoeling

Slide-tape production on an individual basis. Color negative/positive developing and printing.

421. Media IV. — Motion Media, Film and TV. (4) F. Lecture 2 hours, Lab 6 hours.

Beindorf, Banks

Films and television. Videotape production in a studio setting with in-house produced motion pictures. Theories of motion, dynamics of balance, subjective camera motion. Basic cinematography, TV technology, production economics.

423. Graphics for Print Media. (4) F. Prerequisite: Medical Illustration 203. Lecture 2 hours, Lab 2 hours.

Giovanniello, Wakerlin

Calligraphy; brochure design; photography in design; layout: composition; 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.

Wakerlin, Koetling, Humbleba, Harwin

Basic three dimensional modeling, molding, and casting techniques. Preparation of cosmetic max-
ilofacial prosthetic reconstructions given major emphasis in course. Students assist in preparation of prostheses for clinic patients.

Beindorf, Stoeling, Wakerlin
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.
Wakerlin, Giovanniielio
Analysis of advantages and disadvantages of displays as teaching instruments. Aspects of design and construction: materials, scale models, construction, logistics, cost effectiveness and handling. Field trips to display companies. Production of a display for an exhibit.

Beindorf, Wakerlin, Stoeling, Banks
Students begin work on an actual instructional unit. The choice of medium will be determined by the needs, and decided upon through instructional design concept, storyboard, script, production plan, and budget.

431. Media Project II. (3-9) Su, F, W, Sp. Prerequisite: Consent of instructor and approval of director. Lecture Variable.
Beindorf, Wakerlin, Stoeling, Banks
Special study in educational TV, film, or print media; or completion of instructional unit (production and post-production) begun in Media Project 429.

432. Portfolio, Presentation and Graduate Show I (3) F. Lecture 1 hour. Lab 6 hours.
Wakerlin, Beindorf, Stoeling
Portfolio design and development; portfolio expectations and applications. Work on production for graduate presentation; preparation of graduate show.

Wakerlin and Staff
Seminar. Reading and discussion of principles and practices for professional business management and departmental administration.

Beindorf, Banks, Wakerlin, Stoeling
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.

435. Special Study in Medical Illustration. (3-4) F, W, or Sp. Prerequisite: Consent of instructor and approval of director.
Wakerlin and Staff
An elective for special study in area of choice.

436. Portfolio, Presentation and Graduate Show II (1-3) F, W. Lab 3-5 hours.
Wakerlin, Beindorf, Stoeling
Final portfolio design and assembly. Production of final graduate media presentation; graduate show and arrangements.

438. Biological Illustration. (2) F, W, or Sp. Prerequisite: Consent of instructor. Lab 6 hours.
Christman, Stoeling
Taxonomic illustration of botanic, entomologic, parasitologic, microbiologic and other life science subjects for public health education. Techniques are utilized, but mainly pen and ink.

439. Forensic Illustration. (1-3) F, W or Sp. Prerequisite: Consent of instructors and approval of director. Lecture and Lab Variable.
Wright, Wakerlin, Stoeling, Beindorf
Illustration and photography of various wounds to provide demonstrative material for courtroom use. Considerations of adequacy and appropriateness of visual materials as evidence in criminal investigations. Guest lectures and special presentations are included.

440. Museum Methods. (3) F, W or Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Lab 6 hours.
Wright, Humelbaugh, Stoeling, Wakerlin
Techniques for preparation and presentation of scientific information and models in museum settings. Course includes plastic embedment, mounting and preservation of specimens; labeling.

Medical Information Science

190. Programming Concepts and Information Structures. (4) F. Prerequisite: Knowledge of computer programming language. Lecture 3 hours, Lab 3 hours.
Butler
Course involves program structures and program style; information structures used for data representation; non-numerical handling techniques including list and string processing; techniques for data abstraction in existing programming languages and computer systems.

195. Clinical Laboratory Computer Science. (2) F W. Prerequisite: Bachelors degree in physical or biological science.
Henley
A review of the fundamentals of computer science as they relate to clinical laboratory information systems and a detailed examination of current clinical laboratory systems and laboratory informatics. Students will be given programming sample clinical laboratory problems in high level languages.

199. Laboratory Project in Medical Information Science. Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairperson of the department.

201. The Medical Environment. (2) W Van Brunt
A survey of the professions, institutions, organizations and populations involved in the health care process. Included are the aims, expectations, and constraints involved in the medical environment. Course provides a background for students without previous medical or surgical experience in relation to ship processes and functions.

202. Nature of Medical Information. (2) F. Prerequisite: Consent of instructor. Lecture 2 hours. Blos
Medical information considered from a variety of viewpoints: general medical knowledge versus specific patient data. Medical information expressible in numeric, graphic, or natural 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. Staff
Introduction to the concepts, principles, definitions and processes of management and financial accounting with particular emphasis on hospitals and other health care systems.

210A. Computer Systems I. (4) W, Sp. Prerequisite: Medical Information Science 190 or consent of instructor. Lecture 3 hours, Lab 3 hours.
Wasserman
Introduction to computer system organization and architecture. Microprogramming. Interface between systems software and application software. Operative experience with assembly and high level language.

210B. Computer Systems II. (4) Sp. Prerequisite: Medical Information Science 210A or equivalent or consent of instructor. Lecture 2 hours, Lab 3 hours.
Wasserman

211. Introduction to Operations Research. (3) F. Prerequisite: Elementary statistics or probability, and one or calculus. Students without such preparation may be registered for this course with permission of the instructor. An introduction to mathematical programming, including linear programming, sensitivity analysis, and duality. Queuing processes and other selected topics as time permits. Simulation and other types of operation research techniques and models is included.

222. Systems Analysis of Medical Care. (3) F. Lecture 3 hours. Discussion 1 hour.
Stimson
Introduction to use of operations research and systems analysis as aids to design, management or 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 2 hours.
The design of previous medical information systems is examined. Successful components of the systems will be studied in depth, with respect to cost, performance, and acceptability. Field trips to existing systems will be made.

225B. Design of Medical Information Systems. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 1 hour.
The design of medical information systems is examined. The systems will be studied with respect to cost, performance and acceptability. Analysis and proposals for systems design 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 1 hour.
The design of medical information systems is examined. The systems will be studied with respect to cost, performance and acceptability. Laboratory sessions involve analysis and interactive program implementation are a continuation of the studies in Medical Information Science 225B.

230A. Linear Models and Experimental Design. (4) W. Prerequisite: Introduction to Statistics and one year of calculus. Lecture 3 hours, Lab 3 hours.
Hellbrun
Techniques for modelling, designing and analyzing data from experiments, clinical and observational studies using the methodology of regressions and the analysis of variance.

230B. Discrete Analysis and Statistical Classification. (2) Sp. Prerequisite: Introductory statistics and one year of calculus. Lecture 1½ hours, Lab 1 hour.
Hellbrun
Introduction to modern methods for analysis of discrete data. Statistical classification and other
quantitative methods relevant to computer assisted diagnosis and treatment planning.

240. Data Base Management. (3) § W. Prerequisite: Medical Information Science 210B or equivalent, or consent of instructor.

241. Colour

Course covers techniques for logical and physical database organization, data independence, models of data, approaches to large scale data base management, security and privacy, data description languages, and query languages.

245. Seminar Software Engineering. (3) § F. Prerequisite: Medical Information Science 210B or equivalent, or consent of instructor. Lecture 2 hours. Lab 3 hours.

Wasserman

Techniques for program design and development; methods for requirements definition and system specification; programming discipline: management of programming projects; verification and testing of programs; software tools. Emphasis on group participation in small software development projects.


Staff

Selected topics in medical information science. Subjects chosen will range from special topics in information science to hardware, software, and systems studies.

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

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

Medical Technology

100. Introductory Clinical Microbiology. (2) F. Lecture 1 hour. Lab 3 hours. Hadley, Seman, N. S. Cohen, Senyk

Brief survey of disciplines of clinical microbiology and serology. Introduction to literature of field. Fundamentals of statistics and evaluation of data as applied to microbiologic analysis and laboratory quality control.

101A-B. Clinical Bacteriology. (3-3-8) Su, F, W, Sp. Lecture A-B: 3 hours. Lab C: 24 hours.

Hadley, Seman, Senyk, S. N. Cohen

Instruction and laboratory practice in the isolation and identification of bacteria from clinical specimens and the evaluation of pathogenic significance of bacteria.


Hadley, Seman

Instruction and laboratory practice in the isolation and identification of mycobacteria from clinical specimens; evaluation of pathogenic significance and of the antimicrobial susceptibility of mycobacteria.


Heyneman, Horen

Instruction and laboratory practice in the examination and study of clinical material for the detection and identification of animal parasites.


Instruction and laboratory practice in the isolation and identification of fungi associated with the more important mycotic infections of man.


Drew, Hadley

Introduction, demonstrations, and laboratory practice in viral isolation and identification procedures. The rapid detection of specific viral infection.

118. Introduction to Clinical Immunology. (2) F, W, Sp. Senyk

Introduction to the mechanism of immunity: cellular and humoral immunity, host-parasite relationships, structure of immunoglobulins, and antigen-antibody interactions.

120A-B. Clinical Serology. (2-4) Su, F, W, Sp. Lecture A: 2 hours. Lab B: 12 hours.

Senyk, Sagal

Instruction and laboratory practice in serological methods used in diagnosis and the study of disease.


Hadley, S. N. Cohen

The mode of action and assay of antimicrobial agents. Instruction and laboratory practice in testing microorganisms for susceptibility to antimicrobial agents.


Hader, Senyk

Instruction and practice in microscopy, including fluorescent and electron microscopy, spectrophotometry and electron emission tomography. Practical experience with data processing equipment and computers utilized in a clinical microbiology laboratory.

Medicine

110. Basic Clerkship in Medicine at MZ and W4. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C and 122A-B-C.

L. H. Smith, Carbone, Steinseger, H. Williams, Woebber

Student is part of the ward team with intern, resident and faculty. bedside instruction in history-taking, physical diagnosis, selected topics in general medicine with presentations and demonstrations of relevant cases.

130. Clinical Preceptorship for Freshmen. (1) Su, F. Lab 3 hours.

W. Gold, Fitzgerald

Freshmen students meet weekly with a clinical preceptor to begin study of the clinical evaluation of the patient and the applications to clinical medicine of concepts learned concurrently in the basic sciences.

131A-B-C. Introduction to Clinical Medicine. (1-1-1) F, W, Sp. Prerequisite: First year standing or consent of instructor.

Naughton

The first phase of interdepartmental instruction in diagnostic skills. Students will learn basic techniques of physical examination and interpretation of common symptoms relating to the locomotor system, eye, ear, upper respiratory tract, and skin. lectures, clinical demonstrations, conferences, supervised practice.

132A-B-C. Introduction to Clinical Medicine. (6-11-3) F, W, Sp. Prerequisite: Anatomy 100, 102, and 103; Biochemistry 100A-B; Medicine 130 and 131 A-B-C; Microbiology 100A-B (may be taken concurrently), Pathology 101 and 102 may be taken concurrently) Physiology 100 and 101; and Psychiatry 130, or consent of instructor.

Naughton

Continuation of interdepartmental course on pathophysiological basis of symptoms, signs and techniques of collecting and assessing clinical data, including history taking, examination of the patient and use of laboratory tests. Lectures, demonstrations, bedside work, laboratories, conferences, and independent study.

140.01 Advanced Clinical Clerkship at UC, MZ, VA and VAMC. (1½ per week) Su, F, W, Sp. Prerequisite: All core clerkships (with the exception of Ambulatory & Community Medicine 110 and Anesthesia 110 or by special permission). Completion of Medicine 110, 122A-B-C, 131A-B-C.

L. H. Smith, Steinseger, H. Williams, Carbone, H. Woebber

Students are assigned patients for study on the staff and private wards. They are supervised by attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences where their patients are discussed.

140.02 Clinical Clerkship Off-Campus. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and approval of third and fourth year coordinator.

L. H. Smith, Carbone, H. Williams, Woebber

Clinical clerkships in off-campus hospitals approved by the department chairman, third and fourth year coordinator and the Dean.

140.03 Acting Intern in the Cancer Research Institute. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and 131A-B-C.

Friedman and Staff

On Cancer Cancer Chemotherapy Service, students work up patients, present them to attending staff and at conferences, on daily procedures, and write orders under supervision.

140.04. Senior Internal Medicine Clinical Clerkship at NRMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Carney

Clinical clerkship at NRMC. Student functions as intern in ward medicine under supervision of resident and attending staff, or acts as consultant in selected subspecialty under supervision of board certified staff.

140.05. Cardiology at PMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor.

Selzer

Students participate actively in rounds, conferences, and informal teaching sessions, with emphasis on reading electrocardiograms.

140.06. Cardiology at UC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Parnell

Students work up patients in the clinic and on wards; they attend conferences and seminars; receive instruction in specialized studies and do assigned reading.

140.07. Clinical and Physiological Aspects of Pulmonary Disease at SFCH. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Hopewell, J. Murray, Costello
and are encouraged to develop ability to evaluate literature critically. Reading lists:


Overall emphasis on prototypes of disease in organ systems, with emphasis on pathophysiological, biochemical or physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned individual responsibilities, and are encouraged to develop ability to evaluate literature critically. Reading lists:

140.23. Endocrine-Metabolic Medicine, (1/4 per week) F, W, Sp. Prerequisite: Medicine 110. Forsham

Students based in the Medical Unit 110, and 11th floor Moffitt Hospital as assistants to interns, residents, and research fellows on the ward; attend endocrine and metabolic medicine seminars and teaching exercises in endocrinology and metabolism, including grand rounds in medicine.

140.24. Rheumatology — Clinical Immunology at UC, (1/5 per week) W, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor. Sobo

Familiarization with clinical manifestations, rheumatic disease therapy, immunological disorders. Participation in in-outpatient medicine. Basic immunologic principles. Experience to clinically apparent immune neuropathy in bearers. Assignment of pertinent literature, lectures, and introduction to principles and practice of various immunologic testing.

140.25. Renal and Electrolyte Service at SF, (1/4 per week) F, W, Sp. Prerequisite: Medicine 110. Humphreys

Students work up and follow renal and electrolyte patients seen in the service, participate actively in hemodialysis and peritoneal dialysis; they attend three-weekly ward rounds and bi-weekly seminars in renal and electrolyte diseases.

140.26. Acute Care Units at MZ, (1/4 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Ukley

Primary emphasis on the treatment of critically ill patients in Coronary Care Unit and Intensive Care Unit. Includes teaching in the use of monitoring and diagnostic techniques, cardiovascular surgery, and related aspects of electrocardiography.

140.27. Clinical Clerkship Stressing Cardiopulmonary Problems at C, (1/4 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Griffith

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, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. J. Mills

Course includes active consultation service averaging three new consults per day. Daily ward rounds; weekly combined Infectious Disease and Pediatrics rounds, and Infectious Disease inpatient rounds. Introduction to two Infectious Diseases clinics per week. Reading and library research.

140.29. Hematology at UC, (1/5 per week) F, W, Sp. Prerequisite: Medicine 110. Shohei

Students work up and present patients in the wards and outpatient clinics, participate in conferences and seminars, and learn the laboratory procedures pertinent to their patients.

140.30. Clerkship in Endocrinology-Metabolism at SFGH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Biglieri, Schambelan, H. Williams

The Clinical Service is based at the Endocrine-Metabolic Service provides daily house staff and fellow supervised consultations. Weekly Endocrinology Clinic, bi-weekly consultation rounds with senior staff, and conferences in the CSS on current clinical investigations are included.

140.31. Gastrointestinal Clinical Clerkship at L, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. M. Butler

Students function as clinical clerks, working up patients under supervision of interns and residents. They assist in such specialized procedures as sigmoidoscopies or oral endoscopies. They attend radiology and pathology conferences and seminars with visiting consultants.

140.32. Coronary Care Unit at SFGH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and four weeks clinical cardiology elective. Scheinman, Peters

Students work as interns in the Coronary Care Unit and all regular teaching conferences and seminars.

140.33. Infectious Diseases at PMCH, (1/5 per week) Su, W, Sp. Prerequisite: Medicine 110. Valentine

Students may elect clinical clerkship in infectious diseases. Activities include working up patients, relating laboratory data to clinical situations, making ward rounds, and attending seminars.

140.34. Clerkship in Renal Disease, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Rector

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

140.35. Cardiology at SFGH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. J. Abbott, Cheithlin, Rapaport, Schelman

Students see patients in consultation and wards and participate in cardiology electrocardiograms, review cases with cardiac consultant, and attend all seminars and conferences.

140.36. Emergency Service Clerkship at Moffitt Emergency, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students. Offered to UCSF students.

Student serves as an intern working with medical interns and residents and sharing similar responsibilities in the emergency Department. Participation in attending rounds and emergency conferences is required.

140.37. Coronary Care Unit at PMCH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Goldschlager

Students work up, formulate treatment plans, and follow patients in the Coronary Care Unit. Daily ward rounds will be made with resident and attending staff. Opportunity to participate in other teaching rounds, conferences, and ECG reading as time permits.


140.39. Clinical and Physiological Aspects of Pulmonary Disease at UC, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. W. Gold

Students examine patients in Chest Clinic, on the wards, and in ICU and present them at ward rounds, pulmonary conferences, and radiology conferences. They participate in pulmonary function testing and research.

140.40. Endocrine Metabolism Clerkship at VA, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Sperstein

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

140.41. Gastroenterology at SFGH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students.

Earnest

Students are responsible for evaluation of gastrointestinal patients on medical and surgical wards. Students work up are thoroughly discussed with gastroenterology staff. Students observe GI techniques including sigmoidoscopy, colonoscopy, endoscopy, liver biopsy. Basic clinical conferences are held at a third affiliated hospital.

140.42. Clinical Pharmacology at SFGH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Becker

Students participate in daily pharmacology seminars reviewing basic pharmacology and therapeutics principles of commonly used drugs. Students evaluate patients regarding problems of drug choice and drug interaction. Emphasis is placed upon alcoholism, narcotic addiction, poisoning, shock and management of hypertension.

140.43. Basic Rheumatology and Immunology, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor.

Talal

This is a four to twelve week introduction to rheumatology and immunology, offering both clinical and laboratory experience. The student will participate in inpatient and outpatient care and take part in didactic and practical aspects of the research program.

140.44. Clinical and Physiological Aspects of Pulmonary Disease at SFGH, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Kaltreider

Students examine patients in the Chest Clinic, on the wards, and in ICU and present them at ward rounds, pulmonary function and radiology conferences. They participate in pulmonary function testing and research.

140.45. Endocrine Metabolism Clerkship at VA, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Sperstein

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

140.46. Chest, Thyroid, and Gastrointestinal Subspecialty Clinics at UC, (1/5 per week) Su, F, W, Sp. Prerequisite: Medicine 110. W. Gold, D. Watts, Greenspan

Students follow outpatients in Chest, Thyroid, and Gastrointestinal subspecialties; may be responsible for new patient work ups. Clinic work will be combined with directed library readings.
140.47. Arthritis, Cardiology, Diabetes, Hematology, Metabolic, and Oncology Subspecialty Clinics at UC. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Englemann, Gershengorn, Cane, Ries, M. Friedman Students follow outpatient in Arthritis, Cardiology, Diabetes, Hematology, and Oncology subspecialties; may be responsible for new patient work ups. Clinic work will be combined with directed library reading.

140.48. Cardiology, Gastrointestinal, Renal, and Tropical Medicine Subspecialty Clinics at UC. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Gershengorn, W. Gold, D. Watts, Hopper, R. Goldsmith Students follow outpatients in Cardiology, Chest, Gastrointestinal, Renal, and Tropical Medicine subspecialties; may be responsible for new patient work up. Clinic work will be combined with directed library reading.

140.50. Hematology Oncology at UC. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110. R. Cohen

Intensive clinical course emphasizing the diagnosis and treatment of patients with blood disease or cancer. The latest techniques in therapy are studied with stress on blood morphology and laboratory test interpretation. Exposure to specialized oncology laboratories is also available.

140.51. Gastroenterology at UC. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110. A. Ron

Clinical clerks participate in diagnosis and treatment of patients with gastrointestinal and biliary and endoscopic procedures, and use of medical literature in clinical problem solving. Weekly seminars in pathophysiology, journal club, and tissue review supplement a full conference schedule.

140.52. Clinical Renal Elective at VA. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Arleff

Clerkship in clinical nephrology. Lectures, rounds, conferences, renal biopsy review. Patients with acute and chronic renal disease, acute and chronic dialysis patients, and problems of renal transplantation evaluated. Renal grand rounds, journal club, nephrology research, and renal radiology conferences weekly.

140.53. Infectious Disease at UC. (1 1/2 per week) F, W, Sp. Prerequisite: Medicine 110.

Drew

Clinical Infectious Disease Service and Clinical Microbiology Laboratory provide optimal integration of clinical and laboratory medicine. Emphasis on learning techniques of diagnostic microbiology such as bacteriology, virology, parasitology, mycology, and diagnosis management of patients with infections; research in either area.

140.54. Nephrology at A. (1 1/2 per week) F, W, Sp.

Prerequisite: Medicine 110.

Gins, L. Gold

Directors with directors of Renal Service on inpatients with a variety of renal diseases, fluid, electrolyte, acid and base disorders; outpatients on chronic hemodialysis and hemodiagnosis, and related problems. Didactic sessions in clinical renal physiology.

140.55. Acting Internship at C. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students.

Griffeth

Students, teamed with a resident, will evaluate and care for patients in the general medicine unit at 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 MS. (1 1/2 per week) Su, F, W, Sp. Feigl

Humburg, Botkin, H. Weinstein

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

150.01. Research in Cardiovascular Physiology at V.A. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Physiology 100 and 101, Biochemistry 100A and 100B, and instructor. Hollenberg

The elective is designed to provide experience with routine physiological measurements, the handling and monitoring of input-monitor systems, 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 110 (1 1/2 per week) Su, F, W, Sp.

L. H. Smith, Carbone

Students continue previously initiated research projects under the guidance of faculty members. Programs must be approved by the instructors in charge and the third and fourth year coordinator.

150.03. Cancer Viruses. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Basic course in microbiology. Levy

Tissue culture techniques and animal experimentation will be used to study the role of viruses in animal malignancies and autoimmune disease. Research serves as a model system for studying similar disorders in man.

160.01. Clinical Correlations Seminar. (1 1/2 per week) Su, F, W, Sp.

Fitzgerald

A seminar directed toward a holistic view of a patient's problem involving students, basic scientists and clinicians. Students in small groups will see the interplay between basic scientists and clinicians and the immediate pertinence of theoretical science.

160.02. Clinical Allergy. (1 1/2 per week) W, Sp.

Prerequisites: Microbiology 100A and Pharmacology 100A.

Mustacchi

Seminar course on basic aspects of allergy supplemented by discussion of assigned clinical material and demonstration of selected diagnostic and therapeutic procedures.

170.04. Fundamentals of Electrocardiography at V.A. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C.

Goldman

Instruction in basic electrophysiologic principles and interpretation of electrocardiograms.

170.05. Fundamentals of Electrocardiography at PGH. (1 1/2 per week) Su, W, Sp. Prerequisite: Medicine 131A-B-C.

Rappaport

Review of physical principles of electrophysiology and clinical application of electrocardiographic interpretation. Special emphasis on acute and chronic cardiac disease.

170.07. Non-Invasive Laboratory Cardiology. (1 1/2 per week) Su, W, Sp. Prerequisite: Medicine 131A-B-C.

Rappaport

Fundamentals of non-invasive laboratory cardiological procedures will be discussed. Techniques and role of echocardiography, stress electrocardiography, Holter monitoring, phonocardiography, systolic time intervals, vectorcardiography, apexcardiography, and other areas will be covered.

170.08. Introduction to Cancer Medicine. (2 hours) F. Lecture

L. White

Course provides a humanistic orientation to cancer that will form a framework for better understanding and coping with the problems of cancer patients and those concerned with them in other health science courses. Biomedical, clinical, and psychosocial aspects will be explored.


L. H. Smith

A one-year research project approved by the Dean and the chairman of the department.

198. Supervised Study in Medicine. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Consent of instructor preceptor and approval of third and fourth year coordinator.

L. H. Smith, Carbone

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 Medicine. (1 1/2 per week) Su, W, Sp. Prerequisite: Consent of instructor preceptor and approval of third and fourth year coordinator.

L. H. Smith, Carbone

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

400. Medical Staff Conference. (2 1/2 per week) W, Sp.

UC L. H. Smith, SF Griffiths, VA Sieleger

Recent research case presentations by specialists and histories of patients at medical staff conferences including references to the literature, laboratory work, and special studies. Faculty members and visiting professors discuss the cases and present new developments in their respective fields.

410. Interdepartmental Clinical Correlation Course. (4 1/2 per week) W, Sp.

UC L. H. Smith

A series of discussions are conducted in the 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 examinations, and directed student participation.

420. Seminars in Medical Literature. (1 1/2 per week) F, W, Sp.

VA Sieleger

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


UC L. H. Smith

Seminars are conducted in the fields of gastroenterology, hematology, cardiology, electrocardiology, endocrinology, chest diseases and pulmonary physiology, thyroid diseases, psychosomatic medicine, dermatology, infectious diseases, and radiology. Library research, occasional formal reports and patient presentations are required.

450. Specialty Seminars. (F, W, Sp.) SF and PGH.

Williams and Staff

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

450. Specialty Seminars. (F, W, Sp.) SF and PGH.

Staff

Seminars are conducted in cardiology, electrocardiology, hematology, gastrointestinal radiology, fluid and electrolyte balance, endocrinology and pathology, involving discussions, required reading, and reports. Elective seminars include a seminar on the teaching conference, joint medical and surgical conference, tumor board, dermatology conference, and neuro-psychiatry conference.


UC L. H. Smith, SF Griffiths, VA Sieleger

Research problems are arranged with appropriate faculty members on an individual basis.
407. Clinicopathological Conferences. (1) F. W. Sp. SFGH H. Williams, V A Lee Siegler
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.

408. Electrocardiographic Interpretation. (2) Su, F. W. Sp. Sokolow
Seminars (individual instruction) for residents in medicine and trainees in cardiology by cardiologists in consultation with the interpretation of all electrocardiograms and phonocardiograms taken at UC.

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

452. Clinical Medicine. (1 ½ per week) Su, F. W. Sp. VAF Rosenstiel
Residents are responsible for patient care, under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, and consultations. The chief resident, in addition, has certain responsibilities involving the residents, and consults for all other hospital services.

460. Clinical Primary Care. (1 ½ per week) Su, F. W. Sp. SFGH H. Williams. Refer to Ambulatory and Community Medicine 460.
Crede and Staff
Interns in the Primary Care Track of Internal Medicine are responsible for patient care in a multispecialty primary care center. Other rotations include those common to the regular Medicine Internship Program as well as related clinical services such as Dermatology, Neurology.

Crede and Staff
Residents in the Primary Care Track of Internal Medicine are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Medicine Internship Program as well as related clinical services such as Dermatology, Neurology.

Microbiology

100A-B. Biologic Agents of Disease. (3-5) F. Sp. Prerequisite: Biochemistry I 100A-B. Lecture 3 hours Sp; 4 hours Lab 3 hours F. Jawetz, Levinson
Pathogenesis of infection and resistance to microorganisms, particularly bacteria and fungi. Natural history, essentials of diagnosis, treatment and epidemiology of infectious diseases. Laboratory demonstrations and exercises of essential medical skills.

125. Microbiology. (6) Sp. Lecture 4 hours. Lab and Conference 6 hours. Halde and Staff
Morphology and physiology of microorganisms including bacteria, molds, yeasts, and viruses and treatments to study them. Fundamentals of infection and resistance, immunology, microbial genetics, disorganization, chemotherapy, biologic products, and epidemiology. Laboratory diagnosis, treatment and prevention of infectious diseases.

126A-B. Microbiology. (1-5) Sp. Lecture 1 hour Sp; 3 hours Lab, 6 hours W. Jawetz, Speck
An introduction to general immunology and a comprehensive presentation of microorganisms including bacteria, fungi, viruses; fundamentals of infection and resistance, immunology, disorganization, sterilization, and antimicrobial agents. Laboratory studies and demonstrations on indigenous oral flora and applications of microbiology to Dentistry.

150.01. Research in Microbiology. (1 ½) Su, F. W. Sp. Prerequisite: Microbiology 100A-B and consent of instructor.
Research in microbiology; block elective for four year students.

190A. Medical Microbiology for Graduate Students. (3) F. Sp. Prerequisite: Biochemistry I 100A-B or equivalent. Lecture and Conference 4 hours. Jawetz and Staff
Same as Microbiology I 100A. Lecture and conferences in the fundamentals of immunology and virology. Small group seminars on patient-related problems in clinical medicine.

190B. Medical Microbiology for Graduate Students. (4-5) F. Sp. Prerequisite: Biochemistry I 100A-B or equivalent. Lecture and Conference 4 hours. Lab 3 hours (may be omitted with consent of instructor). Jawetz and Staff
Processes of infection and resistance. Microbial and fungal infections, epidemiology, treatment and control with chemotherapy and immunological techniques.

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

199. Laboratory Research Project in Microbiology. (1-5) F. Sp. 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.

203. Molecular and Cellular Immunology. (3) F. F. Sp. Prerequisite: Biochemistry I 100A-B and Microbiology I 100A-B or equivalent. Offered in alternate years. Offered 1977-1978.
Structural and functional aspects of antigens and antibodies, including chemical and genetic basis of immunogenecity, structure and biosynthesis of immunoglobulin, antigen-antibody interactions, immunogenetics, properties of immunocompetent cells, cell cooperation, lymphocyte receptors for antigens.

204. Immunology. (3) W. Sp. Prerequisite: Microbiology I 100A-B or equivalent. Lecture and laboratory diagnosis, treatment and prevention of infectious diseases.

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

260. Pathogenic Fungi. (2) F. Sp. Prerequisite: Microbiology 100A-B. Halde
A systematic review of the fungi responsible for human disease, emphasizing pathogenesis, epidemiology, and diagnostic laboratory procedures.

The nature of viral genetics with emphasis on 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 of cells.

Training in the use and application of immunological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, radioimmunoassay, and immunochemical techniques, paper and column chromatography, zone electrophoresis, isotope labeling and radiography of proteins, and density gradients and analytical ultracentrifugation.

230. Seminar (0-6) F. W. Sp. Lecture 1 hour. Staff
General microbiology: individual research of advanced graduate students, invited speakers and staff members. Review of special topics and journal articles by advanced students.

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

250. Research (1-8) F. W. Sp. Staff

298. Thesis. (0) F. W. Sp. Prerequisite: Advance 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: Advance to candidacy and permission of the graduate adviser.
For graduate students engaged in writing the dissertation for the Ph.D. degree.

Morphology

110A. Morphology — Oclusion. (1) F. Prerequisite: Concurrent enrollment in Morphology 110A. Lecture 1 hour. Tueller
Course introduces the student to tooth morphology and includes discussion of the development and form of the primary and permanent dentition.
Neurological Surgery

Core Clerkship — Neurology 110. Students serve as clinical clerks in the inpatient and outpatient clinics.

140.01. Clinical Neurology rotations. Clerkship at UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Neurology 110 and consent of instructor.

The student will become a member of the house staff, attending ward rounds, working up patients, assisting at operations, and taking night call on rotation with a resident.

140.02. Clinical Neurology Surgery Clerkship at SF/HH or V4. (1 per week) Su, F, W, Sp. Prerequisites: Neurology 110 and consent of instructor.

C. B. Wilson

The student becomes a member of the house staff, attending ward rounds, working up patients, assisting at operations, and taking night call on rotation with a resident. One student per hospital.

140.04. Clinical Neuro-Ophthalmology Clerkship at UC. (1.5 per week) Su, F, W, Sp. Prerequisite: Neurology 110 and consent of instructor. Third-year residents may request.

Hoyt

Students participate with fellows on ward rounds, discussions, and examinations of in-house neurosurgery patients.

198. Supervised Study in Neurosurgery. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Staff

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

199. Laboratory Project in Neurosurgery. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Rosegay

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


Residents, under supervision, examine and present case histories of patients including laboratory work, X-ray studies, special investigation and refer-

to the literature. Discussion is led by the faculty with participation by visitors.


Conference includes discussion of special problems and topics in neurology and neurological surgery relating to case presentations. Members of the house staff and graduate students participate.


Residents discuss clinicopathological aspects of diseases, and their correlation with the literature and specific studies. Faculty members and neurologists and neurosurgeons present developments in selected fields. Second year residents organize conferences and participate in group autopsies on patients from the Neurological Surgery Service.


G. Clark

Recent literature in neurology and neurological surgery is presented. Discussion by members of the faculty in attendance and by visitors from other schools interested in this and related fields.


Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examinations, laboratory tests, and consultations. In addition, the resident has certain administrative, teaching, and clinical responsibilities.


Residents are responsible for the care of patients under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, and consultations. In addition, the resident has certain teaching and administrative responsibilities required by the attending staff.


Residents are responsible for the care of patients in wards and clinics and performance of studies and selected neurosurgical procedures under supervision of the attending staff. They also present patients at conferences and attend seminars and rounds at V4.


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

Neurology

Second Year Coordinator Instruction — Medicine 132A-B. Lecture-demonstrations and section work devoted to the supervised examination of patients.


Fishman, C. B. Wilson

Students are assigned patients for study under supervision of attending and resident staffs at UC, SF/HH, and V4 hospitals. They attend ward rounds, attending rounds, grand rounds, conferences and lecture-seminars, emphasizing diagnosis and management of common clinical problems.


Fishman, C. B. Wilson

Students serve as clinical clerks in the inpatient services and outpatient clinics. Attendance at departmental rounds, seminars, and conferences is required. Approval of the chairman of the department is also required.

140.02. Advanced Clinical Clerkship. (1/2 per week) Su, F, W, Sp. Prerequisite: Neurology 110. C. B. Wilson

Fishman, C. B. Wilson

Clinical clerkship in approved hospitals by special arrangement and approval of the Dean and the chairman of the department.


Participation in childhood neurology studies being carried out in the department including work in Convalescent, Neurology, Cerebral Palsy, and Developmental Clinics, and the special programs for children with neurological handicaps.


Fishman, C. B. Wilson

Opportunities are for research in one of the departmental laboratories under the direction of the chairman of the department.

150.02. Neuropathology. (1/2 per week) F, W, Sp. Prerequisite: anatomy 103 and Pathology 102. C. B. Wilson

Fishman, C. B. Wilson

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

190. Laboratory Project in Neurology. (1-5) Su, F, W, Sp. Prerequisite: Consent of instructor. C. B. Wilson

Fishman, Staff

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


Seminars covering selected subjects in the basic sciences relevant to neurology including neuroanatomy, neurochemistry, neurophysiology, and neuropsychology.


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


Course involves the presentation and discussion of clinical histories and pathology finding in selected cases of neurologic interest and histopathologic study, and discussion of surgical and postmortem specimens from neurological and neurosurgical patients.

430. Research in Neuropathology. (1-10) Su, F, W, Sp. Prerequisite: Second and third year residents. UC Malamud

Course involves pathologic and clinicopathologic research into various aspects of neuropathology. Specific subjects of research are chosen in conjunction with member of the staff.


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


Neuroradiologic techniques and interpretrations are reviewed in detail with particular emphasis on X-rays of the skull and vertebral, pneumoencephalography, myography, and arteriography.


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


V4 Baringer

Specific projects in experimental pathology of the nervous system may be undertaken by direct arrange-
102. Analysis and Presentation of Clinical Data. (2) W. Prerequisite: Nursing 101A and/or 101B, or consent of instructor.

Ahmadah Development of a systematic approach to the analysis and presentation of clinical data. Course emphasizes current nursing and medical knowledge, concepts and terminology, while utilizing material from parallel courses.

110. Physiological Basis of Nursing Assessment. (3) F. Prerequisite: Psychology 113A. Staff

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

11A. Health Assessment in Nursing. (7) F. W. Prerequisite: Nursing 110 or concurrent enrollment. Lecture 2 hours, Lab 15 hours.

Staff 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.

11B. Health Assessment in Nursing. (7) F. W. Prerequisite: Nursing 110 and 111A. Lecture 2 hours, Lab 15 hours.

Staff Explores some 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.

112. Small Groups: Theories and Issues. (3) F. W. Prerequisite: Concurrent enrollment or prerequisite to Nursing 117. Lecture 2 hours, Lab 3 hours.

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

113A. Communication: Theory and Practice in Nursing. (2) F. W. Prerequisite: Concurrent enrollment in Nursing 111A or consent of instructor. Lecture 1 hour. Lab 3 hours.


113B. Communication: Theory and Practice in Nursing. (2) F. W. Prerequisite: Concurrent enrollment in Nursing 111B. Lecture 1 hour, Lab 3 hours.


114A. Introduction to Family Health Care Nursing. (2) F. W. Prerequisite: Psychology 113A. Concurrent enrollment in Nursing 111B. Lecture 1 hour, Seminar 1 hour.

Staff Introduction to the nursing process through an in-depth exploration of the 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. (2) W. Prerequisite: Nursing 114A. Lecture 1 hour, Seminar 1 hour.

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.

116. The Communication Process. (3) F. A. Davis A lecture-discussion course exploring language as a social and therapeutic instrument in describing emotional experiences. Along with a general theoretical consideration of language, emphasis is placed on disturbed communication as depicted in schizophrenic behavior.

117. Psychological Adaptations in Health and Illness. (5) F. W. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, 114A and Psychology 133A-B. Lecture 2 hours, Lab 9 hours.

D. Adams Course deals with theory and practice essential to identifying, understanding, and intervening in forms of psychological disturbance. In laboratory, focus is on working with psychiatric patients, using the nurse-patient relationship as a therapeutic tool.

118. Family and Community Patterns in Health and Illness. (6) F. W. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, and 114A. Lecture 2 hours, Lab 12 hours.

Bello Theory and practice essential to the assessment of family and community patterns in health and illness, and for planning, implementing, and evaluating nursing care measures related to families, groups, and communities.

119. Pathophysiological Adaptation. (8) F. W. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, and 114A. Lecture 2 hours, Lab 18 hours.

Wicks Selected pathophysiological interruptions and adaptations in children and adults. Emphasis on promotion of optimal physiological function through assessing levels of functioning, evaluating adaptive mechanisms, and investigating nursing interventions. Laboratory to implement nursing process utilizing course content framework.

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

Markowitz Course examines structural and functional alterations and related adaptive mechanisms in disease of selected major organ systems, and discusses manifestations, diagnostic tests, 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) Prerequisite: Sociology 123 or consent of instructor. 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: Second year standing.

Furuta Consideration of advances in nursing and other disciplines. Examination of the health care system and the relationship of nursing to it.

130A. Clinical Practice in Circumscribed Areas of Nursing. (8) F. W. Prerequisite: Nursing 110, 111A and 111B, 112, 113A and 113B, 114A and 114B, 117, 118, 119, 121 and Sociology 123. Lecture 2 hours, Lab 18 hours.

Staff Course provides theory and clinical experience in a focused area of nursing practice over 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. Prerequisite: Nursing 130A and Sociology 123.

Staff Course provides theory and clinical experience in a focused area of nursing practice over two quarters. Emphasis is on further development of clinical competence, utilization of a systematic method of inquiry, and development of the leadership role.
154A. Nursing in School Health Programs. (4) F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours. 

Staff

Concepts essential for understanding objectives, organization, administration, and legal aspects of school health programs and the role of the nurse therein. Correlated experience under supervision in public schools.

154B. Nursing in School Health Programs. (5) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 9 hours. 

Staff

Concepts essential for understanding objectives, organization, administration, and legal aspects of school health programs and the role of the nurse therein. Correlated experience under supervision in public schools.


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 or Weekend workshops 2 hours, Lab 3 hours. 

Hargrove

A practical introduction to play designed to increase nursery school growth, communication and mental health in young children, using experiences and demonstrations with play materials, techniques, and methods in relating to young children therapeutically.


Neeson

Course presents related theory and potential content areas and specific knowledge necessary for professional nurses beginning to function as pediatric nurse practitioners. Emphasis is on most common illnesses of infancy and childhood.

158. Health Issues in Population Stabilization. (3) §§ W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. 

Abbott, Bewick, and Pich

Research relevant to social, ecological, and moral issues posed by scientific advances in contraception, sterilization, and abortion. Participant observation in various service settings exploring current and future nursing roles, and investigating provider and recipient attitudes and practices.

159. Health Supervision of Women During the Reproductive Years. (4) § F, W, Sp. Prerequisite: Consent of instructor. 

Neeson

Theories and concepts of applied obstetric and gynecologic science for maternity nurse associates. Areas include maternal-fetal-psychologic unit, common gynecologic problems, hormonal and mechanical contraceptives, sexual functioning, and the health needs of women from adolescence to menopause.

161. Health Maintenance in Infancy and Childhood. (4) § W. Prerequisite: Consent of instructor. 

Dunbar and Staff

Emphasis is on broad issues of child health supervision and the pediatric nurse practitioner's primary care role in management, with consideration of developmental stresses in the child-rearing years.

162. Special Problems of the Reproductive Period. (4) § W. Prerequisite: Nursing 159 and consent of instructor. 

Content includes theory and concepts of biopsychosocial problems and complications during the reproductive period. Metabolic, infectious, traumatic, and functional disorders are studied.

171. Physiological Concepts in Health. (3) W. Nursing 170. 2 hours, Lab 3 hours. 

Carrieri

Current physiological concepts are presented and implemented by the RN student within the problem-solving process. The course is designed to allow the RN student to apply knowledge of theory and conceptual frameworks in clinical practice.


Carrieri

Current physiological concepts in illness are discussed and related to selected written case studies prepared by the RN student. Within the problem-solving process these concepts are tested and applied in the RN's clinical work situation.

176. Health Assessment of the Adult. (4) § W. Prerequisite: Consent of instructor. 

Thurston

Course presents the essential elements of the health history and physical examination of the adult; introduces a systematic approach for use in problem identification by the laboratory for demonstration and practice of skills.

177. Theory and Process of Human Interaction. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 1 hour. 

Rosenau

Relevant principles of psychiatric theory, including communication and interpersonal, are related to interactional patterns of adult health and nurse practitioners as they relate to individuals in their health maintenance role. Problems in interactional process are explored. Laboratory required.


Introduces basic concepts and general approaches in clinical management of health conditions commonly encountered in primary care of adults. In-terdependent responsibilities of nurses and physicians are examined.

181. Law and the Practice of Nursing. (2) § W. Tennenthouse, Takano

Survey of fundamental and critical current issues in law with respect to the theory and practice of nursing. Emphasis on legal contingencies encountered in the everyday practice of nursing in both hospital and community settings.

182A-B. Health Education in Practice. (3-3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. 

Terry

Processes and means of incorporating health education into professional practice: identification of audience, delineation of specific pertinent health concerns, and explanation of modes of transmitting health information. Evaluation methods are explored.

183. The Teaching Learning Process. (2-3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab options 1-3 hours. 

Francis

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.

184A. Contemporary Issues and Trends in Health Care Services. (2) § W. Prerequisite: Consent of instructor. 

Resnik

For nurses in primary care training. Examines dominant issues, controversies, trends in health care. Included are organization, financing, and significant legislative trends as they relate to emerging patterns in primary care delivery.

184B. Contemporary Issues and Trends in Health Care Services. (2) § F. Prerequisite: Nursing 184A. 

Resnik

For nurses in adult primary care training. Examines issues and trends which have direct implications for nurse practitioners. Included are questions of health concerns, organized nursing and medical positions, certification, and planning change in health institutions.

186. Literature and Science: Self, Word and the West. (3) F, W, Sp. Clarke, Flex

An interdisciplinary seminar focused on the relationship between literature and science and the ways in which modern science has modified and added to the traditional raw materials of literature.


Zalar

Theories and concepts of femininity, masculinity and sexuality throughout the life cycle. Exploration of a wide range of human sexual behavior. Content includes sexual response, common sexual dysfunctions and therapy, masturbation, homosexuality, and sexuality in some health conditions.

197. Group Independent Study. (1-5) F, W, Sp. Staff

Groups of two or more collaborate in clinical investigation and studies of special problems related to nursing and health sciences, under the direction of faculty. Students may select study topics related to their areas of interest.

198. Supervised Study in Nursing. (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.

199. Laboratory Project in Nursing. (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.

200. Administrative Problems of Nurse Managers. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours. 

Archer

Theories of organization in relation to the dilemmas nurse managers face in administering nursing service and educational programs. Special emphasis is placed on ambulatory care settings and schools of nursing.

201. Curriculum Development in Nursing. (4) § W. Dunlap

Principles of curriculum development. Utilization of these principles as a frame of reference for planning educational programs in schools of nursing and nursing services.


Comparative study and critical analysis of major conceptual models in nursing. Emphasis is placed on models that are prototypes for the following theoretical frameworks: systems, symbolic interactionist, developmental and adaptation theories. Course may be repeated for credit.

204A-B-C. Comparative Nursing Administration. (2-3, 2-3, 2-3) § F, W, Sp. Prerequisite: Consent of instructor. 

Archer, Schatzman, Hill

Comparative analysis of nursing with emphasis on nursing administration in the United States and other selected countries, using perspectives from anthropological, educational, historical, political, organizational, philosophical, and sociological contexts applicable to each country. Particularly recommended for international students.
205. Processes of Supervision. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Staff
A study of the supervisory process, the role of the supervisor, the development of staff, and the principles and practice of supervision in nursing. Observation and laboratory experience in supervision are arranged for field study.

Analysis of the selected teaching components of reinforcement, stimulus variation, questioning, setting of objectives, and discussion utilized in individual and group instruction with application and practice in a microteaching laboratory setting.

207. Research In Teaching. (2-4) § F. W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours. M. Kramer
Critical inspection and analysis of research in student, patient, and staff teaching. Opportunity provided to incorporate the findings of research in supervised practice teaching sessions.

208. Emerging Roles in Professional Nursing. (3) § Sp. Lecture 2 hours, Lab 3 hours. Staff
Examines from historical, sociological, economic, and nursing perspectives, the phenomena surrounding emerging professional nurse roles. Selected examples from student contact with people practicing in emerging roles and published descriptions provide bases for discussion.

210A. Family Dynamics, Concepts and Assessment. (3) § F. W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. J. Moore
Lecture-seminar that examines family dynamics and major concepts useful in assessment of families. The family as a system wherein roles, cultural values, and interpersonal communication is emphasized is considered. Selective readings are utilized.

210B. Family Dynamics, Pathology and Therapy. (3) § Sp. Prerequisite: Nursing 210A or equivalent and consent of instructor. Lecture 2 hours, Lab 3 hours. J. Moore
Seminar emphasizing family concepts which aid in understanding of dysfunctional families. Marriage and family therapy as treatment modalities are studied. Simulation laboratory experiences are used to test theory. Concurrent enrollment in Nursing 405 with consent of instructor.

211A. Introduction to Research: Perspectives and Styles of Research and Researchers. (3) § F. Sp. Prerequisite: Elementary statistics or equivalent. Lecture 2 hours, Lab 3 hours. M. Kramer
Lectures and small group sections present an overview of the research process including the styles of researchers, the research attitude, logic, ethics, philosophy, and tools of science.

211B. The Research Critique. (3) § W. Sp. Staff
Section with different substantive focus 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.

211C. Research Techniques: Data Analysis. (3-4) § Sp. Prerequisite: Nursing 211A and 211B. Staff
Data collection, analysis and presentation of a research project in nursing.

211D. Experimental Research Design. (3) § Sp. Prerequisite: Nursing 211A or consent of instructor. Horroff
Intensive study and critique of experimental and quasi-experimental research designs.

211B1B. Critique of Studies in Patient-Family Teaching. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. B. Horroff
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.

211B2B. Critique of Studies in Maternal-Child Nursing. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. S. Highley, S. Svedson
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.

211B3B. Critique of Research in Loss and Grief. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. J. Moore
Critical study of studies in loss and grief 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.

211B4B. Critique of Research in Death in Childhood. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Waecherter
Study 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.

211B5B. 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.

211B1B1. Critical Analysis of Clinical Interventions with Young Retarded Children. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. J. Polether
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.

211B2B1. Critique of Research Studies in Nonverbal Behavior. (3) § W. Prerequisite: 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.

211B3B1. Critique of Cardiopulmonary Research. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. J. Carriere
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.

211B4B1. Critique of Research Studies in Quality of Patient Care. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. J. Carriere
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. Physiological Concepts in Nursing. (2-4) § F. Prerequisite: Consent of instructor. Staff
Promotion of the understanding and application of physiological principles to cross-clinical nursing. Emphasis is on basic science considerations, integrative aspects, and selected functional modifications.

212C. Physiological Concepts in Nursing. (2-4) § Sp. Prerequisite: Consent of instructor. Staff
Promotion of the understanding and application of physiological principles to cross-clinical nursing. Emphasis is on basic science considerations, integrative aspects, and selected functional modifications.

213A. Nursing Measurements and Patient Monitoring. (2-3) § W. Prerequisite: Nursing 212A and consent of instructor. Lecture 2 hours, Lab 0.3 hours. Beaumont
Fundamentals of electronics, transducers, and instrumentation directly applicable to the modes of obtaining physiological data from patients.

213B. Nursing Measurements and Patient Monitoring. (2-4) § Sp. Prerequisite: Nursing 212A and consent of instructor. Lecture 2 hours, Lab 0.8 hours. Beaumont
Fundamentals of electronics, transducers, and instrumentation directly 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. J. Mercer
Course focuses on the peripuerum; early maternal/ paternal/newborn relationships and the nurse's role in facilitating mother-infant acquisition and attachment with emphasis on impact of premature infant or infant with defect on the nursing process. Practicum available through Nursing 406.

215A. Health in the Community. (3) § F. W. Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours. Staff
Exploration of theories, concepts, and principles pertaining to the practice of community health nursing with focus on positive health factors and interaction with families. Selective readings are utilized.

215B. Health Care Planning in Communities. (3) § F. W. Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours. Staff
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) § Sp. Prerequisite: Nursing 215A or 215B and consent of instructor. Seminar 2 hours, Lab 3 hours. Staff
Exploration of community health issues 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. Prerequisite: Consent of instructor. 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 Nursing. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Staff Emphasizes surveys and the evaluative research methods including data identification, collection, analysis, interpretation, and reporting. Stresses these functions as essential for planning and evaluating health care programs.

216. Maternal Child Nursing. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours, Zalar, Savedra Survey of major phenomena utilizing concepts, theories, and laboratory experiences within childbearing: pregnancy, normal, enlarging family, mother-child couple, progressing to evolving multiplicity of 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 children in illness and hospitalization for the child and his family. Focus is directed to minimizing trauma and promoting growth. Concurrent practicum recommended.

218. Maternal Identity: Role Transition. (2-3) § Sp. Lecture 2 hours, Lab 0-3 hours, Highley Role identification and maternal role identity is used to examine transition as a lifelong developmental construct. Patient data is utilized to examine theoretical concepts and generate new theory.

219A. Nursing Care of the Acutely Ill Child. (2) § F. Prerequisite: Consent of instructor, Ward Focus is on exploration of immature physiological and pathophysiological processes and their implications for 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, Ward Focus is on exploration of immature 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. Prerequisite: Nursing 211A and 211B 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 emphasizes. Includes traditional, existing, expanded, and emerging roles relating to specialization. Optional laboratory for theory testing and systematic observations.

221B. Role Development: Specialized Nursing Roles. (2-3) § 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 emphasizes. Includes traditional, existing, expanded, and emerging roles relating to specialization. Optional laboratory for theory testing and systematic observation is required for research credit.

221C. 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 critical analysis of specialized nursing role developments. Role research emphasizes. Includes traditional, existing, expanded, and emerging roles relating to specialization. Optional laboratory for theory testing and systematic observation is required for research credit.

222A. A Survey of Modern Psychiatric Thought. (3) § F. W. Prerequisite: Consent of instructor. Underwood Theoretical models from selected schools of psychiatric thought are presented and applied to clinical material. Intrapsychic, interpersonal, and social aspects of mental illness are reviewed. Research related to selected theoretical models is explored.

222B. A Survey of Modern Psychiatric Thought. (3) § W. Prerequisite: Consent of instructor. Underwood Theoretical models from selected schools of psychiatric thought are presented and applied to clinical material. Intrapsychic, interpersonal, and social aspects of mental illness are reviewed. Research related to selected theoretical models is explored.

224. Current Trends in Group Psychotherapy. (3) § F. Prerequisite: Nursing 244 or consent of instructor.

Staff Seminar in focusing in depth on the theoretical bases and implementation of role playing, psychodrama, and gestalt psychotherapy in the group setting by the psychiatric nurse. Designed for nurses desiring advanced preparation in group psychotherapy.

225. Psychopharmacologic Process in Nursing. (3) § F. W. Prerequisite: Consent of instructor, J. Moore Lecture/seminar on the psychopharmacologic process in nursing. Material drawn from recent research in social science, psychiatry, and psychiatric nursing.

226. Nursing in Long-Term Illness. (3) § F. W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours, Hallburg Intensive study of problems related to long-term illness. Explorations of the interrelationship of various cultural, psychosocial, and pathophysiological factors involving health problems. Field experience included.

228. Communications — Theoretical and Philosophical, (2-4) § F. W. Prerequisite: Consent of instructor.

Staff The concept of communication has become one of the overlapping areas in a number of disciplines. This course examines research studies, polemical essays, and recent writings which have made the concepts and problems of human communication central to their investigation.

229. Crisis Intervention. (2-4) § F. W. Lecture 2 hours, Lab 0-6 hours, 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 and the adaptive and maladaptive reaction and compensatory mechanisms and interventions to facilitate successful resolution.

230. Legislative Processes and Strategies. (2-4) § W or Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours, Clem Exploration of legislative processes which affect professional practice. Analysis of strategies for political action. Examination of constitutional and legislative, evaluation of various levels of government, and the effects of various types of legislation. 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.

Staff An advanced course designed to apply major concepts in organizational theory and management to nursing administration. Emphasis is on systems approach and relevant analytical techniques that will enable students to conceptualize and analyze problems in health care settings.

231B. Nursing Administration. (4) § F. Prerequisite: Nursing 231A and consent of instructor.

Staff An advanced course designed to apply major concepts in organizational theory and management to nursing administration. Emphasis is on systems approach and relevant analytical techniques that will enable students to conceptualize and analyze problems in health care settings.

232. Dimensions of Learning. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours, Bailey Overview of concepts, theories, principles, and research studies related to leadership and adjacent processes such as group dynamics and structure. Focuses on systematic analysis of decision processes related to planned change in health care services. Laboratory included; computer simulation.

232B. Dynamics of Leadership. (2-4) § W. Prerequisite: Nursing 232A or consent of instructor. Lecture 2 hours, Lab 0-6 hours, J. Nielsen Analysis of interactive variables and functional relationships of leadership: characteristics of the leader, follower, and health-care environmental situation. Focuses on ideas, theories and research relative to leadership behavior, styles, and strategies. Laboratory includes computer simulated problems.

232C. Problems in Leadership. (2-4) § Sp. Prerequisite: Nursing 232A and 232B or consent of instructor. Lecture 2 hours, Lab 0-6 hours, Gorton Seminar focuses on the analysis of selected problems and case studies and on creative management of human resources in health services. Application and testing of ideas, principles, models, and theories related to leadership roles, decision making, and planned 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. Uses and trends 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. Sp.
Staff Seminar providing opportunity for discussion about multiple issues which come into play when adult patients face death. Discussion focuses on meaning of dying from perspective of persons undergoing the experience and/or problems of health professionals when patients are dying.

235. Process of Aging: Implications for Nursing Care. (2-4) F. W. Lecture 2 hours, Lab 0-6 hours.
Takanski, Mersky
Study of the physiological, psychological, and 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., Sp. Prerequisite: Consent of instructor. Abbott, F.
Theoretical sessions related to methodology and techniques of conducting expectant parent discussion groups. Exploration of content relevant to concerns of expectant parents, encompassing child-bearing and early child-rearing experiences. Concurrent practice required.

238A. Development of the Infant and Preschool Child. (3) F. Sp. Prerequisite: Consent of instructor. Waechter, J.
Examination 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.
Waechter, J.
Examination of the relevant theories, literature, and research findings dealing with normal cognitive, emotional, and social development during the elementary school years.

239C. Adolescent Development. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Enrollment limited.
Waechter, J.
Examination 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.
E. Clarke, Flood
A comprehensive study of the nursing care of patients with pulmonary problems. Emphasis on the physiological concepts necessary to understanding the patient and nursing problems. Exploration of the theoretical bases for nursing decisions and nursing action.

239B. Care of Patients with Pulmonary Problems. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 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 of legislative, ecological, and socioeconomic issues influencing care delivery.

239C. Care of Patients with Pulmonary Problems. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
E. Clarke, Flood
Investigation of nontherapeutic, unintended physiologic effects of selected common nursing interventions with patients with cardiopulmonary dysfunctions. Clinical laboratory included.

239D. Clinical Decision Making. (3) F. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Barstow
The theoretical basis for decision making in the management and teaching of adults, with emphasis on obstructive lung disease in acute and chronic settings. Examination of coping mechanisms, teaching-learning theories, and related research as applied to individual child.

241A.01A. Theoretical Basis of Cardiovascular Nursing. (3) Sp. Prerequisite: Lecture 3 hours. Stotts
A study of cardiovascular theories applicable to nursing practice. Focus will be on selected physiology and pathophysiology that supports selected nursing interventions.

241A.01B. Theoretical Basis of Cardiovascular Nursing. (3) Sp. Prerequisite: Nursing 241A.01A, Consent of instructor. Lecture 3 hours. Stotts
A study of cardiovascular theories applicable to nursing practice. Focus will be on selected physiology and pathophysiology that supports selected nursing interventions.

241A.02. Renal Nursing: A Physiological Basis. (3) W. Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Markewitz, E. Clarke
Exploration of physiological concepts and principles pertinent to selected renal pathology. Application of these principles to nursing assessment and the care of patients with renal problems.

241A.03. Pharmacology for the Cardiopulmonary Patient. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Clarke
Study of cardiopulmonary nursing problems and their amelioration by drugs affecting the autonomic nervous system and cardio-respiratory-renal core systems. Review of relevant anatomy, physiology and drug action included.

Lagerquist
In-depth psychophysiological exploration of concepts of anxiety, stress, body image, and adaptation as they relate to and influence nursing practice.

244. Theories of Group Psychotherapy. (2) W. Sp. Prerequisite: Consent of instructor. Lecture 1 1/2 hours, Lab 1 1/2 hours.
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.

246. Deterrents to Parenting. (3) F. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Tessler
Exploration of evolving mother-child relationships, adaptive tasks, and emotional and interpersonal situations interrupting healthy development of mothering. Implications for nurturing and nursing roles.

247.01. Issues and Trends in the Health Care of the Aged. (3) F. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
An 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 for the aged, both sick and well.

247.02. Legislative Issues and Political Aspects of Aging in Long-Term Health Care. (3) W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Praus
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.
Staff
Groups of two or more collaborate in clinical investigations and 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.
Staff
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
Exploration of psychophysiological concepts in action. Focus is on problems and conflicts encountered by professional nurses in bureaucracies and research related to identification and amelioration of these conflicts.

252. Reality Shock in Nurses. (3-4) Sp. Prerequisite: Three months 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 bureaucracies: evolution, process and relationships. Course focuses on problems and conflicts encountered by professional nurses in bureaucracies and research related to identification and amelioration of these conflicts.

253. Research in Small Group Behavior. (3) Sp. Prerequisite: Nursing 211A and consent of instructor.
Staff
A comprehensive analysis of research design, theory, concepts, and methodology applied to the group process. Variables such as group interaction, performance, group structure and group function will be examined with particular emphasis on measurement and experimental design.

254.01. Maternal Physiology and Clinical Assessment. (2-4) W. Sp. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours.
Dulock, Ree
Exploration of the normal 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, Ree
Exploration of the critical phases and processes of fetal growth, development and function as a basis for understanding the genesis of congenital anomalies, pathophysiologic problems in the newborn and the nursing implications.

254.03. Nursing Care of High Risk Pregnancy. (2-4) F. Sp. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Dulock, Ree
Exploration of pathophysiologic 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
In-depth exploration of the physiologic and pathophysiologic effects affecting the normal and high risk newborn. Current medical and nursing research findings will be incorporated.

254.05. Developmental Pediatric Physiology. (2) F. Prerequisite: Consent of instructor.

Dulock, Ree, Burkhalter
Course provides theoretical concepts of the inter-relationships of drugs, and their pharmacologic effect on the maternal-placental-fetal unit and on the developing newborn. Specific drugs, their clinical considerations, and the nurse's role in drug therapy will be incorporated.

255.01. Child Health Assessment. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

M. Cheung
Presentation of theoretical principles of child health assessment. Areas to be covered include exploration of methodologies of data-gathering and data-analysis essential to comprehensive health assessment of children and the laboratory for testing and integration of theory.

255.02. Child Health Maintenance. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

Durand
Course provides exploration of theories, concepts and knowledge for comprehensive child health maintenance, encompassing prevention and promotion. Emphasis on parental developmental. In assessment, decision-making and management of common childhood problems and normal developmental stresses in infancy and childhood.

255.03. Management of Common Pediatric Illness. (4) F. Sp. Prerequisite: Nursing 255.01 and 255.02. Consent of instructor. Lecture 2 hours. Seminar 2 hours.

Covers theoretical basis of physiological and psychological principles necessary for understanding management of common pediatric illnesses. Provides format oriented to student learning, utilizing developmental and communication concepts in assessment and management. Collaborative roles between nurse, family and physician emphasized.

256. Therapeutic Use of Play. (2) F. W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Hardgrove
Practical experience using play materials, techniques, and games to help young children develop the graduate nursing student's observational skills and afford opportunities to test and develop theories of child development. Practicum optional.

257A. Children at Risk. (3) W. Prerequisite: Nursing 238A, 238B or 238C or Psychology 220 or equivalent and/or consent of instructor. Lecture 2 hours. Lab 3 hours.

Miller

257B. Children at Risk. (3) W. Sp. Prerequisite: Nursing 257A. Lecture 2 hours. Lab 3 hours.

Miller
Exploration of health problems related to children at risk: developmental deviations, hereditary conditions, potential parenting problems, child abuse, environmental and cultural influences upon children. Emphasis on developing a conceptual framework for working with children in their home environments.

258. Intrapartal Nursing. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

Mercer
Exploration of theories of pain perception and clinical course of normal labor and delivery. Social, cultural and psychological factors influencing the family's approach to childbirth are studied concurrently with clinical data. Practicum available through Nursing 406.

259. Sex Education and Counseling. (3) F. Sp. Prerequisite: Nursing 280 or Psychiatry 180 or equivalent. Consent of instructor. Lecture 2 hours. Lab 3 hours.

G. Adams
Theories and principles of sex counseling and intervention for common problems are analyzed to facilitate health professionals work with individuals and families relative to human sexuality. Relevant personal and societal attitudes and values are explored. Nursing 406 required practicum.

260. Health Care of Women in the Reproductive Years. (2) F. Lecture 2 hours. Neeson
Principles and theories of assessment of women's reproductive health; methodologies of data gathering and analysis related to the specific needs of the reproductive years, the conceptional period, the climacteric and the newborn. Consideration of social, cultural and ethnic variations. Laboratory available through Nursing 406.

260. Women's Reproductive Health: Theories and Management. (3) W. Prerequisite: Nursing 259.01 or consent of instructor. Lecture 2 hours. Seminar 2 hours.

Neeson
Exploration of theories, concepts and knowledge necessary to maintain and promote women's reproductive health. Emphasis on application of current research: decision making 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) F. Sp. Prerequisite: Nursing 259.01 and 259.02 or consent of instructor. Lecture 2 hours. Seminar 2 hours.

Neeson
Theory and management of bio-psycho-social deviations from normal in women before and during pregnancy and the 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.

260. Research in Human Communication. (3) W. Prerequisite: Nursing 214A or equivalent.

A. Davis
Seminar examines selected research focusing on human communication. Research topics such as interaction, social context, and language are explored to understand problems encountered in human communication research.

261. Introduction to Computer-Based Instructional Systems in Nursing Education and Practice. (2-4) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 0-6 hours.

Claus, Kamp, Veitch, Gorton
Focus is on computers to aid instruction in nursing education and practice. Concepts, principles and methods of participating computer instruction will be introduced. Laboratory provides opportunities to design and write interaction instructional programs or to evaluate use of computerized systems.

263A. Nursing Evaluations of the Long Term Client. (3) W. Prerequisite: Consent of instructor. Lecture 3 hours.

Davidow
Selected framework for assessment, analysis of data and presentation of diagnoses are explored as related to long term residents in institutional and community settings. Data bases and methodologies for collecting client information are studied. Concurrent unit practicum required.

263B. Restorative Nursing with Long Term Care Clients. (3) F. Sp. Prerequisite: Nursing 263A or consent of instructor. Lecture 2 hours. Seminar 2 hours.

Davidow
Examination of restorative nursing with long term clients in various institutional and community settings. Exploration of methods of implementation of prescribed nursing and evaluation outcomes toward client goal achievement and independence. Concurrent practicum required.

263C. Quality Assurance in Health Care. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours.

Focus is on dimensions of quality assurance. Impact of value judgments and components of quality 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.

Nichols
Focus is on the exploration of social processes and how they impinge on nursing practice. Interventions based on empirical data are considered.

266A. Research Conceptualization. (3-5) F. Prerequisite: Nursing 214A or consent of instructor. Lecture 2 hours. Lab 3-9 hours.

Kramer
Discussion and practice in research problem formulation and design, including development of research. Core classes and small group sessions are organized around students' interests.

266B. Research Implementation. (3-5) F. Sp. Prerequisite: Nursing 256A or consent of instructor. Lecture 2 hours. Lab 3-9 hours.

Kramer
Data collection, analysis, and reporting of a research project, or of some aspect of a research project, such as tool construction, validity, or reliability studies.

268. Current Professional Issues 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 professions.

290.01. Conceptual Approaches to Family Study. (2-4) F. F. Prerequisite: Enrollment in the DNS program. Lecture 2 hours. Lab 0-6 hours.

Sveder, Mercad
Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on interactional and structural-functional. Seminar focuses on relating family interactions and nursing problems in the maintenance of family health.

290.02. Conceptual Approaches to Family Study. (2-4) W. F. Prerequisite: Nursing 290.01 and/or consent of instructors. Enrollment in the DNS program. Lecture 2 hours. Lab 0-6 hours.

Sveder, M. Mercad
Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on the developmental, psychosocial and institutional. Seminar focuses on theoretical application 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.

Saviedra, Mercer

Individual development of an approach or model for study of a specific problem in family health nursing. Seminars focus on critique of models generated by students and their applicability to the research problem.

298. Thesis or Comprehensive Examination. (0) F,W,S. Prerequisite: Approval 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. (0-6) F, W, S. 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, S. 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, S. 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, S. 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, S. 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.

404.06B. Clinical Residency-Pediatric Nurse Associate. (4) Sp. Prerequisite: Nursing 404.06A and consent of instructor. Lab 12 hours. Durand

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory child health care.

405. Practicum in Mental Health and Community Nursing. (1-8) F, W, S. 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 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, S. 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, S. 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.

408. Nursing Internship Seminar. (2) Su. Prerequisite: Admission to Biodisfunction Veterans Administration Internship Program. Friessen

Seminar designed to develop ability of participant to use sociopsychological theory in dealing with the setting of the UC-VA internship. To be taken concurrently with internship which includes individual and small group instruction in clinical management skills.

408B. Nursing Internship Seminar. (2) F. Prerequisite: Admission to Biodisfunction Veterans Administration Program. Conahan

Seminar designed to develop ability of participant to use sociopsychological theory in dealing with the setting of the UC-VA internship. To be taken concurrently with internship which includes individual and small group instruction in clinical management skills.

409. Continuing Education Residency. (6-12) F, W, S. Prerequisite: Nursing 201 or equivalent, and consent of instructor. Lab 18-36 hours. Staff

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the Continuing Education Specialist role in meeting continuing education needs of registered nurses.

410. Teaching Practicum. (1-8) F, W, S. Prerequisite: Consent of instructor. Lab 3-24 hours. Staff

Opportunity to apply theory in clinical practice in selected components of the teaching role in nursing.

410B-C. Human Nutrition. (1-1) W, S. Lecture 1 hour. Silverstein (W), Eckhaus (Sp.)

An introduction to the basic principles of human nutrition. Subject matter 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.

132. Principles of Diet as Therapy in Nursing Interventions. (2) W, S. 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) Prerequisite: Nutrition 130B. Lecture 1 hour. Lab 3 hours. Vissan

Emphasis is on different aspects of nutrition such as diet evaluation, obtaining diet histories, and nutrition education. Panel discussions of pertinent topics in nutrition are included.

181. Nutrition Counseling for Families. (3) § Prerequisite: Nursing 114 and/or consent of instructor. Lecture 2 hours. Lab 3 hours. Gutierrez, Hoare

Course provides theory and practice in the interpretation of current concepts and principles of nutrition counseling with an emphasis on cultural nutrition.

See International Health 182.

Obstetrics and Gynecology


Basic principles and fundamental techniques in obstetrics and gynecology are discussed in a series of seminars, case discussions, and teaching clinics. Students gain practical experience in clinics, wards, delivery room, and operating room under direct supervision.


Advanced clinical clerkships. Senior clerkships are available in various hospitals by arrangement. Prerequisites: MZ L, KP and others in the United States or abroad.

140.03. Senior Clerkship in Obstetrics and Gynecology at C (1½ per week) Su, F, W, Sp. Webb

Nurses will have responsibilities of full-time acting interns on both the obstetrical and gynecological services.


Daily participation in the general and sub-specialty clinics of obstetrics and gynecology.

140.06. Obstetrics and Gynecology Clerkship at SFGH. (1½ per week) Su, F, W, Sp. Prerequisite: Obstetrics and Gynecology 110. R. Sweet, S. Henderson, Beacham, Minkler, Blumenstock

Course is individually structured for each student by the instructor. Emphasis is on areas of interest and need for in-depth exposure to gynecology.


The clerk functions in the role of an acting intern on the gynecology service. Responsibilities are predominantly in the inpatient service and will include both surgical and non-surgical aspects of gynecologic oncology, endocrinology, infertility, and general gynecology.

150.01. Research in Obstetrics and Gynecology. (1¼ per week) Su, F, W, Sp. Prerequisite: Consent of instructor and chairman of the department. Jaffe

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


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 Obstetrics and Gynecology. (1-5) Su, F, W, Sp. Prerequisite: Consent of instructor. Jaffe and Staff

A laboratory research project under direction of a 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 includes lectures on clinical diagnosis and care of eye diseases.

140.01. 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 ophthalmic 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 chairman of the department. In San Francisco, electives offered at SFGH. L. VA, as well as other hospitals in the United States.

150.01. Ophthalmic Pathology. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor. 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. (1.5 per week) Su, F, W, Sp. Prerequisite: Consent of instructor and chairman of the department.

S. Kramer

A research project under the direction of a member of the faculty carried out in the Department of Ophthalmology.

198. Supervised Study in Ophthalmology. (1.5) F, W, Sp. Prerequisite: Library research and directed reading involving supervision of a member of the faculty with the approval of the chairman of the department.

S. Kramer

454. Fourth Year Residency. (1.5 per week) Su, F, W, Sp. Prerequisite: 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.
PH. A. Schwartz, J. P. Hilton, STM Shaffer, CHS. SRM Rathbun
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.

JF. Goodner
Interns, under supervision of the attending staff, are responsible for patient care on wards and in the follow-up clinic, including diagnostic studies and consultation. This rotation is combined with patient-care assignments in the Otolaryngology Service.

Oral Biology

Chinn, Caswell and Staff
Group rotation through two five-week sections: clinical diagnosis — patient presentation entailing history-taking, diagnosis, treatment, and follow-up; and medicine — introduction to internal medicine and physical diagnosis.

T. E. Daniels
Handing of patients is introduced by emphasizing history-taking, differential diagnosis, medical implications, clinical pathology, laboratory in dental practice, and fundamentals of treatment. Classification, etiology, pathology, diagnosis, and treatment of some benign 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
Introduction to oral biology correlating morphologic, chemical, function of dental and maxillofacial, dental, and salivary gland and glandular tissues. Topics include head and neck embryology, enamel, dentin, cementum, pulp and pulpal disease, dental caries, dental anomalies, tooth eruption, periodontics and periodontal disease, and oral mucous membranes.

127. Introduction to Oral Pathology. (3) Prerequisite: Oral Biology 126. 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.

128. Dental Caries, Plaque and Fluorides. (3) Sp. Prerequisite: Biochemistry 126. Lecture 2, Microbiology 126 and Pharmacology 126-B. Lecture 2 hours, Rotating seminar 8 hours.
Chinn

Chinn
Clinical oral pathology for the dental hygienist. 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.
R. Taylor
Seminar series covering differential diagnostic techniques and treatment approach to temporomandibular joint disease.

171. Oral Biology. (2) F. W. Sp. Prerequisite: Oral Biology 126 and consent of instructor. Seminar 2 hours.
Savostin-Asling (F), Christie (W, Sp.
Advanced study of the oral tissues, with emphasis on their histophysiological aspects.

Hansen and Staff
A seminar designed to acquaint postdoctoral dental students with current advances, techniques, trends, and developments in the field of oral pathology.

176A-B-C. Oral Pathology Seminar. (2-2-2) F. W. Sp. Lecture and Seminar 3 hours.
Hansen
Lectures and seminars on diseases of the oral regions. Disease entities are studied from a clinical and histopathologic standpoint with emphasis on etiology and pathogenesis.

179. Oral Medicine. (0-2) 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 commitments in the clinic, students, once selected, may not withdraw. Clinic 10-20 weeks.
R. Taylor
Participation in the Temporomandibular Joint Clinic applying knowledge of history-taking and differential diagnosis and utilizing such diagnostic techniques.

180A-B-C. Clinical Pathology Conference. (1½-1½) F. W. Sp. Prerequisite: Fourth year standing. Lecture 1½ hours.
S. Silverman and Staff
Clinical pathology conference: biology, diagnosis, and treatment of various oral lesions and associated patient problems. Some oral conditions are critically reevaluated in the light of current research advances. Specific medical knowledge is related to patient care.

181. Forensic Odontology. (1) W. Prerequisite: Fourth year standing and consent of instructor. Lecture 1 hour.
Hansen and Staff
Identification by means of dental evidence, known as forensic odontology. Course includes discussions of identification procedures in single and multiple deaths, including homicides and mass disasters. Forensic dental injury and Bite mark analysis. The medicolegal autopsy, fire research, and forensic anthropology.

185. Diagnostic Oral Pathology. (1) F. W. Sp. Prerequisite: Fourth year standing and consent of instructor.
Merrell
The advanced dental student participates in lecture-seminars, in which emphasis is placed on the diagnosis of oral disease correlating the history, clinical presentation, microscopic, radiographic, laboratory, and histopathological findings.

186. 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.

189.01. Oral Medicine. (F) F. W. Sp. Prerequisite: Oral Biology 136A-B-C and consent of instructor. Clinic 3 hours.
S. Silverman
Participation in the Oral Medicine Clinic: apply knowledge of history-taking and differential diagnosis utilizing various diagnostic 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. (1-½ per week) F. W. Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee.
S. Silverman
Ward
Students provide comprehensive dental care to patients assigned to them under supervision of staff in the medical and hospital environment. Students attend seminars and conferences.

190. Oral Medicine. (1½) W.
F. W. Sp. Prerequisite: T. E. Daniels, J. Olson
Review of oral diseases most relevant to physicians. Etiology, diagnosis, management and prevention are covered. Subjects include introduction to dentistry, caries, periodontal disease, periodontal disease, pigmentation, oral cancer, salivary, salivary gland disease, oral aphthae, herpes, smoking, diseases of the tongue.

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

Principles and methods employed in studying oral tissues such as histocomposition, autoradiography, de-calcification procedures, cryostat sectioning, and en-zyme histochemistry will be presented.

S. Silverman and Staff
A wide spectrum of selected topics related to oral biology are presented with emphasis on basic and applied research methodology, pertinent of problems, significance of findings, and critical evaluation of data.

S. Silverman
Advanced consideration in the field of histopathology. Applications of newer techniques and concepts are presented to increase understanding of the oral cavity in health and disease. Etiology, diagnosis, and therapeutics are discussed.

209. Biology of Connective Tissue. (2) F, Sp. Prerequisite: Biochemistry 207 or consent of instructor. Lecture 2 hours.
Staff
A seminar course in connective tissue biology, concerned mainly with the development, differentiation, and pathology of the connective tissue ground substances as topes as regulatory controls of connective tissue macromolecules, fibrosis, wound healing, inflamma-tory 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.

Staff
297. Special Study. (1-3) F. W. Sp. Staff Reading and conferences under the direction of a member of the staff.

298. Thesis. (0) F. W. Sp. Prerequisite: Advance- ment to candidacy and permission of the graduate adviser. Staff For graduate students engaged in writing the thesis for the master's degree.

300. Practicum in Teaching. (1-4) F. W. Sp. Pre- requisite: Consent of instructor. Staff Practice in teaching a course in oral biology under the supervision of the instructor in charge.

406. Seminar in Oral Biology. (1) F. W. Sp. Seminar 1 hour. S. 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.

408.A-B. Oral Pathology. (2-2-2) F. W. Sp. Lecture and Seminar 2 hours. Hansen Lectures and seminars on diseases of the oral regions. Disease entities studied from a clinical and histomorphological standpoint with emphasis on etiology and pathogenesis.

489.01. Oral Medicine. (1) F. W. Sp. Clinic 3 hours. S. Silverman Participation in the Oral Medicine Clinic: apply knowledge of history-taking and differential diagnosis; utilize various diagnostic techniques such as biopsy, cytology, and certain clinical pathology laboratory tests; interpret results, prescribe treatment and follow-up; hospital rounds; and weekly seminars.

489.02. Oral Medicine. (1) F. W. Sp. Prerequisite: D.D.S. degree and consent of instructor. Clinic 3 hours. Ware Taylor and Staff Participation in the Temporomandibular Joint Clinic applying knowledge of history-taking and differential diagnosis; utilizes such diagnostic techniques as laminagraphy and analysis, and other specific joint tests; interprets results; prescribes treatment; and follows-up with patient reviews.

Oral Diagnosis

109. Clinical Oral Diagnosis. (0-1-1/2) F. W. Sp. Pre- requisite: Third year standing. Clinic Variable. Braly and Staff Credit is assigned on a point basis for independent case work-ups and case presentations.

109.01. Oral Diagnosis and Roentgenology Rotation. (0-0-0) 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 and treatment planning, emergency dental care, clinical photography, and roentgenology.

109.02. Dental Emergency Clinic. (0-0-1/2) F. W. Sp. Prerequisite: Oral Diagnosis 109.01. Clinic 6 hours. G. Hall Fourth year students provide dental emergency care in the UC clinics. Instruction will be provided on a one to one basis and credit assigned according to hours spent.

116.A-B. Clinical Dentistry. (0-4, 0-4, 1 1/2) 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 116-B.C. Clinic and Seminar 6 hours. Maxwell Small group instruction is provided in comprehensive case work-up of dental patients. Student completes a case history, clinical examination, studies cast analysis, and diagnosis and treatment plan, meeting the patient’s total dental needs.

189. Oral Diagnosis and Treatment Planning. (1) F. W. Prerequisite: Oral Diagnosis 109 and 109.01, and fourth year standing. Clinic-Seminar 3 hours. Schmidt Students receive experience in advanced treatment planning meeting multidisciplinary nature, through examination, case work-up, and treatment planning of patients presenting complex oral problems. Students work with the oral diagnosis staff and the faculty consultative panel.

Oral Radiology

109.01. Oral Radiology. (0-1-1) SS. F. W. Prerequisite: Oral Radiology 121. Lab Rotation 24 hours. Parks A course in intraoral X-ray technique, including instruction in the long cone paralleling method, and practice on skulls and mannequins. Objective of the course is to prepare the student for clinical experience during the oral diagnosis 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 radiation biology.

131. Oral Radiology. (1) Sp. Prerequisite: Oral Radiology 121. Parks Course is a continuation of Oral Radiology 121 and is intended to broaden the scope of radiographic interpretation. Additional aspects concerning radiation biology are included.

160.B-C. Oral Radiology for Dental Hygiene. (1-1) W. Sp. Lecture 1 hour. Parks Course covers essentially the same material as Oral Radiology 121, but is modified to meet the special needs of the dental hygienist.


199. Laboratory Project in Oral Radiology. (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

109. Dental Local Anesthesia. (1/2) Sp. Khosla Course covers local anesthesia technique as it pertains to the dentition and oral cavity.


130.B. Oral Surgery. (1) F. W. Prerequisite: Anatomy 117-A and Microbiology 126A and 126B. Lecture 1 hour. N. Gordon A didactic course outlining the basic principles of removal of unerupted teeth, pre-prosthetic surgery, presentation writing, maxillary sinus involvement, tooth transplantation, wound healing, referrals and consultations.

130C. Oral Surgery. (1) W. Prerequisite: Anatomy 117-A and Microbiology 126A and 126B. 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 in the dental office are presented.

131. Oral Surgery. (1) Sp. Prerequisite: Oral Surgery 130A, 130B and 130C. Lecture 1 hour. R. A. Smith Procedural skills and academic knowledge the general dentist should be familiar with: includes the treatment of cysts, infection, developmental deformities of the jaws and salivary glands, duct diseases, and procedures.


170. Surgical Orthodontics. (2) W. Prerequisite: Enrollment in postdoctoral specialty program in orthodontics or oral surgery. Seminar 2 hours. Ware The course explores the various facial and occlusal deformities that justify a combination of surgical and orthodontic treatment. The student is assigned a topic, does the necessary library review, and presents a seminar under direction of the instructor.

171. Applied Surgical Anatomy. (1) F. W. Sp. Pre- requisite: Limited to interns and residents. Lab 3 hours. Ware and Staff Relationships of gross anatomical structures of the head and neck utilized during oral surgical dissections. Emphasis is placed on the correlation of cadaver dissection findings to diagnosis and operating room surgery.

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 month and clinical operations on patients.

175.01A-B. Oral Surgery. (2-7, 2-7) F. W. Prerequisite: Limited to interns and residents. Lecture Seminar 2 hours, Clinic 15 hours. Ware and Staff Continuation of Oral Surgery 175.
178B-C. Abnormal Facial Growth. (2-2) W. Sp. Seminar 2 hours. Harold
Diagnosis of orofacial malformations. Emphasis is on the interrelationship of morphology and physiology.
180.1. Speech Habilitation. (1) W. Seminar 1 hour. Lawson
Normal development of speech. Introduction to the acoustic and linguistic elements. Consideration of the speech patterns, habits, and defects related to dental and orofacial problems.
186.1. Habilitation of Abnormal Orofacial Development. (1) W. Sp. Pre-requisite: Fourth year standing or consent of instructor. Seminar and Clinic 3 hours. Chierici, Harald
The pathogenesis of jaw deformities, dental malocclusions, and speech disorders associated with congenital malformation are discussed. Instruction in diagnosis and preventive and corrective treatment methods is given in the clinic.
187.1. Special Study for Advanced Undergraduates. (1) W. Sp. Pre-requisite: Fourth year standing and consent of instructor and approval of Clinic Review Committee. Seminar and Clinic 3 hours. Harold
Instruction in biometric technique and methodology is given in connection with a selected research project.
187.2. Diagnosis and Treatment Planning in Orofacial Malformations. (1) W. Sp. Pre-requisite: Orofacial Anomalies 187.01. Seminar and Clinic 3 hours. Harold
A clinical survey, a clinical experiment, or an animal experiment is designed and analyzed.
401. Orofacial Prosthetics. (1-3) F. Pre-requisite: D.D.S. degree or equivalent. Seminar and Lab 3 hours. Scholz
Prosthetic habilitation of the patient with orofacial malformations. Discussions include principles and techniques of construction of obturators, speech appliances, and retention bridges.
Diagnosis of orofacial malformations and current preventive and corrective measures. Emphasis is placed on the interrelationship of morphology and physiology and the coordination of treatment by the various disciplines involved.

Orthodontics
109. Clinical Orthodontics. (0-3) F. W. Sp. Pre-requisite: Orthodontics 121 and 131A-B, or concurrent enrollment in Orthodontics 131A or 131B. Clinic Variable. R. M. Meyer
Clinical evaluation and treatment of orthodontic problems related to general dental practice. Students will evaluate malocclusions, recommend treatment by general practitioner or specialist, and observe treatment of orthodontic problems.
121. Introduction to Growth and Development. (1) W. Lecture 1 hour. Course describes the mode of growth of the craniofacial complex. General aspects of growth with clinical implications for the growing child are discussed, including the eruption of teeth and their correlation with facial growth.
131A-B. Orthodontics in General Practice. (0-2, 0-2) F. W. Pre-requisite: Orthodontics 121. Lecture 1 hour. Scholz
Recognition and treatment of the problems most commonly seen by the general practitioner.
Discussion of diagnostic technics used in orthodontics, limitations of orthodontic treatment, and principles of treatment with edgewise appliances.
160. Principles of Orthodontics. (1) Sp. Lecture 1 hour. West and Staff
A discussion of recognition, etiology, and principles of orthodontics for the dental hygienist.

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170C. Fundamentals of Orthodontics. (2) Sp. Prerequisite: Orthodontics 170A-B. West Continuation of Orthodontics 170A-B.

171B-C. Orthodontic Practice. (1-1-1) W. Sp. Prerequisite: Consent of instructor and enrollment in a postdoctoral specialty program. Lecture 1 hour. West

This course includes orthodontic principles and techniques that are applicable in a periodontic practice.

171.01A-B-C. Craniofacial Growth. (2-2-2) F, W. Lecture 2 hours Mathews

Research methods in the study of growth with findings relative 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 of the face and palate, biology of cartilage and bone as applied to dentofacial development of newborn babies, and physiology of tooth movement.

171.03A-B-C. Orthodontics In Pedodontic Practice. (1-1-1) F, W. Sp. Prerequisite: Consent of instructor and enrollment in a postdoctoral specialty program. Lecture 1 hour. R. Meyer

This course includes orthodontic principles and techniques that are applicable in a pedodontic practice.

171.04A-B-C. Orthodontics in Pediatric Practice. (1-1-1) F, W. Sp. Prerequisite: Orthodontics 171.03A-B-C Lecture 1 hour. R. Meyer

Continuation of Orthodontics 171.03A-B-C.

172A. Cephalometrics. (2) F. Seminar 2 hours. Poultin

Use of lateral headfilms; reliability of landmarks, applications in dentistry. Techniques of tracing, evaluation of relationships, and techniques of superpositioning are discussed and illustrated.

172B. Cephalometrics (2) W. Lecture 2 hours. Poultin

Evaluation of various analyses used in orthodontic diagnosis including growth changes in serial studies.


This course describes growth concepts in the prediction of facial growth as it applies to orthodontic treatment.

172.01B-C. Introduction to Orthodontic Research. (2-1) W. Sp. Lecture 2 hours. W. 1 hour Sp. S. Ross, Baumrind

Introduction to design and analysis of clinical investigations. Special emphasis placed on critical reviews of selected scientific literature in terms of appropriate design, hypothesis testing, and generalization.

172.02A-B-C. Supervised Orthodontic Research. (2-2-2) F, W. Sp. Prerequisite: 172.01B-C. Baumrind Participation in group and individual clinical investigations including experience in hypothesis generation, sampling, measurement, data acquisition, and data analysis.

173.01A-B-C. Orthodontic Diagnosis. (3-3-3) F, W, Sp. Seminar 3 hours. West and Staff Evaluation and treatment planning of various types of malocclusion.


Research project and preparation of thesis.

173.03A-B-C. Treatment Planning. (3-3-3) F, W, Sp. Seminar 3 hours. West Staff seminar.

173.04. Treatment Planning. (3) SS. R. M. Meyer Staff seminar.

173.05. Special Study. (1) SS. Research 3 hours. Baumrind

Research project and preparation of thesis.

173.06. Treatment Evaluation. (3) SS. Seminar 5 hours. West


174-A. Biomechanics. (2-1) F, W. Lecture 2 hours F, I hour W. Righellis

Development of force systems and advanced orthodontic techniques.

175. Cleft Palate Orthodontics. (2) F. Seminar 2 hours Poultin


Critical evaluation of orthodontic treatment procedures to provide students with a knowledge of techniques differing from those taught in clinical courses.

177. Practice Management. (1) F. Seminar 1 hour. W. Watson, Scholz

Practice management and office administration.

178. Functional Occlusion. (1) F. Lecture 1 hour. R. Roth

Discussion of occlusion from the viewpoint of the orthodontist and periodontist and from the viewpoint of oral rehabilitation.


A systematic review of orthodontic treatment mechanics with particular attention to tooth position and occlusal function.

179.01A-B-C-D-E. Clinical Orthodontics. (0-20, 0-20, 0-20, 0-20) F, W, Sp, SS. Prerequisite: Enrollment in postgraduate orthodontics program. Lab and 15 hour clinical lecture. West and Staff

Laboratory instruction precedes clinical experience. A minimum of 1,080 hours are included in the series of Orthodontics 179.01A-B-C. 179.02, 179.03A-B-C, and 179.04.

179.02. Clinical Orthodontics. (5) SS. Clinical 15 hours. West and Staff

Continuation of Orthodontics 179.01 A-B-C.

179.03A-B-C. Clinical Orthodontics. (5-5) F, W, Sp. Clinical 15 hours. West and Staff

Continuation of Orthodontics 179.02.

179.04. Clinical Orthodontics. (0-5) SS. Clinical 15 hours. West and Staff

Continuation of Orthodontics 179.03-A-B-C.

180. Evaluation of Malocclusions. (1) W. Prerequisite: Orthodontics 121, 131A-B, and 132 Seminar 1 hour. W. Murray, Scholz

Discussion of diagnosis, prognosis, and approach to treatment of malocclusions. Includes treatment timing, limitations, and interdisciplinary problems.

181. Occlusion. (1) Sp. Prerequisite: Orthodontics 121, 131A-B, and 132 Seminar 1 hour. W. Murray

Various concepts of occlusion will be evaluated as they affect habilitation and functional problems of the temporomandibular joint.


Application of general principles of growth and development to specific malocclusions and facial anomalies. Course may be repeated for credit.

189. Clinical Orthodontics. (0-0) F, W. Sp. Prerequisite: Orthodontics 121 and 131A-B. Fourth year standing and approval of Clinic Review Committee. Clinic Variable. Righellis

Treatment of orthodontic problems related to general dental practice.


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-B. Lecture-demonstrations and section work devoted to the supervised examination of patients.

Core Clerkship — Surgery 110 and 111 includes seven to eight orthopedic lectures, case 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 V.A. (1/2 per week) Su, F, W. Prerequisite: Surgery 110 and 111. UC W. Murray, Scholz

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. (1/2 per week) Su, F, W. Sp. Prerequisite: Surgery 110 and 111. W. Murray

Orthopaedic surgery clinical clerkships are offered in off-campus hospitals approved by the chairman of the department and the Dean.

401. Lectures in Orthopaedic Pathology. (1) F, W. Prerequisite: Third and fourth year residents.

A lecture series covering tumors and infections of the musculoskeletal system, illustrated by microscopic slides and photographs of gross specimens.


Seminars cover connective tissue metabolism; muscle, bone, and joint physiology; preoperative and postoperative management of patients; wound infections; microbiology; and surgical principles.


Course includes lectures by students and faculty on gross and functional anatomy, laboratory dissections of cadaver material, and demonstrations of surgical approaches.
406. Seminar In Orthopaedic Literature. (1) Su, F. W. Sp. Residents at C, RDMC, SFGH, SSF, UC and VA. UC Chapman

Seminars are student presentations of selected orthopaedic surgery subjects featuring historical review complete with bibliography. They are moderated by an assigned faculty member.

406. Conference in Rheumatoid Arthritis. (1) 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.


Seminars include 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. VA Maurer

Selected problems are illustrated by cases treated or under treatment. Cases are presented by the resident staff and discussed by members of the attending staff.

409. Orthopaedic Surgical Conference. (1) Su, F. W. Sp. SSF Larsen

Conference with emphasis on children’s problems in which resident make presentation of inpatients for review and of new patients for consideration of diagnosis and therapeutic plan.

411. Orthopaedic Surgical Conference. (1) Su, F. W. Sp. VA Maurer

Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.


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, anatomic 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 selected outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up and problem cases (consultations).


Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.


Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.

452. Clinical Traumatic and Adult Orthopedics. (1½ per week) Su, F. W. Sp. SFGH Bovill, SM W. Jackson, VA Maurer, H. T. Smith

Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.

453. Clinical Orthopedics. (1½ per week) Su, F. W. Sp. UC W. Murray

Chief resident.

Under faculty supervision, the chief resident organizes care and referral of staff patients; supervises a weekly follow-up clinic; administers the teaching-bed fund; independently performs operative procedures in selected cases; advises interns, residents, and fourth year medical students; participates in paramedical teaching.

455. Clinical Orthopaedics: Sports Medicine at MZ. (1) Su, F. W. Sp. Glick and Staff

Clinical instruction in the care and management of orthopaedic problems in athletic injuries. Course consists of clinical practice under supervision as well as didactic lectures every third week.

490. Clinical Orthopedics. (1½ per week) Su, F. W. Sp. SFGH Bovill

Interns rotate through orthopaedic wards and follow-up clinics. They are responsible for patient care under the direction of the attending staff, including history-taking, physical examinations, X-ray conferences, and consultation.

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 ambulatory clinic patients with otolaryngological surgical diseases.


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 and NMRC.


Clinical clerkships in off-campus hospitals approved by the chairman of the department and the Dean.

198. Supervised Study in Otolaryngology. (1-5) F. W. Sp. Prerequisite: Consent of instructor. Boles

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 Otolaryngology. (1-5) F. W. Sp. Prerequisite: Consent of instructor. R. Schneider

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

400. Didactic Lectures. (2) F. W. Sp. Crowley

Lectures cover the anatomical, physiological, and clinical aspects of otolaryngology.


A formal course in the anatomy of the head and neck.

450. Gross Anatomy of the Head and Neck. (1½) F. W. Sp. Prerequisite: Consent of instructor. V. A. Ross

A didactic course in the anatomy of the head and neck.

490. Ear, Nose, and Throat Histology and Pathology. (1½) F. W. Sp. Dekelebo

A detailed review of ear, nose and throat pathology from currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories.

494. Staff Rounds. (2) F. W. Sp. Boles

Weekly seminars are held with discussion of current seminars focusing on problems relevant to management of patients with references to current literature, modern theory, and controversial aspects.

405. Seminar in Audiology and Speech Pathology. (1) F. W. Sp. Owens

Seminar includes psychophysical backgrounds in audiology, 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.

406. Conference in Otolaryngology. (1) Su, F. W. Sp. UC Dedeo

Conference includes presentation of patients, study of histories, and discussion of the treatment of the patient in light of modern progress in the field.

409. Surgical Pathology. (1) Su, F. W. Sp. V. A. Ross

A review of gross and microscopic pathology conducted by staff members in conjunction with the Department of Pathology.

410. Temporal Bone Anatomy and Pathology. (½) F. W. Sp. Schneider

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.

411. Temporal Bone Anatomy and Pathology. (½) F. W. Sp. V. A. Ross

A review of surgical anatomy and dissection of fresh temporal bones conducted by members of the staff.

412. Tumor Board. (1) Su, F. W. Sp. V. A. Ross

Tumor cases are presented for diagnosis and recommendations for treatment.

413. Audiology Conference. (1) Su, F. W. Sp. V. A. Ross

Combined Audiology and Otolaryngology Staff Conference where all patients evaluated for hearing problems are presented, and diagnosis and treatment recommendations are made.

414. Journal Club. (½) F. W. Sp. V. A. Ross

A review of all current ear, nose, and throat literature.

450. Clinical Otolaryngology. (10) Su, F. W. Sp. McCay, SFGH, Crumley, UC Boles, V. A. Bell, V. M. Bell

Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, surgical, examination, labora-
Residents, under supervision, undertake patient care in wards and outpatient clinics including history-taking, physical examination, laboratory tests, preoperative and postoperative care, minor surgery, audiometry, vestibular testing, consultations, and Officer-of-the-Day duties. Senior resident has certain administrative, teaching, and clinical responsibilities.

452. Technique of Endoscopy. (1) F. W. Sp. All residents on rotation at V4 A.
A study of the techniques of endoscopy and some practical laboratory study including cadaver work.

453. Surgical Otolaryngology. (1/2 per week) Su, F. W. Sp. V4 A.
Residents, in off-campus hospital for surgical training to satisfy Board requirements, are responsible, under supervision, for patient care in wards and clinic medical-surgical operations, preoperative and postoperative care, and treatment of surgical conditions in the head and neck area are stressed.

490. Clinical Otolaryngology at SFGH. (1/2 per week) Su, F. W. Sp. V4 A.
Crumley
Residents, under supervision of the attending staff, are responsible for patient care on wards and in the follow-up clinic, including history-taking, examination, and consultation. This rotation is combined with patient-care assignments in the Ophthalmology Service.

Parasitology

135. Medical Parasitology. (3) W. Lecture 2 hours, Lab demonstration 2 hours. Heyneman and Staff
An introduction to the protozoa, helminths, and arthropods that parasitize man. Parasite ecology and disease epidemiology, clinical and diagnostic aspects of parasitic diseases and their treatment are considered 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 introduction to immunology, II if in doubt as to adequacy of preparation. Cramb, J. M. L. Goldberg and Staff
An introduction to the gross and microscopic structural and functional abnormalities of normal and diseased tissues. Emphasis is on the fundamental knowledge of disease processes and the development, classification, and etiologic agents of disease, repair, regeneration, hemodynamic derangements, genetic disorders, disturbances of cell growth, and neoplastic processes.

102. Systemic Pathology. (6) F. Sp. Prerequisite: Anatomy 103, Medicine 132A, Microbiology 100A-B. Pathology 101 and Physiology 101 or concurrent enrollment. Lecture 3 hours, Lab/Seminar 6 hours.
Margaretten and Staff
Recent advances and classical concepts of diseases as they affect each of the organ systems are presented. Emphasis on fundamental and morphologic characteristics of diseases of organ systems.

120. General Pathology. (5) Sp. Prerequisite: Substantive courses in biochemistry, physiology, histology, microbiology (first quarter, concurrent) or an introduction to immunology. If in doubt as to adequacy of preparation, consult the instructor. Lecture 3 hours, Lab, 6 hours.
M. L. Goldberg and Staff
Mechanisms and language of disease are discussed, with emphasis on the dynamic nature of fundamental disease processes: cell injury, immunopathology, inflammation, responses to infectious agents, repair, regeneration, hemodynamic derangements, genetic disorders, disturbances of cell growth, and neoplastic processes. House staff. Preparation and participation in departmental conferences required.

180. Research in Pathology. (1/2 per week) Su, F. W. Sp. Prerequisite: Consent of instructor and chairman of the department. McKay
A research project under the direction of a member of the faculty.

170.01. Clinical Cytology. (3) Sp. Prerequisite: Anatomy 103, Pathology 101 and 102, E. King, HILL
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 cytopathologic and clinical findings on examination of the patient.

Aiva
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.

Rosenau
Presentation of selected current cases seen in the hospital pathology laboratory. Discussion of pathological findings and correlation with history, physical findings, radiologic findings, and treatment.

170.05. Neuropathology. (2) W. Prerequisite: Pathology 102. Third or fourth year standing. Lee and Townsend Seminar 2 hours.
Emphasis is placed on clinicopathological correlation of neurological diseases by means of study of gross and microscopic material and participation in conferences.

170.06. Clinicalopathological Conference at SFGH. (1/2) Su, F. W. Prerequisite: Third or fourth year standing.
SFGH McKay, Margaretten, Howes
A cumulative review of clinical pathological materials with the Department of Medicine.

170.08. Studies in Pathology. (1-5) Su, F. W. Prerequisite: Consent of instructor and chairman of the department.
Aiva
Stu'ss in pathology at other institutions with the approval of the chairman of the department.

180.01. Pathology. (3) F. Prerequisite: Anatomy 118, M. L. Goldberg and Staff
This course is identical to the lecture portion of Pathology 126. Elective in the dental hygiene curricula.

188. Supervised Study in Pathology. (1-5) F. W. Sp. Prerequisite: Consent of instructor.
Research and directed reading under supervision of a member of the faculty or the approval of the chairman of the department.

199. Laboratory Project in Pathology. (1-5) F. 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.

200. Applied Pathology. (3) F. W. Sp. Prerequisite: Microbiology 120A-B and Pathology 120B or equivalents.
Greenspan
Weekly seminars are designed to provide students with an understanding of the basic principles of pathology. Emphasis is placed on research students will critically review current literature in the field, under faculty supervision.

220. Seminar. (1) F. W. Sp. Prerequisite: Permission of chairman of the department.
Dahlin
Faculty members and visiting professors discuss current developments in diagnosis and research in pathology.

Staff
Research in pathology.

290. Thesis. (0) F. W. Sp. Prerequisite: Advance-
ment 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) F. W. Sp. Prerequisite: Advance-
ment 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.
Ramo
Faculty members and visiting professors discuss current developments in diagnosis and research in pathology.

401. Special Pathology Seminars. (Units to be arranged) Su, F. W. Sp. Interns and residents.
Ramo
Seminars focusing upon the pathology of special areas of the body are conducted by specialists in the area under discussion. Course emphasizes correlation of the clinical manifestations of the disease and the gross and microscopic findings.

Ramo
Seminars focusing upon the pathology of special areas of the body are conducted by specialists in the area under discussion. Course emphasizes correlation of the clinical manifestations of the disease and the gross and microscopic findings.
and collect data correlating physiological with pathological concepts. They are encouraged to make original contributions.

404. Clinicopathological Conference. (1) F. W. Sp. Residents. 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 correlation of clinical manifestations of disease with clinical and autopsied findings.

450. Pathologic Anatomy. (5-10) Su. F. W. Sp. Required for interns; elective for residents. SFGH, UC. V. A. Rambo

Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature.

495. Pathologic Anatomy. (1/2 per week) Su. F. W. Sp. Required for interns. 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) W. C. Epstein

Basic aspects of human genetics are presented in a context relevant to the diagnosis, treatment, and counseling of patients with congenital malformations. Emphasis is placed on the application of genetic knowledge to actual counseling problems.

110. Required Clerkship in Pediatrics. (1/2 per week) F. W. Sp. Prerequisite: Consent of instructor. Grumbach, M. Ganssman

Practical work including teaching in the ward, newborn nursery, and outpatient clinics with emphasis on case assignments; seminar covering major aspects of pediatrics and infectious diseases and procedures at demonstrations at UC and SFGH.

140.01. Advanced Clerkship. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01A. Advanced Clinical Clerkship at SFGH. (1 1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Pascoe

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01C. Advanced Clinical Clerkship — Outpatient at L. (1/4 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Steward

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01D. Advanced Clinical Clerkship — Outpatient at CHMC. (1/4 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Gerdisen

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01E. Advanced Clinical Clerkship — Inpatient at CHMC. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Gerdisen

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01F. Advanced Clinical Clerkship — Outpatient at K. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Shinefield

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01G. Advanced Clinical Clerkship — Inpatient at K. (1/4 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Shinefield

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01H. Advanced Clinical Clerkship — Outpatient at NRMC. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Hayes

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01I. Advanced Clinical Clerkship — Inpatient at NRMC. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Hayes

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01J. Advanced Clinical Clerkship at Moffitt Manor. (1/4 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach, Phibbs

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.02. Off-Campus Clinical Clerkships. (1/4 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Grumbach

Clinical clerkship in off-campus hospitals approved by the chairman of the department and the Dean.

140.03. Ambulatory Pediatrics at VMC. (6) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Nilson

Working with a pediatric house staff and pediatric nurse practitioner team and under the supervision of the attending staff. Students have divisional primary care and health supervision responsibilities for selected well and acutely ill children in a clinic setting.

140.04. Pediatric Cardiology. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Rudolph

Experience in cardiac evaluation and treatment including clinical work-up in the ward and clinic, cardiac catheterization, angiography, children's electrocardiograms, surgical management, and postoperative care.

140.04A. Cardiology Private Practice. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. S. Robinson

Experience in clinical evaluation of children with cardiac disease and their parents. Setting includes history, physical examination, X ray, electrocardiogram and any other procedures necessary for diagnosis.

140.05. Pediatric Private Practice. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. L. P. Smith

Working experience with a pediatrician on the clinical faculty as he sees patients in his office and in the hospital. Student may select time in small group, large group or subspecialty practice, or a combination of these.

140.06. Adolescent Medicine. (1/4 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Garels

Clinical clerkship in adolescent medicine with emphasis on outpatient clinical experience in a wide range of health problems of the adolescent.

140.07. Infectious Disease at VMC. (6) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. 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 contact with hospital-based infectious disease consultants. Work in the clinical microbiology laboratory may also be arranged.

140.08. Ambulatory Pediatric Clerkship at MZ. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. R. Ballard

Experience in ambulatory pediatrics in pediatric outpatient departments of slope multidisciplinary Comprehensive Care Program for children and youth is based. Student works with a team of physicians and follows patients admitted to the inpatient service.


Supervised participation in clinical activities, both inpatient and outpatient, on regularly scheduled conferences of the Child Neurology Division. Study of the developing nervous system and diseases of the nervous system affecting infants, children, and adolescents.

140.10. Pediatric Hematology Elective. (1/2 per week) Su. F. W. Sp. Mentzer, Lubin

Instruction in pediatric hematology; students participate in ward rounds, outpatient clinic, and laboratory evaluation of bone marrow specimens at SFGH and CHMC. Pursuit of special interests in the clinic or the laboratory is encouraged.

140.11. Pediatric Cardiology at CHMC. (1/2 per week) Su. F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110. Higashino

Students participate in clinical experience including outpatient evaluation, instruction in the non invasive methods of diagnosis, care of ward medical and surgical cardiac patients, cardiopulmonary laboratory, and cardiovascular conferences. Emphasis is on the physiological principles of diagnosis and management.

154 / Pathology / Pediatrics

Pediatrics / 155

Work under the direction of the instructor in Diabetic Camp. Clinical and management aspects of diabetes. Students have an opportunity to participate in the operation of the camp program and treatment of many aspects of diabetes in children, adolescents, and young adults.

140.15. Pediatric Hematology and Oncology. (1/2 per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Holliday, Piet, Potter

Cohn

Experience in patient care in the clinic and on the ward. Morphologic study of blood cells and participation in hematologic and oncology conferences. Selected topics discussed in detail.


Holliday, Piet, Potter

Balin

Introduction to general nephrology. Clinical experience in pediatric nephrology with children having nutritional problems. ESRD and chronic renal failure. Post-transplant and dialysis consultations, new cases from the nursery, and cases requiring TPN. Research projects may be arranged with instructors.


Gamm An

C. Epstein, B. Hall

Evaluation and management of children and adults with hereditary (including cytogenetic) diseases, with particular emphasis on genetic counseling, patient education, and the biochemical and genetic mechanisms involved in the pathogenesis and transmission of these conditions.


Giambanna

Students participate in patient care in close association with the hospital staff and clinical fellows both in wards and for sick children and in Newborn Care Unit. In rounds and conferences conducted by senior staff.


Giambanna

Students participate in the 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 pediatrics participating in the program.


Deamer

Diagnosis and treatment of asthma, allergic rhinitis, and hay fever. Attendance at Allergy Clinic daily. Participation in activities of allergy trainees.


Cohn

Clinical experience in a busy community hospital ambulatory Pediatric Clinic to prepare the student for daily patient encounters and responsibilities of pediatric or family practitioners. Teaching of patients in well and ill general pediatric patients, preventive medicine, and pediatrics subspecialties.


R. Ballard

Students participate in the care of infants in the intensive care nursery in close association with the hospital staff, fellows, and senior staff and in conferences conducted by senior staff.


R. Ballard

Experience in normal newborn and intensive care nurseries, according to student's interest and skills. Student participates in the care of transport infants, assisting attending physician.


Grumbach, Kaplan, F. Conte

Participation in the clinical and investigative aspects of endocrine and metabolic problems in children. Students spend time in the laboratory, wards, and clinics.


Grumbach, F. Conte

Participation in human cytogenetic studies in children. Emphasis is on laboratory work with exposure to clinical problems and patients.


Grumbach, Kaplan, F. Conte

Students research projects under supervision of faculty.


Grumbach

Students prepare case presentations weekly from patients on the pediatrics wards. Course correlates students' problems with the work in the required curriculum. Experience on the ward in the clinical setting.


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. (1-5) 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.

100. Pediatric Staff Conference. (1/2) Su, F, W, Sp. Interns and residents.

UC Grumbach

Conferences include house staff preparation and presentation of case histories with reference to the literature, laboratory work and special studies. Faculty members and consultants from other departments as well as other universities discuss recent developments in pediatrics.


UC Gooding

Conferences include review and discussion of recent X-ray studies of pediatric cases in the wards and outpatient service.

402. Pediatric Clinical Seminar. (1/2) Su, F, W, Sp. UC 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.


UC 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 infection, trauma, and pediatric emergencies.


Residents, under supervision, are responsible for patient care in the wards, communicable disease section, and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment. Emphasis is on diagnosis and management of infection, trauma, and pediatric emergencies.

462. Clinical Primary Care. (1/2 per week) Su, F, W. Sp. Prerequisite: Refer to Ambulatory and Community Medicine 462.

Grumbach, Dower

Interns 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 Interimship Program as well as related clinical services such as Dermatology, Otolaryngology.

463. Clinical Primary Care. (1/2 per week) Su, F, W. Sp. Prerequisite: Refer to Ambulatory and Community Medicine 462.

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 as well as related clinical services such as Dermatology, Otolaryngology.


M. Grossman

Interns rotate through newborn, well, and sick wards and clinic, communicable diseases ward, and emergency room. They are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examination, laboratory tests, and consultation.


M. Grossman

Interns, under supervision, are responsible for patient care in the wards and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment.

Pediadontology

109. Clinical Pediadontology: (0-1) F, W. Prerequisite: Third year standing. Clinical rotation 12 hours.

M. Morris and Staff

Clinical diagnosis, plan of treatment, dietary analysis and counseling, fabrication of appliances for and treatment of children's teeth and space management, and preventive orthodontics. Units assigned upon completion of clinical requirements.

109.01. Clinical Pediadontology Rotation. (0-1/2) F, W. Sp. Prerequisite: Third year standing. Clinical rotation 12 hours.

M. Morris and Staff

Introduction to the examination of the child patient, treatment planning, diagnosis, treatment, dietary analysis, and the performance of operative procedures. Proper management of the child patient will be covered.


M. Morris and Staff

Course is broken up into two components: Mondays, Tuesdays, and Thursdays will be spent at the Dental Annex Clinic; Thursdays and Fridays at the Mobile Dental Clinic in Stockton.

170.02A-BC. Clinical Pedodontics. (3-4, 3-4, 3-4, F). W. Sp. Prerequisite: Pedodontics 170.01A-B-C-D. Clinical 9-12 hours. M. Morris and Staff

171.01A-BC. Pedodontic Seminar. (1-5, 1-5, 1-5, 1-5, F). W. Sp. Seminar 1-5 hours. M. Morris

Assigning reading of current and classical literature in pedodontics and allied specialty areas with review and discussion of each reading assignment to prepare students to critically evaluate dental literature.


172A-B. Clinic and Seminar. (2-2-2) F. W. Sp. Clinic and Seminar 60 hours. M. Morris and Staff

Hospital procedures: admitting, orders, histories, charts and records, 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. (0-6) SS. Prerequisite: Pedodontics 170.02A-BC. Clinic Variable.

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. SFGH 90 hours. K. Khosla, D. Vinion

Hospital procedures, management of trauma and emergencies involving the primary and young succedaneous teeth. Extraction, re-implantation, pulp protection, stabilization of luxated teeth, management of infection, and supportive therapy are emphasized.

176. Pediatric General Anesthesia, (2-3) F. HCMD 90 hours. K. Schroeder and Staff

An introductory course in general anesthesia to familiarize the student with general anesthesia; the attendant risks and hazards, 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 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.

180.01B-C. Pedodontic Seminar. (1-5) W. Sp. Prerequisite: Completion of third year pedodontic lecture series and approval of the Dean. B. Smith

Documented discussions on occlusion, mixed dentition analysis, arch and jaw discrepancies, and premolars, hypoplasias, anomalies, injuries, and oral manifestations of systemic disease. Designed for students considering pedodontics and pediatric dentistry.

185. Advanced Pedodontic Appliance Laboratory. (2) F. W. Sp. Prerequisite: Postdoctoral standing or approval of Clinic Review Committee and Chairman of the Division. Lecture 1 hour. Lab 3 hours. Aubusson.

A laboratory course concerned with the fabrication of interceptive orthodontic appliances currently being employed in pedodontics.

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 Clinical Review Committee. Clinic Variable.

M. Morris and Staff

Course provides additional clinical experience in pedodontics.

189.02. Community Pedodontics. (0-4) F. W. Sp. Prerequisite: Completion of clinical requirements for graduation or approval of Clinic Review Committee.

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 minor dental minor surgery, amalgam and processing needed radiographs.


Parr and Staff

Treatment of periodontal diseases.


Introduction to the recognition and diagnosis of inflammatory periodontal disease. The pathogenesis of periodontal disease is discussed from clinical, histopathological, and biochemical points of view.

119. Periodontal Therapy (Introduction). (3) Sp. Madsen

Introduction to the techniques of supragingival scaling and root planing.

121. Periodontal Therapy (Introduction). (1) F. Sp. Prerequisite: Periodontology 110. Armitage

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 quarter is utilized for treatment of their own patients.

131. Periodontics. (1) F. Prerequisite: Periodontology 121.

The demonstration and rationale of surgical treatment of periodontal lesions.

150. Periodontics. (2) Sp. Lecture and Demonstration 2 hours. K. 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.

150. Periodontics. (1) F. Prerequisite: Periodontology 150.

Madsen

Classification of periodontal diseases and methods of therapy. Lesions of periodontal disease are correlated with therapeutic procedures. A faculty panel discusses the role of the hygienist in dental practice.

Periodontics — Treatment. (0-6) F. W. Sp. Prerequisite: Periodontology 121. Clinic Variable.

Parr and Staff

Treatment of periodontal diseases.


Introduction to the recognition and diagnosis of inflammatory periodontal disease. The pathogenesis of periodontal disease is discussed from clinical, histopathological, and biochemical points of view.

119. Periodontal Therapy (Introduction). (3) Sp. Madsen

Introduction to the techniques of supragingival scaling and root planing.

121. Periodontal Therapy (Introduction). (1) F. Sp. Prerequisite: Periodontology 110. Armitage

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 quarter is utilized for treatment of their own patients.

131. Periodontics. (1) F. Prerequisite: Periodontology 121.

The demonstration and rationale of surgical treatment of periodontal lesions.

150. Periodontics. (2) Sp. Lecture and Demonstration 2 hours. K. 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.

150. Periodontics. (1) F. Prerequisite: Periodontology 150.

Madsen

Classification of periodontal diseases and methods of therapy. Lesions of periodontal disease are correlated with therapeutic procedures. A faculty panel discusses the role of the hygienist in dental practice.
174. Periodontics. (1) SS. Prerequisite: D.D.S. degree. Lecture 1 hour. Parr
A seminar to discuss and evaluate the problems common to the specialties of orthodontics and periodontics.

175A.B.C.D. Treatment Planning and Surgery Seminar. 0.0-3, 0.3, 0.3, 1.0. F, W, Sp, SS. Seminar 1 hour. Shibata and Staff
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They are expected to defend their treatment plan and therapeutic procedure based on relevant literature and clinical experience.

175.01A.B.C.D. Advanced Treatment Planning and Surgery Seminar. (1-1-1) F, W, Sp, SS. Seminar 1 hour. Shibata and Staff
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They will be responsible for defending their treatment plan and therapeutic procedures based on relevant literature and clinical experience.

176. Original Investigation in the Field of Periodontology. (1-5) F, W, Sp. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lab 3-15 hours. Greenspan Research.

Study in depth with literature review and seminar discussions on surgical techniques used to treat lesions involving the hard and soft tissue of the periodontium.

Course provides a broad concept of the principles of occlusion, upon which definitive therapeutic procedures can be based.

179A. Applied Biochemistry. (2) F. Lecture 2 hours. Wadell
Course covers physiology as it relates to anesthesia and periodontal surgery.

179B. Applied Anatomy. (2-5) Sp. Lecture 2 hours. Lab total of 15 hours. R. Coleman
Course covers anatomy as it relates to anesthesia and periodontal surgery.

180. Periodontics. (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. Prerequisite: Periodontology 131 and consent of instructor. Seminar 1 hour. S. Miller
Study in depth with literature review and seminar discussions of areas of periodontology having major clinical significance.

180.03. Periodontal Surgical Techniques. (1) F. Prerequisite: Periodontology 131, Lecture 1 hour. Shibata
Surgical techniques 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. Prerequisite: Biochemistry 110A-B and 111 or concurrent enrollment. Lecture 1 hour. Staff
Biochemical and molecular biological basis of connective tissue survival, development, and disorder. Topics discussed include a) plasmin, TMJ, chondrocytosis, wound healing, periodontal disease, arthritis, and fibrotic disorders, b) extracellular matrix, collagen, elastin, and prostaglandins.

Continuation of clinical experience beyond the level of Periodontology 109.

190. Laboratory Project in Periodontology. (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.

201A-B. Experimental Methods in Biological Research. (3-3-3) F, W, Sp. Lecture 2 hours, Lab 3 hours. Shibata (F), Greenspan (Sp).
Elements of experimental design, statistical inference, and methods of laboratory and clinical research.

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.

Pharmacological Chemistry

120. Principles of Pharmacological Chemistry. (3) F. Prerequisite: Chemistry 113, Lecture 3 hours. Ortiz de Montellano, R. B. Meyer
A study of physicochemical and biological factors which contribute to drug action: in vivo and in vitro biotransformations of drugs and related organic compounds.

121. Principles of Pharmaceutical Chemistry. (2) W. Prerequisite: Pharmaceutical Chemistry 120 and current enrollment in Pharmacology 121. Lecture 2 hours. Jorgensen, Wolf
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 disorders.

122. Principles of Pharmaceutical Chemistry. (3) Sp. Prerequisite: Pharmaceutical Chemistry 120, Lecture 3 hours.
Brochmann-Hanssen
A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the autonomic nervous and cardiovascular systems as well as renal function.

132. 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.

A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on anti-infective 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 evaluation of drugs and dosage forms, with special emphasis on instrumental techniques and in situ methods of analysis.

152. Radionuclides in Biology and Medicine. (1) F Lecture 1 hour.
Hoffer, Peng
Discussion on radionuclides in frequent use in biology and medicine. The course is oriented toward topics of broad interest.

A study of radionuclides used in nuclear medicine as pharmaceuticals. Dosage form design and related aspects are discussed.

154. Pharmaceutical Quality Control. (2) W. Prerequisite: Pharmacy 165, Pharmacy 166 or concurrent enrollment. Lecture 2 hours. Brochmann-Hanssen,
General principles of total quality control applied to the manufacture of pharmaceuticals, introduction to statistical quality control, its application to process studies, and evaluation of dosage forms. Consideration given to simplified quality control systems for small-scale manufacturing and hospital pharmacy.

156. Pharmaceutical Analysis. (2) Sp. Prerequisite: Pharmaceutical Chemistry 151. Lab 6 hours.
Brochmann-Hanssen
Experiments in pharmaceutical analysis applied to drug entities, dosage forms, and samples of biological origin.

Sade
Analytical theory and techniques for determining drugs and metabolites in biological fluids.

158. Radiosotope Measurements. (1) W. Sp. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lecture 3 hours. Peng
Detection and measurement of radionuclides commonly used in biology and medicine.

160. Fundamentals in Radioactivity. (2) F Lecture 2 hours.
Perez-Mendez
This course will treat the principles of physical decay in radionuclides, characteristics of nuclear emissions, interaction with matter, and related aspects in radioactivity.

162. Radiosotope Imaging. (1) Sp. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lecture 1 hour.
Price
This course will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.

Group studies of selected topics in pharmaceutical chemistry.

178. Supervised Study in Pharmaceutical Chemistry. (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.

179. Laboratory Project in Pharmaceutical Chemistry. (1-5) W. Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.
201. Advanced Survey of Medicinal Chemistry. (2) $ Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Jorgensen
Reports and discussion of topics of current interest in medicinal chemistry, with emphasis on relationships between chemical structure, physical properties, and biological response.

212. Basic Considerations of the Kinetics of Drug Absorption and Disposition. (3) $ F. Prerequisite: Chemistry 115. Calculus background is recommended. Lecture 2 hours, Lab 3 hours.

Rowland, Tozer and Staff
A basic study of the concentration-time course of drugs and their metabolites, methods of pharmacokinetic analysis, and the design of dosage regimen. Emphasis is placed on 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, Benet and Staff
Advanced consideration of pharmacokinetics including multicompartment models, assessment of in vivo absorption and disposition parameters, and correlation of pharmacological response with the concentration-time course of a drug. Laboratory will include analog and digital computational methods.


Eller
Genetic mechanism and drug action, cell division and antimetabolites, adaptive phenomena in relation to control mechanisms, and the uncoupling agents.

217. Physical Pharmacy of Solid Dosage Forms. (3) $ W. Prerequisite: Pharmaceutical Chemistry 160 or consent of instructor. Lecture 3 hours.

Staff
Properties of solids, solid-solid interactions, solid dosage forms, and stability of solid dosage forms are discussed.


Staff
Solubility, solution, diffusion, properties of solutions of solids and drug stability.


Staff
Selected topics on enzyme mechanisms. General survey of enzyme catalysis: general acid-base catalysis, protonic effects, strain and conformational change. Chemical intermediates in enzyme catalysis. Role of cofactors in enzyme catalysis. Phosphate transfer reactions.

220. Graduate Seminar Program. (1) $ W. Sp. Staff
A program involving the presentation of core material in pharmaceutical chemistry in the medicinal chemistry and pharmacaceutics 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.

Staff
A series of weekly research conferences 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 biopharmaceutical chemistry.

230A. Spectroscopy. (4) $ Sp. Prerequisite: Chemistry 162 or equivalent. Lecture 3 hours, Lab 3 hours. Offered in alternate years. Not offered 1977-1978.

Kuntz
The theory and application of molecular electronic and vibrational spectroscopy: optical rotary dispersion and magnetic circular dichroism.

230B. Spectroscopy. (3) $ Sp. Prerequisite: Chemistry 162 recommended. Lecture 3 hours.

T. James
Theory and application of nuclear magnetic resonance and electron-spin resonance: mass spectrometry.

230C. Spectroscopy. (1) $ W. Lab 3 hours. T. James
Laboratory work in nuclear magnetic resonance and electron-spin resonance: mass spectrometry.


T. James
Selected topics in spectroscopy and related areas. Content of the course changes, 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. Peng
Theory and techniques related to the synthesis of isotopically labeled organic compounds. Course may be repeated for credit.

241. Radiobiological Analysis. (1) $ W. Prerequisite: Consent of instructor. Lab 3 hours. Peng
Experimental techniques related to various aspects of radioassay of biological specimens, biochemical compounds, and drugs isotopically labeled with tritium or radio-carbon.

Pharmaceutical Chemistry / Pharmacognosy / 163

242. Radiotracer Methodology. (1) $ W. Prerequisite: Pharmaceutical Chemistry 152 or 160, or consent of instructor. Lecture 2 hours. Peng, Benet, Licko
Discussions 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. Peng, J. W. Harris, Painter
Effects of ionizing radiation on chemical and biological systems will be discussed.

250. Research. (1-8) $ W. Sp. Staff

266. Conferences in Research Planning. (1) $ F. W. Sp. Prerequisite: Consent of instructor. 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.

298. Thesis. (0) $ W. Sp. Prerequisite: Advance to candidacy and permission of graduate advisor.
For graduate students engaged in writing the thesis for the master's degree.

299. Dissertation. (0) $ W. Sp. Prerequisite: Advance to candidacy and permission of graduate advisor.
For graduate students engaged in writing dissertation for the Ph.D. Degree.

300. Practicum in Teaching. (1) $ F. W. Sp. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry and participation in the on-going teaching program. Staff
Conferences and discussion dealing with the teaching of courses in the School of Pharmacy under the direction of the faculty.

Pharmacognosy

198. Supervised Study in Pharmacognosy. (1-5) $ 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.

199. Laboratory Project in Pharmacognosy. (1-5) $ W. Sp. Staff
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, Sp. Prerequisite: Biochemistry 100A and Biology 120 and 125 or equivalents.

Katzin, Trevor

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. (1.5) § W. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 121. Lecture 1 hour. Burkehalter

Systematic survey of action and uses of drugs with emphasis on steroids, hormones, and drugs for metabolic disorders.

125. Pharmacology and Toxicology. (4) § S. Prerequisite: Biochemistry 120A and Physiology 120 and 125. Lecture 3 hours. Lab 3 hours.

Hondeghem, Burkehalter

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. Prerequisite: Physiology 110. Lecture 2 hours. W, 3 hours Sp. Lab 3 hours. Sp. F. Meyers

Objectives of the course is to acquaint dental and dental hygiene students with the fundamentals of pharmacologic agents. Various classes of drugs 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 130. 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.

134. Pharmacology and Toxicology. (1) § S. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 134. Lecture 1 hour. Trevor, Apple

Systematic survey of action and uses of anti-infective and antineoplastic drugs.

136. Pharmacology and Toxicology (4) § F. Prerequisite: Pharmacology 125. Lecture 3 hours. Lab 3 hours.

Burkehalter and Staff

Systematic survey of action and uses of drugs acting on the central nervous system.

150.01. Pharmacology Research. (1/2 per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Staff

Students perform individual research in a field of their choice under the guidance and supervision of a member of the faculty.

210A-B.C. Introductory Toxicology. (3-1-1) § F, W. Prerequisite: Consent of instructor. Lecture 1 hour. Hine, Hodge, F. Meyers, Piper, Vore-Iwamoto

Introductory toxicology divided into the following three components: toxicity testing procedures; environmental toxicology; toxic substances; and clinical toxicology, current developments.

211A-B.C. Advanced Toxicology. (1-1-1) § F, W. Prerequisite: Consent of instructor. Lecture 1 hour. Hine, Hodge, F. Meyers, Piper, Vore-Iwamoto

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 concepts of toxicology are presented.


Staff

Seminar to discuss present methods and problems in current teaching and research in pharmacology and toxicology.


Staff

292. Physiological Techniques in Pharmacology. (3) § F, W, Sp. Prerequisite: Survey course in pharmacology or consent of instructor. Lecture 3 hours. Hindeghem, Katzin

Principles and applications of physiological techniques used in the study of drugs. Emphasis is on the study of cardiovascular and autonomic agents.

296. Laboratory Techniques in Toxicology. (2) § Sp. Lab 6 hours.

Staff

Principles and application of experimental techniques in the toxicologic hazards and environmental chemicals: techniques for testing acute and chronic toxicity, skin irritation and sensitization, mutagenesis and carcinogenesis will be covered.

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

For graduate students engaged in writing the thesis for the masters degree.

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

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

300A-B.C. Practicum in Teaching. (1-3, 1-3) § F, W. Prerequisite: Advancement to candidacy for the Ph.D. degree.

Staff

Practicum is provided to participate in a formalized way in the teaching of pharmacology under the direction of the faculty.

Pharmacy

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 techniques and research designs are considered. Topics include problem design, sample size, choice of estimates, and probability densities, including normal, t, x^2 and F.

115. Biopharmaceutics and Physical Pharmacy. (4)

Prerequisite: Chemistry 115 and concurrent enrollment in Chemistry 116. Lecture 3 hours, Lab 3 hours.

Hooer, Hunt, Day

A study of the physical, chemical and biological factors which influence the design of dosage forms as drug delivery systems. Course includes laboratory preparation of basic drug delivery systems.

116. Biopharmaceutics and Physical Pharmacy. (4)

Prerequisite: Pharmacology 115 and Chemistry 116. Lecture 3 hours, Lab 3 hours.

Hunt, Hooer, Day, Spencer

Continuation of Pharmacy 115.

127. Prescription Study and Practice. (4) F. Prerequisite: Pharmacy Administration 112. Lecture 2 hours, Lab 6 hours. Spencer

Application of philosophical, ethical, and legal principles to the practice of the profession of pharmacy. Due consideration is given to the dispensing of prescriptions.

128. Pharmacokinetics. (3/2) W. Prerequisite: Pharmacy 110. Lecture 3 hours, Conference 1-2 hours.

OE Tozer

Course covers the pharmacokinetic basis of variability in the therapeutic, pharmacologic and toxicologic effects of drugs.

129. Pharmacokinetics. (3/2) Sp. Prerequisite: Pharmacy 128. Lecture 3 hours, Conference 1-2 hours.

OE Tozer

Continuation of Pharmacy 128.

133. Biologic Products. (3) Prerequisite: Third year standing. Lecture 3 hours.

K. H. Lee

A study of food and nutrition for all ag groups. Diet therapy is discussed.

151. Community Health Education. (2) Sp. Lecture and Discussion 2 hours. Participation in at least 4 community health education programs 1 hour.

OE Spencer

Course is designed to train students for participation in community health programs dealing with drug abuse education and other drug-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.
Schwarz
Discussion and laboratory exercises on the formulation of products for external use, including drugs and cosmetics. The course deals with the properties and ingredients of products.

161. Biologic Products. (2) W. Prerequisite: Third year standing. Lecture 2 hours.
K. H. Lee
A discussion of the pharmaceutical aspects and evaluations of the therapeutic values of biologic preparations in current use, including enzymes, blood and its derivatives, plasma substitutes, hematologic prepaerations, and biologic products.

164. Veterinary Products. (3) Sp. Prerequisite: Microbiology 102, Pharmacology 130 and Pharmacology 136 and Pharmacy 116. Lecture 3 hours.
Spinelli
Course is designed to familiarize the student with the common ailments of domestic animals and livestock, products used for the prevention and treatment of such diseases, the interrelationship of pharmacists, veterinarian and animal owner, and legal limitations on veterinary medication.

165. Pharmaceutical Technology. (3) F. Prerequisite: Pharmacy 116. Lecture 1 hour. Lab 6 hours.
Gibson, Cooper
An introduction to the technology of liquid and semisolid pharmaceuticals. Special emphasis is given to the problems encountered and the materials used in pharmaceutical manufacturing.

166. Pharmaceutical Technology. (3) W. Prerequisite: Pharmacy 165. Lecture 1 hour. Lab 6 hours.
Gibson, Cooper and Staff
An introduction to the technology 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) W. Prerequisite: Pharmacy 166. Lecture 1 hour. Lab 6 hours.
Gibson, Cooper and Staff
An advanced study of the relationship of the art and science of pharmaceutical technology to solid dosage forms.

168. Seminar in Clinical Pharmacokinetics. (2) Su. F. W. Sp. Prerequisite: Fourth year standing or consent of instructor. Reports and Conferences 6 hours. Enrollment limited.
Tozer, Riegemann
Discussion and review of the literature on the clinical application of pharmacokinetic principles in drug therapy.

170. Group Studies Course. (1-4) F. W. Sp. Prerequisite: Consent of instructor.
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, Stone
An introductory course emphasizing patient interviewing. 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 interviewing responses.

170.02. Special Topics in Pharmacology. (2) Sp. Prerequisite: Pharmacy 116 or concurrent enrollment. Lecture 2 hours.
Pedersen
An intermediate course offering an opportunity to explore, in greater depth, specific drug delivery systems and some fundamental relationships involved in their design or action.

180. Drugs and Society. (3) W. Prerequisite: Basic course sequence in pharmacology and consent of instructor. Enrollmernt limited. Lecture 3 hours.
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.

189. Supervised Study in Pharmacy. (1-5) F. W. 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 Pharmacy. (1-5) F. W. 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.
Schwarz, Jackson
Introduction to the formulation and technology of parenteral preparations. Laboratory includes participation in hospital activities in which parenterals are made and administered.

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 relationship and responsibility of the practitioner to the patient.

112. Pharmacy Laws. (2) W. Lecture 2 hours.
J. R. Nielsen, Lab 3 hours
A detailed examination of Federal and State drug, cosmetic, and narcotic laws; their promulgation, enforcement, and effect upon the practice of pharmacy. Some administrative work.

150. Marketing. (4) W. Lecture 4 hours.
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 environmental factors affecting marketing decisions.

Staff
Principles of management, specially directed toward developing familiarity with current problems peculiar to community pharmacy operation. Emphasis is given to elements in locating, organizing, operating, and adapting a pharmacy.

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.

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

180A-B. Legal Problems Related to Health Care. (2-2-2) F. W. Sp. Prerequisite: Third year standing. Pharmacy Administration 180A is prerequisite to 180B. Students will be placed in 180A or 180B at the discretion of the instructor. Attendance is mandatory. Faculty: R. Nielsen
Conducted in cooperation with law students who are teamed with students from professional schools on this campus to investigate assigned problems of their respective disciplines, with particular emphasis upon the legal implications arising therefrom.

189. Supervised Study in Pharmacy Administration. (1-5) F. W. 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.
Nordchow
This 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.
Lukin
This 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. Review plus dissection of the lower limb is stressed.

101A. Pathology. (3) E. F. M. L. Goldberg
A general survey of the fundamental principles of pathology with special emphasis on the correlation between pathologic processes and the clinical signs, symptoms, and course of disease. Gross pathology is demonstrated and autopsy material is available.

102A. Physiology. (3) F. Prerequisite: General human biology or equivalent.
Lukin
A review of certain aspects of human physiology, with special emphasis on the cardiovascular system and metabolism. Specific aspects of normal physiology are considered, especially in relation to stroke and heart disease. Applications of physical principles to physiology are discussed.

103A. Neuroanatomy. (2) F. Lecture 1 hour, Lab 3 hours.
Garoutte
The development of the human nervous system with special reference to structure and functional relationships.

104A. Physical Therapy Procedures I. (6) F. Prerequisite: Introductory physics. Lecture 3 hours, Lab 9 hours.
S. Jones
Lectures and laboratory practice in electrophysiology, kinesiology, and tests and measurements. Emphasis are therapeutic use of electricity in certain pathologic conditions. Analysis of musculoskeletal 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.
S. Jones
Lectures, demonstrations, and laboratory practice in hydrotherapy, massage, and therapeutic exercise. Emphasis are therapeutic uses of water and massage techniques to various pathologic problems and techniques of administration of exercises commonly used in orthopaedic, medical, and neurological conditions.

Lectures and laboratory practice in therapeutic exercise. Emphasized are methods of 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. Ranallo

Lectures and clinical demonstrations concerning peripheral nervous system, vascular problems, gynecologic, various types of arthritis, muscular dystrophy, spinal cord injury, cerebrovascular accidents, the brain-damaged child, neck pain, and back pain.

106B. Clinical Medicine I. (5) W. F. Schiller, J. Schneider

Lectures and clinical presentations of medical and neurologic patients are designed to increase the student’s understanding of the basic interrelationship of structure and function of the various body systems. Conditions requiring physical therapy treatments are fully discussed.

106C. Clinical Medicine II. (5) Sp. Pre-require: Abnormal psychology or equivalent. G. Strange

Lectures in orthopaedic surgery, pediatrics, psychiatry, surgery, obstetrics, gynecology, geriatrics, and dermatology are presented by physicians in these specialties.

107B. Neuroumuscular Physiology. (2) W. Sabbadini

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 disability.

108C. Basic Medical Procedures. (3) Sp. Lecture 1 hour, Lab 3 hours. Naradchow

The study of procedures necessary for the total care of patients.

109C. Principles of Professional Practice and Administration. (5) Sp. Lecture 2 hours, Lab 9 hours. Gilbert

A study of professional attitudes and obligations and the organization and administration of a department of physical therapy. Laboratory work included observation in outpatient clinics and a clerkship in an approved hospital by special arrangement of the clinical supervisor.

125. Mammalian Physiology. (7) F. W. Pre-require: Consent of instructor. Lecture 5 hours, Conference 2 hours, Lab 4 hours.

Mines

Introduction to mechanisms by which mammals, especially man, function. The interaction of internal and external environments and their relationship to the functions of cells and muscular, circulatory, respiratory, gastrointestinal, and excretory systems.

150.1. Research in Physiology. (1/2 per week) F. W. Pre-require: Consent of instructor.

150.2. Research in Endocrinology. (1/2 per week) F. W. Pre-require: Consent of instructor.

Ganong and Staff

Research in endocrinology carried out in the Department of Physiology.

170.2. Electronic Instrumentation. (3) F. W. Pre-require: College physics. J. W. Winston

Basic information on electricity and electronics. Circuity and operating principles of a wide range of electronic instruments used in physiological and biochemical investigations.

189. Supervised Study in Physiology. (1-5) F. W. Pre-require: Consent of instructor.

Ganong 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 Physiology. (1-5) F. W. Pre-require: Consent of instructor.

Ganong and Staff

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. Pre-require: Consent of instructor.

Directed reading organized in seminar or tutorial fashion to review aspects of physiology under supervisi of a member of the faculty.

201. Physiology of Vision. (2)Sp. Pre-require: Anatomy 103 or Physiology 110 or equivalent. K. Bronen

Study of mechanisms underlying vision. 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.

203. Cardiopulmonary Research Seminar. (1) F. W. Pre-require: Consent of instructor. Lecture 1/2 hours.

Cer蛉idge, Corone

Seminars on cardiovascular and pulmonary systems. Sessions on experimental methods and ways of solving cardiopulmonary problems. Attempts are presented is discussed and evaluated by the faculty and fellows. Students present a critical evaluation of one of the seminars.

204. Seminars: Topics in Physiology. (1) W. Pre-require: A minimum of six units of introductory physiology. Rothman

This seminar discusses selected topics in cellular and integrative physiology. Readings are drawn from primary and secondary sources.

205. Functional Neuroanatomy Projects. (4) Sp. Pre-require: Consent of instructor. Lecture 3 hours, Lab 3 hours. Heuser

Each year a different neuroanatomical project is undertaken in order for students to learn a variety of techniques used in electron microscopy, including freeze-fracture. Students will be able to prepare a three hour seminar on a basic aspect of electron microscopic neuroanatomy.

206. Advanced Kidney and Electrolyte Physiology. (3) Sp. Pre-require: Physiology 100 and 120, or 125, or consent of instructor. Heuser

Current theories regarding renal hemodynamics and the transport mechanisms occurring 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) Sp. Pre-require: Endocrinology and neural sciences or consent of instructor. M. Dallman

Mechanisms for regulation of endocrine function by the central nervous system and the influence of hormones on the nervous system are considered in view of anatomical data in the literature. Course may be repeated for credit.

209. Physiology of the Auditory, Vestibular, and Other Sensory Systems. (2) Sp. Pre-require: Anatomy 103 or equivalent. Merzenich

Lecturers and demonstrations provide basic information on the physiology of the auditory, vestibular system, chemical senses, and somatosensory system. Material includes historical and current concepts derived from relevant psychophysics, neuroanatomy, and neurophysiology.
210. Cellular Mechanisms of Hormone Secretion. (2) § Sp. Prerequisite: Physiology 101 or consent of instructor. Discussion of current literature pertaining to the mechanism of hormone synthesis, packaging, and release. J. A. Williams

220. Seminar. (1) F, W. Sp. Prerequisite: Consent of instructor. Gaining Seminar presentations by guest speakers, alternating with discussion by physiology staff members of their current research. 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) § W. Sp. Prerequisite: Physiology 101 and College of Liberal and Staff. This course includes critical reviews of topics of current importance, presentation of unsolved problems by staff, and critical evaluation of published articles from the group. The total program is presented over six successive quarters.

222. Endocrinology Seminar. (1) F, W. Sp. Prerequisite: Consent of instructor. The faculty in endocrinology is the subject of the group presentations each quarter. Course may be repeated for credit.

250. Research. (1-8) F, W. Sp. Prerequisite: Consent of instructor. Ganong and Staff

251. Research in Endocrinology. (1-8) § F, W. Sp. Prerequisite: Consent of instructor. Ganong and Staff

298. Thesis. (0) § F, W. Sp. Prerequisite: Advance- ment to candidacy and permission of the graduate adviser. Ganong

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

299. Dissertation. (0) § F, W. Sp. Prerequisite: Advance- ment to candidacy and permission of the graduate adviser. Ganong 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. Practice in teaching physiology under faculty supervision. Students supervise laboratory work, conduct entrance exams, and assist in preparing and grading examinations. Responsibilities are assigned according to the individual's stage of development.

301. Scientific Writing. (0) § F, Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Seminar A seminar workshop designed to help the pre-postdoctoral fellow to how to best put 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 Lecturing. (0) § F, Sp. Prerequisite: Consent of instructor. Lecture 1½ hours. Enrollment limited. Staff, Comroe

A course in teaching techniques. Students present short lectures, and video tapes of the presentations are analyzed by self- and group-criticism.

Preventive Dentistry and Community Health

109.01. Community Health Problems and Practice. (0-1) W. Sp. Clinic-Seminar rotation 30 hours. F. Fine

Students work in community clinics which serve dented 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.

110. Changing Aspects of Dental Practice. (1) F. Lecture 1 hour. Wycoff

A survey course to acquaint the student with current social and professional problems in dentistry. Includes identifying the patient's biological, national and professional needs, and how they are met.

120. Behavioral Sciences. (1) W. Lecture 1 hour. Gold

An introduction to the basic concepts, theories and findings of the social sciences. Emphasis is on the appli- cation of these concepts and modes 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. Introduces the concept of experimental reliability, fundamental principles of sampling techniques, selection of data, and variability. The student plans, develops, and writes a research protocol.

168. Community Health Methods. (2) F. Silverstein

Dental hygiene students work in the North Oakland Community Health and Youth Project staff. Students are assigned to area schools where oral screening is done. Students also make home visits.

180.01. Practice Management of Doctor and Patient Relationships. (1) F. Sp. Lecture 1 hour. S. Gold

Participatory seminars utilizing role playing, open discussions, and exercises to study interpersonal relations in dentistry. Topics covered include active listening, effective ways of communicating, and creative conflict-solving.

188.01. Community Health Methods, 0-9 F. Sp. Seminar and Clinic Variable. Tarbell

Students work in the Guadalupe Health Center, providing dental care in a community setting of comprehensive care.

188.02. Community Health Methods, 0-9 F. Sp. Seminar and Clinic Variable. Darke

Students work at the South of Market Health Center, which is a satellite to SFCH, providing dental care in a community setting of comprehensive health care.

199. Laboratory Project in Preventive Dentistry and Community Health. (1-5) F, W. Sp. Prerequisite: Consent of instructor. Wycoff, Silverstein

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

Psychiatry


Introduction to the basic science underpinning clinical psychiatry in the three main knowledge areas of biological science, psychological science, and social science, and clinical medicine with emphasis on the psychological and social aspects of health and disease.

110. Core Clerkship in Psychiatry. (1½ per week) Su, F, W. Sp. Prerequisite: Psychiatry 130 and 131A-B and consent of instructor. H. Weinstain

Four-week assignment to an outpatient or inpa- tient psychiatric service. Students, under supervision, are responsible for patient evaluation, participate in treatment planning and implementation, attend seminars related to clinical work, and make field visits to other types of psychiatric facilities.

130. Basic Clerkship — Communication Skills. (2) W. Seminar 2 hours. Independent study 2 hours. H. Peterson, Richman

Course provides students examples of different in- terviewing techniques and history taking procedures as utilized by physicians with different ages, illnesses, and sociocultural backgrounds. Students interview patients directly, and engage in supervisory and self- evaluative sessions.


Introduction to psychiatry as a clinical discipline. Basic behavioral science data is presented. Focus is on interviewing techniques, normal psychological development, description and treatment of psychopathology, and discussion of the interface between psychiatry and medicine. Videotaped lectures, patient interview, small group seminars.

135A. Psychiatric Aspects of Medical Practice — Ambulatory and Community Medicine. (§§) Su, W, F. Sp. Prerequisite: Satisfactory completion of first and second years in School of Medicine. Students accumulate a total of 3 units after successful completion of the six component parts of the Psychiatry 135 series. Clinical seminar 2 hours.

135M. Psychiatric Aspects of Medical Practice — Medicine (1st year). (Su) F, W, Sp. Prerequisite: Satisfactory completion of first and second years in School of Medicine. Students accumulate a total of 3 units after successful completion of the six component parts of the Psychiatry 135 series. Clinical seminar 2 hours.

Rosen, Jonas, Werderger

The psychiatric aspects of Ambulatory and Community Medicine will be taught in a systematic manner concurrently with the required third year Ambulatory and Community Medicine clerkship in weekly clinically oriented seminars.

135M. Psychiatric Aspects of Medical Practice — Medicine (2nd year). (Su) F, W, Sp. Prerequisite: Satisfactory completion of first and second years in School of Medicine. Students accumulate a total of 3 units after successful completion of the six component parts of the Psychiatry 135 series. Clinical seminar 2 hours.

Rosen, M. Weinstain

The psychiatric aspects of Medicine will be taught in a systematic manner concurrently with the required third year Medicine clerkship in weekly clinically oriented seminars.

135M. Psychiatric Aspects of Medical Practice — Medicine (3rd year). (Su) F, W, Sp. Prerequisite: Satisfactory completion of first and second years in School of Medicine. Students accumulate a total of 3 units after successful completion of the six component parts of the Psychiatry 135 series. Clinical seminar 2 hours.

Rosen, M. Weinstain

The psychiatric aspects of Medicine will be taught in a systematic manner concurrently with the required third year Medicine clerkship in weekly clinically oriented seminars.

135M. Psychiatric Aspects of Medical Practice — Medicine (4th year). (Su) F, W, Sp. Prerequisite: Satisfactory completion of first and second years in School of Medicine. Students accumulate a total of 3 units after successful completion of the six component parts of the Psychiatry 135 series. Clinical seminar 2 hours.

Rosen, M. Weinstain

The psychiatric aspects of Medicine will be taught in a systematic manner concurrently with the required third year Medicine clerkship in weekly clinically oriented seminars.

135M. Psychiatric Aspects of Medical Practice — Medicine (5th year). (Su) F, W, Sp. Prerequisite: Satisfactory completion of first and second years in School of Medicine. Students accumulate a total of 3 units after successful completion of the six component parts of the Psychiatry 135 series. Clinical seminar 2 hours.

Rosen, M. Weinstain

The psychiatric aspects of Medicine will be taught in a systematic manner concurrently with the required third year Medicine clerkship in weekly clinically oriented seminars.

Rosen, Sandler
The psychiatric aspects of Pediatrics will be taught in a systematic manner concurrently with the required third year Pediatrics clerkship in weekly clinically oriented seminars.

140.01. Advanced Clinical Clerkship in Psychiatry. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Psychiatry 110 and consent of instructor. Boatman
Participation, with supervision of Department of Psychiatry residents, staff, and psychiatric assessment, treatment, and consultation with adult or child inpatients or outpatients. Seminars, assigned reading, and case presentations may be required.

140.02. Clinical Clerkship. (1 1/2 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 PMC. (1 1/2 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 limited number of housing accommodations or stipends are available.

140.05. Clinical Psychiatry. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Boatman
Participation, under close supervision, in accordance with student's level of experience and special interests, in clinical psychiatric treatment of adult or child inpatients or outpatients.

140.06. Psychiatry Research. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Callaway
Participation according to students' level of experience in experimental work in such areas as neurophysiology, operant conditioning, psychophysics, immunology, and nonlexical communication. All work is under the close supervision of members of the faculty.

150.02. Block Elective in Human Development. (1 1/2 per week) Su, F, W, Sp. Fiske and Staff
Guided reading and research in human development. Work may focus on culture and personality studies; social psychology of human development; socialization including the role of values; adaptive processes initially treated. Refer to Human Development and Aging courses.

150.03. Clerkship in Human Sexuality. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Psychiatry 150 and consent of instructor. Boatman
An introduction to sexual functioning, sexual dysfunctions and their treatment, the spectrum of human sexual behavior, and students' own sexual values. A paper on non-psychoanalytic specialties.

160.01. Psychopathology of Speech and Language. (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours. Ostwald
A clinical course focusing on speech and language pathology. Students' eligibility depends on previous experience with psychiatric patients and interest in specific problems of communication. Patients with characteristic psychiatric illness will be interviewed and suitable treatment procedures performed under supervision.

Clinical psychiatric rounds are attended by the psychiatrists and case histories used as the basis for discussions of psychiatric diagnosis. A seminar format allows for free discussion between students and instructors.

160.03. Demonstration of Psychotherapy with Outpatients. (2) Su, F, W, Sp. Prerequisite: Psychiatry 151A and consent of instructor. Boatman
Students observe psychotherapeutic sessions with outpatients who are under intensive treatment. The observation session is followed by a seminar discussion. The seminar is a part of participation in and viewing of models of intensive psychiatric treatment.

160.07. Psychotherapy for Outpatients. (3-7) F, W, Sp. Prerequisite: Psychiatry 150 and consent of instructor. Lecture 3 hours, Lab 0-12 hours. Amin
Practical experience in psychotherapeutic work with outpatients to increase students' understanding of psychodynamics, and the role of psychotherapeutics. Students are assigned patients under supervision of a member of the faculty. Assigned reading, seminars, and chart writing.

160.08. Psychosomatic Case Conference. (1 1/2) F, W, Sp. Prerequisite: Consent of instructor. Murphy
Case conference with selected outpatients from the department of psychiatry. Emphasis is placed on the interpersonal relationship between psychological, social, and somatic factors. Although primarily intended for social work students, case conference may be taken by psychiatric residents and other mental health professionals.

Instruction and group supervision of clinical work with patients. The focus is on developing rapport, obtaining relevant information, and establishing a satisfactory therapist-patient relationship. Supplementary reading assignments may be assigned.

Seminar course designed for students who intend to enter non-psychoanalytic 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.

A comprehensive course on human sexuality as a part of health. Emphasis is on accurate information regarding the range of human sexual behavior, and the typical sexual concerns of patients.

160.15. Introduction to Sex Counseling Principles. (2) F, W, Sp. Prerequisite: Psychiatry 160.14 or 180. Consent of instructor. Lecture 30 hours, Lab 20 hours. Course is given over two consecutive weekend days. D. H. Wallace and Staff
A didactic experimental overview of the etiology and nosology of functional sexual problems and 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 160.14 or 180, or consent of instructor. Lecture 12 hours. Course is given over a weekend. D. H. Wallace and Staff
Course covers the role of sexuality in rehabilitation of physically handicapped and mentally handicapped, and principles of counseling for the handicapped. Lectures, films, seminars, and community resource people involved.

160.18. Videotape Demonstration of Psychotherapy. (1 1/2) F, W, Sp. Prerequisite: Consent of instructor. Nelken
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 rating is widely.

170.01. Introduction to the Study of Suicide. (2) F, W. Prerequisite: Consent of instructor. Motto
Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field.

170.02. Basic Science Aspects of Psychiatry. (2) F, W, Sp. Prerequisite: Consent of instructor. Felnberg
This elective seminar explores in depth psychobiological studies of mental disorders. Students have an opportunity to learn laboratory techniques as well as theoretical issues in EEG, sleep research, and biofeedback.

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 study of a topic 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.

Seminar sketches normal development from infancy through adolescence, to point out potential psychopathogenesis in the various phases of development.

170.05. Psychology of Consciousness. (1) Sp. Lecture 12 hours. Course given over a weekend. Orinstein
Course considers the new interest in consciousness in psychiatry and psychology today. Emphasis is placed on mental and physical events. The objective study of hypnosis, sleep and dreams, and rational and irrational modes of thought are included.

170.06. Research in Human Sexuality. (2) Su, F, W, Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor. Lecture 1 hour, Lab 3 hours. D. H. Wallace
Collaboration or directed 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. G. Solomon
Course compares and contrasts influences of cultural, physical, social, and sensory deprivation on cognitive and emotional development. Emphasis on social stigma and family response to handicap, the adaptive nature of problems and treatment of handicapped groups, development and utilization of community resources.
170.09. Social and Cultural Basis of Illness Behavior. (2) W. Lecture 2 hours.
Kessler
Patients whose cases illustrate the social and cultural determinants of illness behavior and
health care system responses will be presented. Students and the interdisciplinary faculty will review
literature, discuss, and integrate the anthropological, sociological and psychiatric viewpoints.

170.10. The Biological Core of Medicine. (1) W. Lec-
ture 1 hour. Feinberg
Course covers blood flow and metabolism in the human
brain, electrophysiological manifestations of different sets of consciousness, human memory, and
moral models for behavioral disturbances in man.

170.11. Psychologies: East and West. (1) F. Lecture
12 hours. Course is given over a weekend.
Ornstein
Students of cognition, perception and medicine
find that many advanced questions in their disci-
plines are related to the psychologies of the East.
This course brings together representatives of Eastern and Western psychological traditions
to explore their limits, in interaction.

Horowitz
An introduction to psychodynamics which will focus on cognitive schemas of self and others and the
cognitive processes and affective experiences, psychological defenses, and unconscious process.

170.13. Biofeedback, Meditation and Self-Regu-
ulatory Therapies. (1) W. Lecture 12 hours. Course
is given over a weekend.
Ornstein
A symposium presenting a critical overview of the most
promising techniques and clinical applications of
biofeedback, meditation, and other self-regulatory
therapies. Intended primarily for physicians, nurses,
psychotheropists, and other health professionals
as well as psychological and biological researchers.

170.14. Seminar in Human Development. (2) F. W.
Kielker
Philosophical relationships between medical, behavioral, physical sciences and major theories of
the life cycle. Applications of the theories to medical practice: psychological and social stress in relation
to disease; cultural and other factors in the meaning of
health, illness and treatment.

Sp. Prerequisite: Psychiatry 170.01 and consent
of instructor.
Motto
Continuation of the study of mortality and mor-
bidity resulting from self-destructive behavior. Sub-
jects to be covered and the method of study are deter-
imed by the interests of the students.

W. Wallace and Staff
Social, behavioral, and clinical aspects of human
sexuality are covered in a series of lectures and
seminar periods. Lectures present didactic material
and seminars focus on clinical and ethical problems
related to sex and medical practice.

181. The Black Experience. (2) Sp. Prerequisite:
Consent of instructor.
Cobbs
Seminar discussions concerning the varieties of inter-
personal experiences of black people which are relevant
to understanding their personality develop-
ment. This is of importance in the initiation and
maintenance of an effective doctor-patient relation-
ship in any medical specialty.

182. Transcultural Psychiatry. (1) F. Sp. Prerequi-
site: Consent of instructor.
Hargot
A series of seminars discussing transcultural psychiatry from entering the illness community and
epidemiology to folk healing. The relevance to American urban and ethnic issues is emphasized. Ex-
amples, problems, methodology, and possibilities for research are also presented.

184. The Social Organization of the Hospital. (1) 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 the structural impediments to
effective performance; conduct of the relationships
among health workers and patients, and impact of
hospital organization on the health worker and pa-
tient quality of life.

198. Supervised Study in Psychiatry. (1-5) F. W.
Sp. Prerequisite: Consent of instructor.
Epstein and Staff
Library research and directed reading under supervi-
sion of a member of the faculty with the approval of
the chairman of the department.

199. Laboratory Project in Psychiatry. (1-5) F. W.
Sp. Prerequisite: Consent of instructor.
Epstein and Staff
A laboratory research project under direction of a
member of the faculty with the approval of the chair-
man of the department.

211. Theoretical Bases of Psychotherapeutic Inquiry. (1-5) F. W.
Sp. Prerequisite: Consent of instructor.
Motto
Directed reading and small group seminars regarding
models of understanding and psychotherapeutic intervention in emotional disturbance.

Prerequisite: Consent of instructor. Lecture 1 hour;
Readings and field work;
M. R. Harris
Course will focus on history, classification, con-
tcepts and theory as well as practice considerations
relating to mental health consultation. In addition to
seminar participation, students may, where approp-
riate, arrange a 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
M. R. Harris
Participate in this seminar have current or recent responsibility for a mental health consultation. Focus
is on the theory and practice technique of mental
health consultation. Consultation experiences pro-
vide the major content for discussion.

214. The Practice of Clinical Social Work. (1.5) F.
W. Sp. Prerequisite: Consent of instructor. Lecture
1/2 hours.
Abern
Theoretical background for trainees in psycho-
social diagnosis; individual and group therapy, fam-
ily therapy, brief therapy and crisis intervention,
cross-cultural therapy; interview with systems and other
disciplines. Emphasis on clinical social work with
Geriatric patients, the physically ill, and others.

400. Psychiatric Grand Rounds. (1/2) F. W.
Sp. W. Wallerstein
Members of the Department of Psychiatry make clinical presentations reflecting all aspects of
the department's work. Each topic involves a two-
session sequence, with the second week consisting
of formal discussion of the previously presented work
from the viewpoint of the patients.

402. Orientation to Psychiatric Research. (1/2) Su.
Callaway
Guided tours through the research facilities of
M. R. Fisher and introductory presenta-
tions of research projects by individual investigators.

Ostwald
Individual consultation with psychiatric residents
and students concerning treatment and manage-
ment problems. Diagnostic questions, indications
for somatic and psychological interven-
tions, the course of therapy, and research issues are
emphasized.

404. Theories of Personality. (1) F. W.
Callaway
Focus is on personality theories other than Freud-
ian, e.g., Piaget, Skinner, Rogers, existential
psychology. Course includes an examination, study
and discussion of contemporary personality theories,
their concepts, systematic application to the beh-
avioral sciences, and research potentials. Parallel
reading is required.

L. Fisher, L. Davison
Seminar presents techniques of assessing per-
sonality and intellectual functions in relation to
evaluation of basic study progress in psychotherapy. Discussion of development, design, and theory of clinical psychological methods
and clinical applications and demonstrations with
appropriate case material.

406. Supervised Teaching of Medical Students. (1-2)
Su, F. W. Sp.
Ostwald
Individual and group instruction is given for
psychiatric residents working with medical students in
Psychiatry. Theoretical and practical issues in supervision and learning are analyzed, together with
selected reading assignments.

407. Research In Behavioral Sciences. (1-10) Su,
F. W. Sp.
Callaway
Course consists of supervised clinical and basic research in behavioral aberrations, psychopath-
ology, and experimental psychiatry. Specific subjects for
research are chosen in conjunction with members of
the staff.

M. R. Malamud
Discussion of the neuropathology of neurological
and psychiatric disorders with illustrations from
gross and microscopic material.

412. Jungian Psychoanalytic Theory. (1) F. W.
Brookes
On-going review of major principles of Jung's
analytical psychology with special reference to the
application to practice of psychotherapy. Designed to
elaborate dynamics of psychotherapeutic process by
utilizing widely differing theoretical backgrounds in
dialogue around clinical material.

413. Introduction to the Computer. (2-3) F. W.
Starkweather
Seminar presents a review of digital computing and
its applications in psychiatry. Residents explore
these concepts through their own programming efforts.

415. Literature In Child Psychiatry. (1) Su, F. W.
Binger
Survey of the literature in child development and
child psychiatry. Parallel reading is required.

Discussion of readings on major problems in contemporary psychiatric research. Advance registration is required.


Supervised research with computer methods for the simulation of behavioral interactions. Applications of computers to the analysis of human communication.

419. Child Development and Personality. (1/2) Su. Prerequisite: Consent of instructor.

LPI F. Conen, Frielander, D. Morrison

Seminar is focused on the most common and prevalently used methods of assessing intelligence, perceptual-motor integration and personality in children. Actual testing materials as well as supporting research are covered. Participation is required.

424. Research on Human Response to Stress. (4) Su, F, W, Sp. Prerequisite: Graduate or advanced resident standing. One year of advanced psychological or psychiatric work.

M. Horowitz

Guided research using experimental, field, and clinical modes of investigation into the typical and idiosyncratic behaviors of external stressors. The focus is on conscious and unconscious idea
tional, emotional, and defensive processes.


Course will focus on history, classification, concepts and practical considerations relating to mental health consultation. In addition to seminar participation, students may, where appropriate, arrange a supervised field experience in mental health consultation.


Participants in this seminar have current or recent responsibility for a mental health consultation. Focus is on the theory and practice technique of mental health consultation. Consultation experiences provide the major content for discussion.

427. Advanced Psychotherapy. (2-4) Su, F, W, Sp. Prerequisite: One year of full time experience in the conduct of outpatient psychotherapy or equivalent. Lecture 2 hours. Lab 4-10 hours. M. Horowitz

Course covers psychotherapy of selected cases with recordings of the process, supervision during treat-
ment, and group seminars in which the therapy is reviewed in retrospect using microanalytic and macroanalytic levels of analysis.

428. Practicum in Sex Counseling. (8) Su, W. Prerequisite: Psychiatry 160.14 and 160.15, or 180, or consent of instructor. Psychiatry 428 must be taken in order and consecutively with 426. D. H. Wallace

Six month rotation in the Sex Counseling Unit involving presentations, case conferences, and supervised counseling experience with couples and individuals presenting sexual dysfunctions.

429. Practicum in Sex Counseling. (8) F, Sp. Prerequisite: Psychiatry 160.14 and 160.15, or 180, or consent of instructor. Psychiatry 429 must be taken in order and consecutively with 426.

D. H. Wallace

Six month rotation in the Sex Counseling Unit involving presentations, case conferences, and supervised counseling experience with couples and individuals presenting sexual dysfunctions.

430. Clinical Conferences of the Child and Adolesc.

ent. (1/5) F, W, Sp. I. Phillips

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. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 431 is equivalent to Psychology 221.

Attkisson, Hargreaves

A seminar course designed to provide a basic overview of the organizational components of program evaluation; design and implementation of information systems; assessment of community needs; evaluation of program quality and effectiveness, and training of evaluators.

432. Clinical Biofeedback. (2) F, Sp. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 432 is equivalent to Psychology 181.03.

Pellerier

Integration of biofeedback with psychotherapy and medical practice; methods of intervention and prevention will be presented in a therapeutic model emphasizing differences among patients in stress disorders. Biofeedback instruments are demonstrated and applied. Course is intended for clinical practitioners.

433A-B-C. Special Seminar in Physiological-Biological Research in Psychopathology. (1-1-1) F, W, Sp. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 433A-B-C is equivalent to Psychology 233A-B-C. Seminar 2 hours.

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 Integration. (2) Sp. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 434 is equivalent to Psychology 181.02.

Galn

Group discussions of readings in seminar format of neuropsychology of hemispheric specialization for cognitive function, and integration of the two hemispheres; developmental, psychiatric and educa
tional implications, evaluation of data from six case studies of brain lesions, electrophysiological recordings, and behavioral testing.

435. Impact of Health Insurance Legislation on Practice. (2) W. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 440 is equivalent to Psychology 290. Lecture 2 hours.

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; illustration of the legislative process.

436. Social and Psychological Factors in Health Education. (2) W. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 441 is equivalent to Psychology 181.05.

J. B. Henderson

Overview of the major concepts and approaches in health education, focusing on chronic diseases and primary and secondary prevention of health risks and problems: societal factors and individual determinants; specific techniques for helping people modify life styles.

437. Current Topics in Biological Psychology. (2) Sp. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 442 is equivalent to Psychology 232.

Salamy, H. Peeke

A seminar course focusing on a current topic in biological psychology such as neurotransmission, lateralization of brain functions, psychophysiology of stress, or psychology of attention. Individual presentations and discussion are required.

438. Psychosocial Care of the Dying Patient. (2) F, Sp. Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 443 is equivalent to Psychology 180.

Garfield

Models for dealing with psychosocial issues involved in caring for the dying patient. Emphasis on the sequence of events encountered by the health pro
dessional and patient from diagnosis through death. Course is intended for medical, nursing and mental health students.


M. R. Harris, J. L. Epstein, Morto, C. Broida

Residents are responsible for the study and treat
tment of psychiatric patients and consultation of non
psychiatric patients under the supervision of senior staff members of the faculty. Parallel reading is re
duired.

451. Advanced Psychiatry. (1½ per week) Su, F, W. Prerequisite: Chief residents.

M. R. Harris, J. L. Epstein

Program planning and consultation among ad
mnistrative, teaching and research roles of chief residents.


LPI I. Phillips

Residents in child psychiatry are responsible for the diagnosis and treatment of children with psychi
tric problems and for therapeutic work with their parents under the supervision of the senior staff.


LPI I. Phillips

In addition to clinical work, the residents in child psychiatry are required to supervise the work of others and to consider over treatment reviews and in
teragency conferences.

456. Community Mental Health. (3) Su, F, W. Prerequisite: Open to third, fourth and fifth year residents.

D. Brown

Lectures in the theory and practice of mental health consultation, program evaluation and ad
dministration, and preventive services. Supervision of related field experiences by senior faculty in seminar setting. Interdisciplinary interaction emphasized. Review of relevant literature.

461. Basic Psychiatry I. (1) F, W. Amini

Introduction to the basic psychiatric syndromes: required for first year psychiatric residents.

462. Basic Psychiatry II. (1) F, W. Prerequisite: Psychiatry 461.

I. Glick, Braff

Introduction to the theory and practice of family, group, and behavior therapy: required for second year psychiatric residents.


Seminar offers instruction in the theoretical bases of psychoanalysis.

491. Interdisciplinary Seminar in Human Development. (3) F. W. Sp. Prerequisite: Consent of instructor. Three-quarter course. Fiske and Staff Theory and research covering advances to old age from sociocultural, psychological, psychoanalytic, and anthropological perspectives. Topics include stress, personality and cognitive change, time perspective values, crises and adaptation. Reading and paper required.

492. Teaching, Hearing, and Psychiatry. (1) Su, F. W. Sp. Prerequisite: Consent of instructor. Ostwald 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.

472. Problems in Psychotherapy. (1-2) W. Sp. Prerequisite: Consent of instructor. R. S. Wallenstein Problems in psychotherapy conducted within a psychodynamic framework. Topics include: treatment indications, goals, motivation and treatability, resistance, transference and countertransference, dreams in psychotherapy, third party involvements, emergency and hospitalization, adjuvant drug management, note taking and recording, transfer and termination.

474. Videotape Demonstration of Psychotherapy. (2) F. W. Sp. Prerequisite: Consent of instructor. Nelken 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.

Psychology

113A. Human Growth and Behavior. (3) F. W. Sp. Prerequisite: First year standing or consent of instructor. Schaw Examination of patterns and sequences of human development. Exploration of human behavior and maturation with a view of the influences affecting the human condition through the life span. Various theoretical bases are explored in conjunction with biological and psychosocial concepts.

170. Patient Compliance. (2) § F. W. Lecture 2 hours. Not offered 1977-1978. G. Stone Patients' cooperation with health regiments contributes significantly to outcomes of health care. This course reviews factors that affect degree of compliance achieved and examines results of attempts to improve compliance. Stress is placed on tailoring methods to specific clinical circumstances.


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) Sp. Combined with psychiatry. F. Lewis This course integrates students' basic training from the specialty courses in dentistry with knowledge of the psychological considerations necessary to individualize treatment for patients. These topics may then be planned to the practitioners' awareness of the unique needs of patients.

180.03. Advanced Psychology for Dental Hygienists. (1) Sp. Seminar I hour. Plainfield Seminar discussions on the emotional aspects of interpersonal transactions among office personnel, therapists, and patients.

181.01. Behavior Interventions in Medicine. (2) § W. Sp. Prerequisite: Consent of instructor. S. Hall Review of the research literature on the behavioral treatment of physical disorders and disability, especially cardiovascular risk factors including smoking, anxiety-related disorders, chronic diseases, and preventive care are emphasized.

181.02. Cerebral Hemispheric Specialization and Integration. (2) § F. W. Sp. Prerequisite: Consent of instructor. Galin Group discussions of readings in seminar format of neuropsychology of hemispheric specialization for cognitive function, and integration of the two hemispheres in medical and psychological and educational implications; evaluation of data from study of brain lesions, electrophysiological recordings, and behavioral testing.

181.03. Clinical Biofeedback. (2) § F. W. Sp. Pelletier Integration of biofeedback with psychotherapy and medical treatment of health problems. Intervention and prevention 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.

181.04. Issues and Research in the Treatment of Substance Abuse. (2) § W. W. Sp. Prerequisite: Consent of instructor. S. Hall, Hayssey Seminar on research on issues concerning treatment of substance abusers and of theories of etiology and treatment. Substances covered are heroin, alcohol, barbiturates, amphetamines, caffeine and nicotine. Obesity will also be included.

181.05. Social and Psychological Factors in Health Education. (2) § W. W. B. Henderson Overview of the major concepts and approaches in health education on chronic diseases and primary and secondary prevention of health risks and problems; societal factors and individual determinants; specific techniques for helping people modify lifestyle.

185. Nonverbal Communication. (1) § F. Ekan 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. (1) § W. W. Sp. Prerequisite: Consent of instructor. G. Stone, Jacoby Course provides the basis for a supervised practicum in teaching 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 with techniques.

190B. Practicum in Teaching Communication Skills. (3) § F. W. Sp. Prerequisite: Psychology 190A and consent of instructor. Lecture 2 hours, Lab 3 hours. G. Stone, H. Jacoby 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 substrate course and meet weekly with instructor to discuss issues of teaching.

198. Supervised Study in Psychology. (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.

200. Theory and Research in Learning and Cognition. (3) § F. W. Sp. Prerequisite: Graduate standing in Health Psychology Program or upper division courses in learning and cognitive psychology, and consent of instructor. Seminar 3 hours. Offered in alternate years. Offered 1977-1978. G. Stone General introduction to the current research and theory in learning and cognition, and for designing interventions in health transactions based on research in cognitive processes and traces history of major issues and viewpoints.

202A-B. Computer Simulation of Personal and Human Interaction. (3-3) § W. W. Sp. Prerequisite: Psychology 257 or equivalent. Lecture 1 hour. Lab 6 hours. The development and testing of theoretical models of personality are explored by means of computer programs. Students play the role of the computer for simulation and symbol manipulation.

210. Personality Psychology. (3) § F. W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978. F. Cohen General and systemic issues in the study of personality; evaluation of major theories and points of view; developmental issues; theoretical and methodological issues in the assessment of personality; evaluation of research methods.

211A-B. Theories of Personality. (2-2) § W. 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. J. Fisher Survey of major contemporary theories of personality, including some from recent, selected philosophical perspectives; survey of the current status of research, how they conceptualize personality development, how they relate to empirical phenomena, and what research is generated by them.

212. Psychological Stress and Coping. (3) § F. W. Sp. Prerequisite: Consent of instructor. Offered in alternate years. Not offered 1977-1978. F. Cohen Course examines stress theory and research from clinical, field, and laboratory settings; psychological, physiological, and sociocultural 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. Atkinson, Hargreaves A seminar course designed to provide a basic overview of the organizational context of program evaluation; design and implementation of information systems; assessment of community needs; evaluation
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. Offered 1977-1978.

An overview of major organ systems of the human body stressing psychological impacts on their functioning and psychological consequences of abnormality. Course will prepare student for reading medical literature and interacting effectively with health professionals in planning research.

231. Basic Psychological Research. (3) § Sp. Prerequisite: Basic courses in experimental psychology and consent of instructor. H. Peake.

Central nervous system mechanism involved in the regulation of behavior will be emphasized. Elementary neurophysiology 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 physiological psychology, experimental psychology, and consent of instructor. S. Numassy, H. Peake.

A seminar course focusing on a current topic in biological psychology such as neurochemistry, lateralization of brain function, psychophysiology of stress, or physiology of attention. Individual presentations and discussion are required.

233-A 3-C. Special Seminar in Physiological-Biological Research in Psychopathology. (1-1-3) § F. W. Sp. Prerequisite: Consent of instructor. Seminar 2 hours.

A seminar course 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.

234. Neurochemical Basis of Abnormal Psychology. (2) § W. Sp. Prerequisite: Consent of instructor. E. Ellman.

Seminar and readings on subjects related to the biochemical, neuropharmacological basis of CNS functions; cell physiology of the nervous system.


Kamila

Course considers the relationships among behavior, subjective experience and physiological processes. It stresses the interplay among autonomic and central neural review of methods of achieving increased awareness and control of physiological activity. Demonstrations, laboratory.

240. Social Psychology. (3) § F. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978.

A survey of social psychological theory and research. Topics to be covered include attitude formation and change, decision-making, role theory, group dynamics, conformity and social influence, person perception and attribution theory.

248. Independent Study. (1-6) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

Independent study under the supervision of a member of the faculty.

249A. Special Seminar in Cognitive-Information Processing. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

Special seminar in the area of cognitive-information processing. Topics to be announced.

249B. Special Seminar in Personality. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

Special seminar in the area of personality. Topics to be announced.

249C. Special Seminar in Developmental Psychology. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

Special seminar in the area of developmental psychology. Topics to be announced.

249D. Special Seminar in Evaluation. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

Special seminar in the area of evaluation. Topics to be announced.

249E. Special Seminar in Physiological-Biological Psychology. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

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. Staff.

Special seminar in the area of social-organizational psychology. Topics to be announced.

249G. Special Seminar in Statistics-Measurement. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. Staff.

Special seminar in the area of statistics-measurement. Topics to be announced.

249H. Special Seminar in Health Psychology. (1-3) § F. W. Sp. Prerequisite: Consent of instructor. 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. 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. 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. Staff.

Special seminar in other areas of psychology. Topics to be announced.


Fein

Introduction to parametric and non-parametric techniques appropriate for analyzing outcomes of experiments and field studies.

251B. Statistics for Psychology II. (3) § F. Prerequisite: Psychology 251A. Lecture 3 hours. Offered in alternate years. Not offered 1977-1978.

G. Stone

Introduction to the theory and use of linear models, including multiple regression; general concepts of multivariate analysis are also considered.

253. Introduction to Multivariate Statistical Methods (2) § F. W. Prerequisite: Graduate course in statistics including univariate analysis of variance and regression and correlation.

Fein

Regression, discriminant function, canonical correlation factors and multivariate methods will be evaluated in terms of inferences that can be made; sample sizes and statistical power; statistical assumptions and robustness; and strategies for establishing replicable results.

254A. Research Methods. (3) § W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978.

N. Adler

An overview of research strategies and their associated strengths and weaknesses: experimental and quasi-experimental designs, correlation approaches, interview techniques, survey and questionnaire construction, uses 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. Offered 1977-1978.

N. Adler

An in-depth study of major research approaches: experimental research, quasi-experimental research, field and evaluation research. Problem design, artifactual, and ethics of research will be considered.

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.

257. Introduction to the Computer for Behavioral Sciences. (3) § F. Prerequisite: Elementary statistics and consent of instructor. Lecture 1 hour, Lab 6 hours. Starkweather

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 Health Psychology Program, or consent of instructor. Offered in alternate years. Offered 1977-1978.

G. Stone

Functions and tasks of the health system: resources available and their deployment; institutions and organizations, professional roles; constraints imposed by rules, norms, societal factors. Issues of access, utilization, outcomes, financing will be stressed. Participation by invited guest experts.

260B. The Health System. (3) § Sp. Prerequisite: Consent of instructor. Offered in alternate years. Offered 1977-1978.

F. Cohen

Examination of empirical 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, de-individuation among health professionals.


N. Adler

A seminar to acquaint students with researchers in health psychology. Presentations of research studies in health care problems, and discussion of related issues.


F. Cohen

Introduction to problems and methods in ongoing health care systems research. Time involved in clinical, field and laboratory research settings: discussion of methodological and practical problems of health research.
306. Practicum in Teaching Psychology. (0) F. W. or Sp. Prerequisite: Consent of instructor. Staff Supervised classroom or tutorial teaching experience.

**Radiation Oncology**

140.01. Radiation Oncology Clinical Clerkship at UC. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C. T. Phillips Participation in examination of cancer patients under treatment in radiation oncology. Students participate in rounds, conferences, and clinics, and see demonstrations on the use of newer radiotherapeutic techniques.

140.06. Clinical Clerkship in Radiation Oncology at MZ. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C. J. Castro Participation in examination of cancer patients under treatment in the Claire Zellarbach Samson Tumor Institute at MZ. Students participate in rounds, conferences, and clinics, and see demonstrations on the use of newer radiotherapeutic techniques.

150.01. Research Selective. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C. T. Phillips Individual research in radiation oncology by arrangement with the chairman of the department. Students work under close supervision of a member of the staff.

403. Radiation Oncology Grand ROUNDS. (1) Su, F. W. Sp. T. Phillips Rounds include presentation of problem situations with discussion of diagnosis and treatment as well as biologic implications. Frequent guest lectures are used to cover important aspects of oncology.

404. Specialty Seminars Concerning Cancer. (3) Su, F. W. Sp. T. Phillips Seminars include discussions of the diagnosis, treatment and results of specialty oncology problems, including the salvage procedures in the head and neck, gynecologic, otolaryngologic, pediatric, dermatologic, lymphomatous and general malignancies.

415. Seminars in Radiobiology. (1) F. W. Sp. T. Phillips 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 in radiation in clinical radiotherapy. Oriented to radiotherapy fellows and residents.

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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. Sp. Prerequisite: Residents assigned to therapeutic radiology. V. Smith A lecture-seminar course with practical sessions to provide the resident with the basic concepts of radiologic physics with special reference to those aspects relating to therapeutic radiology.

454. Clinical Therapeutic Radiology. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C. T. Phillips Residents under supervision, are responsible for their diagnosis, treatment, and follow-up of patients referred to radiation therapy from the wards and outpatient clinic. Study of the junior resident includes discussion of newly referred patients; chart rounds include the discussion of patients under treatment.

**Radiology**

100. Introduction to Clinical Radiology. (2) F. W. Sp. Prerequisite: Anatomy 100 and 103, Medicine 130, Pathology 102, and Psychiatry 130; concurrent enrollment in Medicine laboratory course.

Course provides instruction in basic aspects of therapeutic and diagnostic radiology and nuclear medicine. Illustration of diagnostic and therapeutic modalities in specific disease states provides instruction in use of radiologic resources.

140.01. Roentgen Diagnosis. (1 1/2 per week) F. W. Sp. Prerequisite: Medicine 110 and Surgery 110. D. Margulis Clerkship in radiology. Observation of procedures and review of pathology, pathophysiology, diagnosis, and natural history of selected diseases 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-B-C. Margulis Clerkship in clinical radiology. Fellowship-approved hospital by special arrangement and appointment of the chairman of the department and the Dean.

140.04. Clinical Clerkship in Nuclear Medicine. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C. T. Phillips Observation of basic nuclear medicine procedures and participation in diagnostic tests employing radioisotopic agents. Complementary to 140.03.

140.12, 170.08, and 170.09 meet the State of California requirements for licensure to use radioactive substances.
180. Isotopes in clinical medicine.

140.05. Diagnostic Radiology at MZ. (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 faculty, and attendance at daily conferences; tutorials available with members of the faculty. Role of radiology in clinical management emphasized.

140.08. Clinical Clerkship in Cardiovascular Radiology. (1/2 per week) Su, F. W. Sp. Prerequisite: Medicine I, II, W. Carlson

Cardiovascular radiology provides an opportunity to become acquainted with the radiologic studies of the cardiovascular system through active participation in diagnostic and therapeutic reactions.

140.09. Clinical Clerkship in Diagnostic Radiology at SFGH. (1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C.

Minagi

Students serve a clerkship in the Diagnostic Section of the Department of Radiology. They observe performance of radiologic procedures and interpretation of films, attend conferences, and learn basic philosophy of conducting radiologic examinations and the rules of interpretation.

140.11. Radiology Clerkship at C. (1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131A-B-C.

Barbenne

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. Radiology Laboratory. (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 and radioactivity techniques for biomedical purposes.

140.13. Radiology and Medical Diagnosis. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Medicine 131B-A-C.

S. Ross

A clerkship for third year students to help acquire knowledge and attitudes that ease transition from preclinical studies to clinical medicine. Radiographs with case presentations are used to help learn mechanisms of disease and clinical judgment.

170A.01B-C. Introduction to Research on Learning. (2-2.2) F, W. Sp. Prerequisite: Consent of instructor.

S. Ross

Designed to acquaint students with domain of educational research, specifically that on learning. Students learn vocabulary, recognize valid problems and valid results, and gain insight into the problem of method.

170.05A-B-C-D. The Anatomy of Anatomy. (1 1/2 - 1 1/2 - 1 1/2 - 1 1/2 Su) F, W. Sp. Lecture 1-2 hours.

Rader

Course description: Demonstration 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 importance of clinical thinking, and useful habits in learning. For freshman "Blue" group.


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.


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 freshman "Gold" group.

170.08. Nuclear Medicine Physics. (3 1/2) Su, F. W. Sp. Prerequisite: Concurrent enrollment in Radiology 170.09.

Perez-Mendez, Kaufman

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.

Hoffler and Staff

Introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radioisotopes.


Minagi, L. Lim, Laing

Weekly seminar covering the radiologic studies of surgical cases emphasizing indications, risks, and information derived from procedures. Active participation in X ray interpretation is included.


Minagi

An elective course for fourth year medical students. Consideration of the role of the radiologist as a consultant in the emergency room. Topics covered include head injuries, fractures, dislocations, chest, abdominal and genito-urinary trauma, and management of contrast reactions.

198. Supervised Study in Radiology. (1-5) F, W. Sp. 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. (1-5) F, W. Sp. Margulis and Staff

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

220. Seminars in Radiologic Physics for Physicists. (2) § F, W. Sp. Prerequisite: Bachelor’s or higher degree in the physical sciences. V. Smith, R. Baker

Seminars provide physicists with an in-depth knowledge of radiologic physics.

295A. Nuclear Medicine Instrumentation and Techniques in the examination and diagnosis of graduate diseases in quantum mechanics, electricity and magnetism, nuclear physics, and computer sciences. Consent of instructor. Lecture 4 hours.

L. Kaufman

Selected readings and seminars on nuclear medicine imaging and counting instrumentation and techniques. Principles, design, performance and evaluation of instruments, including gamma cameras, collimators and well counters. Students will be responsible for two presentations to the staff.

295B. New Developments in Nuclear Medicine Instrumentation. (2) § W. Sp. Prerequisite: Graduate course in quantum mechanics, electricity and magnetism, nuclear physics, and computer sciences. Radiology 295A and consent of instructor. Lecture 3 hours.

L. Kaufman

Selected readings, techniques and seminars on nuclear medicine’s current developments in new imaging instruments, semiconductors, diagnostic and therapeutic devices, computer systems and applications, computer simulations and tomographic reconstruction. Students will be responsible for two presentations to the staff.


H. Goldberg

Faculty from radiology and other departments lecture on various aspects of all systems of the body. Residents prepare case histories stressing roentgen findings and correlative surgical and laboratory work, special studies, library, and film research.


Margulis, Gooding

Films of interesting cases from the daily work are presented and reviewed. Roentgenograms of surgical pathology and pathologically proved cases are correlated with the gross and microscopic pathologic findings.

402. Specialty Seminars Concerned with Diagnosis. (3) F, W. Sp. UC Margulis

Seminars require preparation and presentation of roentgen findings on patients under discussion at both medical, surgical, pediatric, obstetric and gynecologic departmental conferences and seminars on congenital heart disease of the gastrointestinal tract, and orthopaedics.


Minagi

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 and conduct of, interpretation of special radiologic procedures.


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.


Selditz

The elements of radiologic physics are studied in a series of lectures and problem assignments. 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 radiologic physics.


Sanchez

Interdepartmental seminars in which the radiologist and members of other departments discuss cases either in which diagnostic or therapeutic nature is presented. This course includes surgical and medical radiologic rounds, consultative tumor board, clinicopathological conferences, and other departmental grand rounds.


Coulson, VA Ovens

Interdepartmental seminars in which the radiologist discusses cases from the radiological picture of problem cases either in which diagnostic or therapeutic nature is presented. These include medical-surgical, clinicopathological, chest, medical X ray, rheumatology, neurology and neurologic surgery conferences; consultative tumor board; and surgical and orthopaedic grand rounds.

491. Radiobiology: Radiation Effects on Genes and Chromosomes. (2) W. Sp. Prerequisite: Consent of instructor.

S. Ross

Concepts and mathematics of target theory related
to damage of genetic apparatus. Biophysical and biochemical studies on induction of intragenic and intergenic mutations that give insight into the structure of chromosomes and interaction of radiation with biological material.

411. Introduction to Nuclear Medicine. (2) Su, F. W. Sp. Prerequisite: Concurrent enrollment in Radiology 421. Hoffer and Staff Clinical introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radiopharmaceuticals.

412. Pathology. (1) Su, F. W. Sp. V/A Offenders Course includes review of surgical pathology material and attendance at autopsy rounds.

413. Pathology. (1) Su, F. W. Sp. SFGM Minagi Course includes presentation of pathological material of special interest to radiologists with emphasis on the correspondence of diagnostic and laboratory and pathological findings and a study of the pathology of patients under radiation treatment.

414. Physics of Diagnostic Radiology. (2) W. Sp. Pre- requirement: Radiology 406. Lecture 1-1/2 hours, Lab 2 hours. Seidlitz A seminar course with laboratory experiments designed to acquaint the student with current knowledge of physics applicable to diagnostic radiology. Topics include generation and extraction of radiologic information, image conversion, recording methods, and special purpose equipment.

419. Growth Kinetics of Cells, Tissues, and Tumors. (2) Sp. Prerequisite: Consent of instructor. Cleaver, Patt An analysis of cell population growth in tissues, tumors, and cultures. Students are given to radioactive tracer (thyidine and its biochemical) and experimental methods for studying cell proliferation in vivo and in vitro.

420. Nuclear Medicine Seminars. (1) F. W. Sp. Hoffer Rotating assignments of topics for discussion by residents in nuclear medicine training programs in all affiliated hospitals. Critical review of recent literature in limited areas are used to provide a broad review of nuclear medicine for all trainees.


422. Basic Radiological Sciences. (3) Su. Perez-Mendez, Kaufman Course intended for all first year residents in radiology; provides an introductory survey of radiobiology, diagnostic X ray physics, radioactivity, and radiation instrumentation.

450. Clinical Nuclear Medicine. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Radiology 422. Hoffer and Staff Clinical experience in diagnostic and therapeutic nuclear medicine to satisfy requirements of American Board of Radiology for certification in diagnostic radiology and radiation therapy.

451. Clinical Diagnostic Radiology. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Radiology 450. Margulis 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. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Radiology 450. V/A Offenders Residents, under supervision, are responsible for the diagnostic activities of the department, including diagnostic consultations and reports, history-taking, and physical examinations. In addition, the chief resident has certain administrative duties relative to the resident training program.

453. Clinical Radiology. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Radiology 450. SFGM Coulbourn Residents are responsible for the diagnostic and therapeutic activities of the department under the direction of staff radiologists. Diagnostic consultations and reports, history-taking, physical examinations, radiation therapy, and follow-up of patients referred for therapeutic considerations.

455. Radiology Laboratory. (1 1/2 per week) Su, F. W. Sp. Prerequisite: Residents assigned to nuclear medicine section and consent of instructor. Perez-Mendez, Kaufman Course is designed to teach accurate measurement and recording techniques for biomedical purposes.

Removable Prosthodontics


110B-C. Elementary Complete Denture Prosthodontics. (1-1) W. Sp. Prerequisite: Concurrent enrollment in Removable Prosthodontics 110B-C. Removable Prosthodontics 110B is a Prerequisite to 110C. Lecture 1 hour. M. L. Parker Lectures on the elementary principles of complete denture prosthodontics emphasizing the biological background and clinical application of the technical steps.

116B-C. Elementary Complete Denture Prosthodontics. (2-2) W. Sp. Prerequisite: Concurrent enrollment in Removable Prosthodontics 110B-C. Removable Prosthodontics 116B is Prerequisite to 116C. Lab 6 hours. M. L. Parker A laboratory course on the elementary principles of complete denture prosthodontics. Laboratory varies demonstrate technical and clinical procedures.


Presentation of clinical procedures for immediate dentures.


126.01. Partial Dentures. (3) F. Prerequisite: Removable Prosthodontics 116B-C. Lecture 1 hour, Lab 6 hours. Herzberg Fundamentals of partial denture design and construction of the partial denture.

126.02. Immediate Dentures. (2) W. Prerequisite: Removable Prosthodontics 110B-C, 116B-C and concurrent enrollment in Removable Prosthodontics 122. Lab 6 hours. Fitzloff Course provides experience in fabrication of immediate dentures.

126.03. Complete Prosthodontics. (2) Sp. Prerequisite: Removable Prosthodontics 126.01 and 126.02. Lab 6 hours. Regli, M. L. Parker Fabrication of complete upper and lower dentures.

130A. Clinical Procedures. (1) F. Prerequisite: Removable Prosthodontics 126.01, 126.02 and 126.03. E. Kelly, Regli The course bridges the preclinical courses and clinical courses in removable prosthodontics. It includes prosthetic treatment of edentulous abnormalities; and special clinical procedures not covered in other prosthodontic courses.

130B. Advanced Removable Partial Denture Design. (1) W. Sp. Prerequisite: Removable Prosthodontics 130A.

Krol Principles and concepts of partial denture design in relation to clinical dentistry. Treatment planning for removable partial dentures especially as related to preventive dentistry will be emphasized. Special attention will be given to design of the extension base partial denture.

130C. Orofacial Prosthodontics. (1) Sp. Prerequisite: Removable Prosthodontics 130B. Chelidonski and Staff Biologic principles underlying prosthetic treatment of patients with congenital and acquired malformations, defects and dysfunctions. Included is the development of normal and abnormal speech as it relates to prosthodontics. The basis for prosthetic therapy in temporomandibular joint disorders is also presented.

171A-B-C. Complete Prosthodontics. (4-4-4) F. W. Sp. Lecture 1 hour, Lab and Clinic 9 hours. Regli, M. L. Parker and Staff Instruction in clinical and laboratory procedures related to complete prosthodontics.

172.01A-B-C. Partial Prosthodontics. (4-4-4) F. W. Sp. Lecture 1 hour, Lab and Clinic 9 hours. Regli, M. L. Parker and Staff Instruction in clinical and laboratory procedures related to partial prosthodontics.

172.02. Partial Prosthodontics. (5) SS. Lecture 1 hour, Lab and Clinic 12 hours. Regli, M. L. Parker and Staff Instruction in clinical and laboratory procedures related to partial prosthodontics. Continuation of Removable Prosthodontics 172.01A-B-C.


174A-B-C. Complete Prosthodontics. (3-3-4) F. W. Sp. Prerequisite: Removable Prosthodontics 171A-B-C. Lecture 1 hour, Lab 9 hours, W. Sp. Regli, M. L. Parker, McCormick, Wilde Instruction in clinical and laboratory procedures related to complete prosthodontics. Course will include in-service hospital treatment at V/A.

175A-B-C. Partial Dentures. (3-3-4) W. Sp. Lecture 1 hour, Lab and Clinic 6 hours F. W. Sp. W. Sp. Regli, M. L. Parker and Staff

176A-B-C. Special Study for Postdoctoral Students. (1-5) F. W. Sp. Regli, M. L. Parker Original investigation in the field of removable prosthodontics.

177. Prosthodontics Seminar. (4) F. W. Sp. Prerequisite: Students in removable prosthodontics certificate program must enroll in this course each quarter and summer session for entire program. Seminar 4 hours. Regli, M. L. Parker and Staff Review of the literature related to prosthodontics.
A elective course offering instruction in procedures and materials other than those normally used in the clinic.

181. Fixed and Removable Methods. (1) F, W. Prerequisite: Fourth year standing. Lecture 1 hour.
Augsburger
Concepts of vertical and cross-arch stabilization relating to partial prosthodontics are reviewed. Preservation of a few remaining teeth and the edentulous ridges through biologic engineering principles is emphasized. Patient psychology, periodontics, endodontics and dental implants are related to removable prosthodontics.

185. Multidisciplinary Approach to Maxillofacial Prosthetics. (1) F, W. Prerequisite: Consent of instructor. Lecture 1 hour. (2) T. Curtis
A course is designed to acquaint postdoctoral and senior dental students with multidisciplinary aspects of maxillofacial prosthetics. Lectures will be given on maxillofacial prosthetic techniques, oncology, head and neck surgery, plastic surgery, oral surgery, therapeutic radiology, psychology and related oral biology.

Continuation of clinical experience at the level of Removable Prosthodontics 109.

189.02 Complete Prosthodontics. (0-7-5) SS. Prerequisite: Fourth year standing. Lab and Clinical Variable. (2) Regli
Work is done in a clinic location on an Indian reservation near Albuquerque, New Mexico. Each student will treat five patients. For clinical work completed, credit will be given to satisfy part of the Removable Prosthodontics 109 requirement.

190.04 Clinical Maxillofacial Prosthetics. (0-6) F, W, Sp. Prerequisite: Consent of instructor and Clinical Review Committee. Lab Variable. (2) T. Curtis
Senior dental students will observe and perform maxillofacial prosthetic services for patients in the Maxillofacial Prosthodontic Clinic. Case history will be required each quarter. Attendance at related tumor board conferences and field trips to other therapy centers.

199. Laboratory Project in Removable Prosthodontics. (1-5) F, W, Sp. (2) Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

Course is designed to acquaint students with multidisciplinary aspects of maxillofacial prosthetics. Lectures will be given on maxillofacial prosthetic techniques, oncology, head and neck surgery, plastic surgery, oral surgery, therapeutic radiology, psychology and related oral biology.

489.01 Clinical Maxillofacial Prosthetics. (1-6) F, W, Sp. Lab Variable. (2) T. Curtis
Residents and advanced prosthodontic literature will observe and perform maxillofacial prosthetic services for patients in the Maxillofacial Clinic. A detailed case history will be required each quarter. Attendance at related tumor board conferences and field trips to other therapy centers.

Restorative Dentistry

171A-B-C. Advanced Restorative Dentistry. (3-3-3) Yr. Lecture 1 hour. Clinic 6 hours. (2) Schuchard, Stark
Seminar and literature review correlating basic and preclinical science with the practice of restorative dentistry. Selected cases requiring medical and dental diagnostic procedures and treatment planning will be presented.

173. Postdoctoral Clinical Practice. (2) SS. Prerequisite: Restorative Dentistry 171A-B-C. Clinic 60 hours. (2) Schuchard, Stark
cClinical practice applying advanced restorative procedures.

174A-B-C. Advanced Restorative Dentistry. (3-3-3) F, W, Sp. Prerequisite: Restorative Dentistry 171A-B-C. Lecture 1 hour, Clinic 6 hours. (2) Schuchard, Stark
Advanced restorative dentistry. Seminars will be directed toward the psychology of patient management in relation to treatment planning. The clinical phrase will provide experience in contact instruction.

175. Postdoctoral Clinical Practice. (2) SS. Prerequisite: Restorative Dentistry 174A-B-C. Clinic 60 hours. (2) Schuchard, Stark
Clinical practice applying advanced restorative procedures. Continuation of Restorative Dentistry 173 at advanced level.

176B-C. Clinical Research. (1-5, 1-5) W, Sp. Prerequisite: Restorative Dentistry 171A-B-C. 173, and 174A-B-C. Research 3-15 hours. (2) Schuchard, Stark
A research project in the field of restorative dentistry. Findings must be prepared for publication.

177A-B-C. Seminar. (2-2-2) F, W, Sp. Seminar 2 hours. (2) Schuchard, Stark
Study and interpretation of current literature contributing to the advance of dental science. Discussion is directed toward defining areas of further study and considerations of modifying scope of dental education include advances. Research protocols are developed and implemented.

177.02. Seminar. (2) SS. Prerequisite: Restorative Dentistry 177A.OA-B-C. Seminar 2 hours. (2) Schuchard, Stark
Continuation of Restorative Dentistry 177A.OA-B-C.

177A.OA-B-C. Seminar. (2-2-2) F, W, Sp. Prerequisite: Restorative Dentistry 177.02. Seminar 2 hours. (2) Schuchard, Stark
Continuation of Restorative Dentistry 177.02.

177.04. Seminar. (2) SS. Prerequisite: Restorative Dentistry 177A.OA-B-C. Seminar 2 hours. (2) Schuchard, Stark
Continuation of Restorative Dentistry 177A.OA-B-C.

Sociology

112. American Society and Its Problems. (3) Sp. (2) Staples
Presentation of prominent sociocultural features of dominant systems in American society. Integration and dissonance between and among these systems with emphasis on major social problems which result, such as racism, inequality, youth, disjunction between technology and humanistic values.

122. Health and Illness in American Society. (3) F. (2) Estes
Broad survey of features of American society that produce either health or morbidity or both. A variety of significant factors are explored in conjunction with ideological implications for the quality and quantity of health care services.

123. Social Systems Theory and Application to Nursing Practice. (2) W. Prerequisite: Fifth quarter standing or consent of instructor. Lecture 2 hours.

Schatzman
Course presents a theoretical framework from which patient care and health delivery systems can be analyzed, approached, and influenced by the professional nurse.

124. Marriage and the Family. (3) F. (2) Staples
Explore family life styles in the United States and other societies. Changing forms of dating and marital practice are explored and the viability of the monogamous nuclear family is examined. An area of interest is Black family patterns.

126. Families of the Third World. (3) W. Lecture 2 hours, Lab 3 hours. (2) Staples
Examination of family structures and dynamics among Third World peoples. Families to be discussed include African and Afro-American, Asians, Native Americans and Latinos. Emphasis on continuities in the family life of these groups in their native land and the United States.

127. Race and Racism in the Modern World. (3) F. Lecture 2 hours, Lab 3 hours. (2) Staples
An exploration of factors that create and maintain superordinate-subordinate relations ordered along racial lines. A cross-cultural analysis with special emphasis on race relations in the United States.

132. Individual and Change. (3) F. Prerequisite: Consent of instructor. (2) Olesen
The relationship of social structures to individuals and their behavior. Emphasis will be on individuals as members of society rather than on individuals or society as such.

134. Perspectives on Women's Roles in Health Care and Healing Systems. (3) F, W or Sp. Lecture 3 hours. (2) Olesen
Analysis of sex roles in general and women's roles in particular in health care receipt and delivery, with particular emphasis on recruitment problems to health professions, images of women in therapeutic situations, and gender and cross-cultural features of health care delivery.

136. Palm: Social, Organizational and Interactional Aspects. (3) Sp. Lecture 2 hours. Lab 3 hours. (2) A. Straus
Pain as experienced, expressed, and managed in a variety of settings by patients, staff, and family. Sociological and organizational perspectives on assessing, legitimizing, and controlling pain.

137. Sociology of Sexual Behavior. (3) F. Lecture 2 hours, Lab 3 hours. (2) Staples
A sociological perspective of human sexuality as expressed in various forms, varied among different segments of the population and influenced by diverse social forces, with emphasis on sexual relations as an element of social relations.

138. Sociology of Change in Health Care Systems. (3) W, Sp. Prerequisite: Open to upper division and graduate students. (2) Staff
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, and the occupations, types, future care. Debate on an examination of key issues.

167. Social Organization of Health Care With Primary Emphasis on Hospitals. (2) F. Prerequisite: Consent of instructor. (2) Staff
An inquiry into the nature of the organizational forms by which health care is distributed, with particular emphasis on hospital organization and the interaction among health care personnel.
212A-B. Sociological Theory. (2-2) F. W. Prerequisite: Sociology 212A is prerequisite to 212B. Required for graduate students in sociology.

213. Studies in Participant Observation. (3) W. Prerequisite: Consent of instructor. Schatzman. A basic course in the logic and operations of social research in the field. Lectures, readings and discussion on research strategies: entree, listening, data recording, and analyzing.

214A. Discovery of Social Reality. (3) F. Prerequisite: Required for graduate students in sociology. Lecture 1 hour. Lab 3 hours. Schatzman, Olesen. Practicum in sociological field observation; course is designed to sensitize students to the social and behavioral components of social life in public places. Observation of human aggregates in varied neighborhoods of a metropolis. Instruction in observation techniques and data organization.

214B. Discovery of Social Reality. (3) W. Lecture 2 hours. Lab 3 hours. A Strauss. Sociological field observation. Instruction in observation techniques, interviewing, the organization of data, descriptive analysis, and research writing. Continuation of Sociology 214A.

314C. Qualitative Analysis. (3) F, Sp. Prerequisite: Sociology 214A and 214B. Lecture 2 hours. Lab 3 hours. A Strauss. Examination of modes of analysis applicable to qualitative data; emphasis on dimensions and properties exhibited in student presented data.

215. Problems in Microsociology: Urban Life. (2-4) F. Prerequisite: Consent of instructor. Sociology 207 recommended. A Strauss. 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 of research and concepts in this area.

216. Comparative Organizations. (3) W. Prerequisite: Consent of instructor. Olesen. 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) Sp. Lecture 2 hours. Lab 3 hours. A Strauss. Examination of changes in dating, sexual, sex role, marital and familial patterns in the United States. Discussion of futuristic models of family life as affected by socio-cultural forces. Special emphasis given to changes in sex role behavior as affecting male-female relationships.

219. Political Sociology of Aging. (3) F, W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. A Strauss. Major paradigms in the study of community and national power structures examined in terms of theoretical, methodological, empirical, ideological content. Issues of actual and potential power of the aging considered in light of available data and the major paradigms discussed.

220. Seminar in Sociology. (3) F, W. Prerequisite: Consent of instructor. A Strauss. Doctoral student seminar to discuss methods and problems in current research. Course may be repeated for credit.

222. Politics of Planning in the Human Services. (3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 1 hour. A Strauss. Examination of trends in planning for the human services, including the role of government organizations, professionals and consumers in generating and benefiting from planning processes. Planning in the fields of health and aging is emphasized.

230. Analysis of Symbolic Systems. (2-4) Sp. Prerequisite: Consent of instructor. Olesen. Critical analysis and inspection of American symbols and institutions and mass media of communication with respect to the diffusion and alteration of values in significant sections of the societ, such as health professions.
psychophysical, and behavioral aspects of the speech and hearing sciences.

Surgery

110. Required Core Clinical Clerkship in General Surgery, (1.5% per week) Su., F., W., Sp. Prerequisite: Core curriculum in basic sciences.

Ebert, Blaisdell, L. Way

Core general clerkship in surgery. Students assigned to wards and clinics at UC, SFGH, V.A. and C. The application of basic sciences to surgery is emphasized in ward rounds and seminars.

111. Required Core Clinical Clerkship in Advanced General Surgery, (1.5% per week) Su., F., W., Sp. Prerequisite: Medicine 110 and Surgery 110 and 111.

T. Hunt, Blaisdell, L. Way

Students serve as senior clerks on the wards and in the operating rooms at UC, SFGH, and V.A. Rounds and seminars focus on the physiological approach to surgery.

140.01. Advanced General Surgery Clerkship, (1.5% per week) Su., F., W., Sp. Prerequisite: Surgery 110 and 111.

T. Hunt

Senior clinical clerks participate in clinic, ward, and operating room with direct involvement in post-operative care at UC. SFGH, V.A. and RDMC.

140.02. Clinical Clerkship, (1.5% per week) Su., F., W., Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111.

Ebert

Clinical clerkship in approved hospitals in other universities by special arrangement and approval of the chairman of the department and the Dean.

140.03. Tissue Transplantation, (1.5% per week) Su., F., W., Sp. Prerequisite: Medicine 131 A-B C and consent of instructor.

Salvaterra

Participation in renal homotransplantation operations, ward rounds, transplantation and research conferences spent in the Surgical Research Laboratories, participating in experimental organ transplantation studies.

140.04. Vascular Surgery Clerkship, (1.5% per week) Su., F., W., Sp. Prerequisite: Medicine 110, Surgery 110 and 111.

Goldstone

Students serve as interns in the vascular surgery team, participating in preoperative, intraoperative, and post-operative management of patients, as well as in clinics, rounds, and conferences.

140.05. Operable Heart Disease, (1.5% per week) Su., F., W., Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111.

UC B. Roe, PMC Gerbode, V.A. Ulybey

Ward rounds and conferences on patients with operable, congenital or acquired heart disease. Details of selection, differential diagnosis, and results of surgery are discussed.

140.06. SFGH Emergency Clerkship, (1.5% per week) Su., F., W., Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111.

R. Lim and Teitel

Four weeks participation on the Emergency Ward at SFGH. Students will work up selected cases, perform minor procedures under supervision, and follow all surgical emergencies as time permits.

140.07. Shock and Trauma Research, (1.5% per week) Su., F., W., Sp. Prerequisite: Core curriculum in basic sciences and medicine 110 or Surgery 110 and 111.

Sheldon

Course involves clinical and laboratory investigation and a detailed study of specific patients with trauma and shock.

140.08. General Surgery Clinical Clerkship at C, (1.5% per week) Su., F., W., Sp. Prerequisite: Second and third year clinical clerkship in Surgery. V. Richards

Students work as interns on Surgical Service; they evaluate general surgical patients pre-operatively; work with patients in operating room and as consultant, assuming 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, (1.5% 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 an intern clerk level as an integral part of the service.

140.10. Clinical Experience in Cardiothoracic Surgery, (1.5% per week) Su., F., W., Sp. Prerequisite: Medicine 110 or Surgery 110 or 111.

Ulybey

As an integral member of the cardiothoracic team, the student directly and actively shares in pre-operative, intra-operative, and post-operative care. Cardiac and thoracic conferences and daily ward rounds provide the didactic teaching.

140.11. Burn Care Elective, (1.5% per week) Su., F., W., Sp. Prerequisite: Surgery 110.

Trunkley

Clinical rotation on a large Burn Center Service. Pathophysiology of thermal pulmonary aspects will be stressed. Students act as integral members of the team and participate directly in patient care.

140.12. Plastic/Reconstructive Surgery Clerkship, (1.5% per week) Su., F., W., Sp. Prerequisite: Medicine 110 and Surgery 110 and 111.

Goldman

Instruction in techniques of wound repair and healing, management of maxillofacial trauma, and planning and indications for various types of wound closure, flaps, and skin grafting. Emphasis given to complications and sequelae of burns, head and neck surgery, and the extremities.

160.03. Cardiopulmonary Surgery, (2 Sp. Prerequisite: Third or fourth year standing. Lecture 2 hours.

Ebert, B. Roe, Hutchinson, N. Fishman

Seminars are conducted on a series of subjects relating to cardiopulmonary surgery, which may be attended separately or in conjunction with weekly rounds on cardiopulmonary patients.

160.05. Advanced Surgery Reading Course, (2 Sp. Prerequisite: Trunkley

A weekly seminar where previously assigned papers are discussed and critiqued. Papers representing the classical and current concepts in general surgery are covered.

160.06. Total Parenteral Nutrition Clerkship, (5 Sp. Su., F., W., Sp. Prerequisite: Preceptorship, Lecture 3 hours. Lab. 6 hours.

Sheldon

Course emphasizes nutritional and metabolic requirements of injured, ill, and malnourished patients. Clinical rotation involves methods of preparation, administration, and assessment of patients receiving caloric protein or amino acid support as part of specific therapy.

170.01. Basic Surgical Techniques, (1 F. W. Prerequisite: Anatomy 100. Early registration to course with instructor recommended. Enrollment limited. Lab. 4 hours.

Feduska

Course emphasizes the basic principles of operative surgery including aseptic and operative techniques. Student follows a surgical team and has contact with each anesthesiologist in the performance of specific operations on anesthetized dogs. Postoperative evaluation, management, and care of the cardiopulmonary resuscitation is also 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 interpreting and reporting a cardiac, psychiatric emergency, and civil disaster. Format includes lectures, discussions, films, practice, and tour of Mission Emergency. Course is offered primarily for first and second year medical students.

Surgery / 193
development of technical and laboratory methods to be applied in surgery.

UC Blasdell

Interns rotate through the general surgical service, including the intensive care unit. Under the direction of the attending staff, experience is provided in vascular, chest, hand and plastic surgery, and surgery of maxillofacial injuries.

UC Esbree

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


Course provides resource information in the form of a systematic overview of educational technology. This information is introduced in conjunction with the development by the individual student of an actual microcourse, teaching a single skill.


Practice teaching experience in selected courses under the supervision of members of the staff.

180.02A-B-C. Teaching Methods. (0.3, 0.3, 0.3) F, W, Sp. Prerequisite: Fourth year standing or consent of instructor. Lecture 1 hour

R. J. Miller

Predominantly group discussion based on selected readings in educational methodology. Specialists in education are invited to participate. Practical experience in teaching is included in Teaching Methodology 180.01A-B-C. Students teach in selected courses under supervision.

180.01A-B-C. 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.

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. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

Tanagho

Students work as interns on the Urology Service at UC. They also attend rounds and scheduled seminars with residents and visiting staff.

140.02. Urology Clinical Clerkship. (1 1/2 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. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

Meares

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. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Surgery 110.

F. Hinman

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: Consent of instructor. Tanagho and Staff

Seminar and library research.


Tanagho and Staff

Library research and directed reading under supervision.

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.


D. R. Smith

Seminar includes study of the basic sciences and urologic roentgenology with members of the attending staff.


Tanagho

Course includes experimental investigation in urologic problems.


D. R. Smith

Seminar includes discussion of diagnosis and treatment of patients in the urology wards with the attending staff.

403. General Urologic Staff Conference. (1 1/2) Su, F, W, Sp.

D. R. Smith

Conference includes presentation and discussion of urologic problems by the house staff and faculty.