COURSES OF INSTRUCTION

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 paragraphs include: (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 paragraphs describe the course content.

Abbreviations — These abbreviations are used where applicable: Su = summer quarter; SS = summer session, F = fall quarter, W = winter quarter, Sp = spring quarter, Yr = three consecutive quarters, A = course taught in the fall quarter, B = course taught in the winter quarter, and C = course taught in the spring quarter. For courses noted within the 100 series, when the units are followed by a parenthesis, the courses so designated are open to graduate academic students. The hospitals are designated by the following initials:

A, Alta Bates Hospital, Berkeley
G, Children's Hospital and Adult Medical Center, San Francisco
CC, Crippled Children's Hospital, Phoenix
CCP, Center for Training in Community Psychiatry, Berkeley
CMHC, Children's Hospital Medical Center of Northern California, Oakland
CHS, Community Hospital of Sonoma County, Santa Rosa
CM, Cowell Memorial Hospital, Berkeley
F, Franklin Hospital and Medical Center, San Francisco
FR, French Hospital, San Francisco
H, Highland General Hospital, Oakland
HCH, Harkness Community Hospital and Medical Center, San Francisco
K, Kaiser Foundation Hospital, San Francisco
KP, Kaiser Permanente Medical Center, Oakland
KSF, Kaiser Foundation Hospital, South San Francisco
L, Letterman General Hospital, San Francisco
LPNT, Langley Porter Neuropsychiatric Institute, San Francisco
MC, Maricopa County Hospital, Phoenix
MG, Marin General Hospital, Ross
MZ, Mt. Zion Hospital and Medical Center, San Francisco
OC, O'Connor Hospital, San Jose
PH, Peninsular Hospital, Burlingame
PHS, United States Public Health Service Hospital, San Francisco
PMC, Pacific Medical Center, San Francisco
Q, The Queen's Hospital, Honolulu, Hawaii
RLA, Rancho Los Amigos Hospital, Downey
SCC, Santa Clara Valley Medical Center, San Jose
SF, San Francisco General Hospital, San Francisco
SJ, San Joaquin General Hospital, Stockton
SH, Shriners Hospital for Crippled Children, Honolulu, Hawaii
SM, Samuel Merritt Hospital, Oakland
SSF, Shriners Hospital for Crippled Children, San Francisco
STJ, St. Joseph's Hospital, San Francisco
STM, St. Luke's Hospital, San Francisco
T, Tripler Army Medical Center, Honolulu, Hawaii
UC, University of California Hospitals and Clinics, San Francisco
VAF, Veterans Administration Hospital, San Francisco
VAMC, Veterans Administration Hospital, Fresno
VAP, Veterans Administration Hospital, Phoenix
VAMC, Valley Medical Center, Fresno

Course Numbers — All courses are numbered according to the following system: 100 series = lower division professional course, 200 and 300 series = graduate academic course, and 400 series = postdoctoral professional course. The meanings of the second (tens) and first (units) digits vary among the schools. A detailed explanation of course numbering is available from the Office of the Dean of each School.

AMBULATORY AND COMMUNITY MEDICINE

101. Fundamentals of Epidemiology. (3) W. Prerequisite: Biochemistry 102, Microbiology 100, or their equivalent. Lectures and seminars dealing with distribution and determinants of disease 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 and Staff

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

130. Introduction to Patient Care. (2) W, Sp. Prerequisite: Consent of the instructor.

An interdepartmental course including the sequence of medical events in patient care, the nature of the physician-patient interaction, the basic methods of identifying and solving problems in patient care. Lectures, small group discussion, and clinical section work.

140.01 Clinical Community Health Program. (1 ½ per week) Su, W, F, Sp. Prerequisite: Determined by students’ clinical experiences and elective for which they are applying.

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

140.06 Community Rehabilitation Medicine. (1 ½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Specht, Crede
Students will be assigned to a variety of community medicine and other rehabilitation facilities for two to four weeks. Emphasis will be on the selection of patients suitable for rehabilitation and the interprofessional approach to rehabilitation.

150.01 Community Health Field Work. (1 ½ per week) W, F, W, Sp. Prerequisite: Consent of the instructor. Crede, Howard
Field work to explore one area or more in social medicine or community health. Faculty from School of Medicine, Public Health, Nursing, Dentistry, and Social Welfare may participate where needed.

160.01 Clinical Aspects of Community Medicine. (1 ½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Barbaccia, Howard
Students are assigned to community health agencies where they will have contact with patients. Seminars may be used to clarify issues in community health. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare may participate where needed.

160.02 Clinical Occupational Medicine. (1 ½ per week) W, F, Sp. Prerequisite: Consent of the instructor. Hine
Clinical demonstrations and case presentations representative of occupational and environmental disease.

160.03 Pregnancy Counselling. (1) F, W, Vandersvoor
Students complete a course in instruction in pregnancy counselling at San Francisco Planned Parenthood and participate as pregnancy counselors at Planned Parenthood or satellite under supervision of University faculty and Planned Parenthood staff and attend periodic lecture-demonstrations.

160.05 Rehabilitation Medicine. (1 ½ per week) F, W, Sp, Su. Prerequisite: Consent of the instructor.

Sanchez, Pascoe
Students participate in a series of clinics and seminars in the needs of the Latino population at all age levels, from prekindergarten to elderly. Health care, free breakfast, and lunch programs conducted at the Centro Latino, 1292 Potrero.

160.06 Latino School Elective. (5) F, W, Sp, Su. Prerequisite: Consent of the instructor.

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

Students meet weekly for two consecutive quarters in small group seminar led primarily by family physicians. Through seminars, reading, and continuing contact with families undergoing medical care, students will learn basic medical and behavioral approaches to family medicine and care.

160.08 Introduction to Family Therapy. (1 ½ per week) W, Sp. Prerequisite: Consent of the instructor. Crede, Howard
This course provides an introduction for students expecting to take more advanced training in family therapy. Students will not see families themselves, but will participate in the supervision hours of family therapy trainers as well as observe family therapy sessions.

160.01 Aspects of Social Medicine in Community Health Agencies. (1 ½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Crede, Howard
Seminars may explore one area or more in social medicine or community health. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare may participate where needed.

160.02 Economics and the Organization of Health and Welfare Programs. (2) W, Sp. Prerequisite: Consent of the instructor. Crede, Howard
Seminars in the planning, organization, and operation of health and welfare programs through discussion and seminar participation in the supervision hours of family therapy.

183. Asian Health Elective. (1 ½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Barbaccia
A lecture series with guest speakers. The purpose of the course is to develop awareness of West Coast Asian community health problems and to assist in the development of viable alternatives to these existing problems.

183.01 Health Care For Blacks: A Candid Look at Patients and Practitioners. (2) W. Howard, Cobbs
Considers etiology and management of diseases having greater prevalence and morbidty among blacks, e.g., hypertension, strokes, sickle-cell anemia, and cervical cancer. Stresses problems of patients in gaining access to appropriate treatment, discusses the situation of black health professionals.

183.02 Introduction to the Economics of Human Services. Seminar. (1) Sp. F, Pre­erequisite: Concurrent registration in Ambulatory and Community Medicine 183.91 or consent of the instructor. Seminar: 1 hour.

Ingar
Seminar discussion of factors affecting supply of resources and demand for services. Analyzes organizational, administrative, financial, and payment differences among programs. Evaluates systems using such economic concepts as cost, price, utility, productivity, economy, efficiency, and effectiveness in meeting patient needs.

183.03, Economics and the Organization and Administration of Health and Welfare Programs. (2) F, W. Prerequisite: Ambulatory and Community Medicine 183.01 or consent of the instructor. Seminar: 1 hour.

Ingar
Discussion of case materials concerning programs which provide care, purchase services, and plan delivery systems. Emphasizes development and application of cost-benefit, cost effectiveness, and other economic concepts for improving managerial performance and analyzing governmental policies which affect health status of population.

182. Public Health Programs. (2) F, W. Prerequisite: Third- or fourth-year standing for Pharmacy students (required course); consent of the instructor for other students. Barbaccia
Survey of major health problems throughout the world, and programs and agencies concerned with their control. Relationships of pharmacy to emergency medical services, communicable diseases, nutrition, sanitation, occupational health, maternal and child hygiene, mental health, public health administration, etc.

182.01 Introduction to the Economics of Human Services. (1) Sp. F. Ingar
Description of factors affecting supply of resources and demand for services. Analysis of organizational, administrative, and financial differences among programs. Evaluation of systems using such economic concepts as cost, price, utility, productivity, economy, efficiency, and effectiveness in meeting patient needs.
184. Contemporary Spanish-Speaking Cultures. (3) F, W. Prerequisite: Consent of the instructor.

Sanchez, J. Examination of selected theories of migration, urbanization, assimilation, and conflict with emphasis on diverse Spanish-speaking populations in urban areas; relationships between this grouping and formal institutions, i.e., medical services.

185. Health Care Systems. (3) Sp. Barberia, Admonon Lec tures and discussion seminars will provide an ecological framework of political, social, and economic influence in the medical care system. Topics will include manpower, hospitals, ambulatory care, information and communication, regulation and controls, costs, government programs, and health services research.

185.01 Medical Care Evaluation. (2) W. Prerequisite: Consent of the instructor. Lecture: 2 hours. Barberia, Admonon Offers instruction in methods of appraising quality and efficiency of medical care using medical audit and utilization review. Initial emphasis will be on a learning problem-oriented medical recording to facilitate patient management and implementation of these review techniques.

186. Politics of Health. (1-1½) F. P. Lee Lecture series presents an overview of the health care industry, its economic, political, and sociological aspects relating to development and implementation of health policies at the federal, state, and local levels, particularly concerning major issues of national health insurance.

187. Politics of Health. (1-1½) W. P. Lee Lecture series presents an analysis of the impact of national health insurance policy alternatives on various sectors of society: health professions, consumers, medical schools, health care facilities, pharmaceutical manufacturers, and governmental entities at the federal, state, and local levels.

188. Politics of Health. (1-1½) Sp. P. Lee This lecture series focuses on institutional and personal values influencing formation of specific aspects of health policy. Topics include physician specialization, research and technology, genetic screening, traditional medicine, bioethics, experimentation, mental health, and care of the aging.

189. Social and Research Problems in Sexual Identity. (2) Sp. Seminar: 2 hours. Prerequisite: Consent of the instructor. Lecture: 2 hours. Hoffman. An examination of the research literature in the area of sexual identity. Basic sexual concepts, gender identity and role, clinical problems (including transvestism and transsexualism), sexual object-choice, homosexuality (biological, social, and psychiatric), issues of etiology, treatment, societal response.

190. Family Counseling and Psychotherapy. (1) W. F. W. Sp. Prerequisite: Consent of the instructor. Seminar: 3 hours. Students will observe family therapy sessions, both live and on videotape. They will also meet with families, under the supervision of Dr. Ransom and other faculty. Appropriate readings will be assigned and discussed in seminar.

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

400. Family Practice: Seminars in Medical Literature. (1½) F, W, Sp. Menachof Monthly seminars are held on recent literature in the major clinical disciplines and subspecialties as pertaining to the training and practice of family physicians.

401. Family Practice: Seminar in Diagnostic Radiology. (1) F, W, Sp, Su. Butler Radiologists on attending staff present systematic review of techniques of interpretation of X rays as needed by the family physician, covering roentgen findings in selected medical, surgical, pediatric, gynecologic, obstetric, and orthopedic problems. Normal findings and their variants are stressed.

402. Family Practice: Clinicopathological Conference. (1-1½ per week) Su, F, W, Sp. Residents present clinical data for selected patients in clinicopathological conferences as part of regular program monthly hospital staff meetings. Staff pathologists provide correlation of clinical manifestations of disease with clinical laboratory, histologic, and autopsy findings.

403. Family Practice: Staff Conferences. (3) F, W, Sp. Su. Residents develop interviewing and management techniques for patients with a variety of common emotional disorders. Psychiatric supervision is facilitated by a one-way mirror, and a conference between resident and psychiatrist follows each session.

100. Systemic and Regional Anatomy. (6) W. Prerequisite: Systemic and Regional Anatomy. Atting, Evans, and Monie The gross structure of the human body is studied by means of dissection, demonstration, X-ray, surface, and cross-sectional anatomy with special reference to the functional aspects of the structures examined.

101. Human Development and Genetics. (4½) F. Prerequisite: School of Medicine entrance requirements and consent of the instructor. Monie, C. Epstein and Staff Aspects of normal and abnormal physical and mental development are considered and their clinical relevance discussed. Factors involved in genetic counseling and in prenatal diagnosis of congenital defects are also presented.

102. Histology. (4) W. Prerequisite: Biochemistry. Vinson and Staff Course deals with microscopic structure of tissues and organs. Structure is correlated with function. Neural, endocrine and reproductive systems are not covered.

103. Nervous System: Form and Function. (5) W. Prerequisite: Anatomy 100 and 101 or consent of the instructor.

The structure and function of the nervous system studied in lectures, conferences, demonstrations, and laboratory exercises.

115. Histology. (3) Sp. Lecture: 2 hours. Laboratory: 3 hours. Armstrong and Staff A study of the microscopic structures of the tissues and organs of the human body by means of lectures, demonstrations, and microscope slides. Functional aspects of the structures are stressed.

116. Gross Anatomy. (5) W. Lecture: 2 hours. Laboratory: 3 hours. Evans and Staff A study of the macroscopic structure of the human body by means of the live body and sections. Functional aspects of the structures are stressed.

117A-B. Gross Anatomy. (4-6) W. F. Lee. Lecture: 2 hours. Laboratory: 6 hours. Lecture: 3 hours. Laboratory: 9 hours. W. Bowman and Staff Gross anatomy of the trunk, upper extremity, and head and neck are studied by laboratory dissection and demonstration. The course includes an introduction to neuroanatomy. Emphasis is placed on the functions of the structures and systems examined.

118. General Histology. (3) F. Lecture: 2 hours. Laboratory: 3 hours. McDowell The microscopic structure of tissues and organs of the body are studied with their histophysiologic considerations.

119. Neuroanatomy. (3) Sp. Lecture: 2 hours. Laboratory: 3 hours. Lawry and Staff The structure and function of the nervous system studied in lectures and laboratory.

156. Survey of General and Head and Neck Anatomy. (6) F. Lecture: 3 hours. Laboratory: 9 hours. Lawry and Staff 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. Laboratory: 0-12 hours.

This course is designed for postprofessional certificate students enrolled in the clinical specialty training programs in the School of Dentistry. Seminar type of presentation and demonstrations of head and neck anatomy and correlation with their clinical applications to dental practice.

170.01. Problem Areas in Clinical Anatomy. (1) F, W, Sp. Prerequisite: Prior or current enrollment in Anatomy 100. Lindner

Discussions of important areas in clinical anatomy, hernia, thyroid, perineum, peritoneal cavity, etc. Correlated with Anatomy 100.

170.02. Survey of Congenital Defects. (2) W. Prerequisite: Gross anatomy course and consent of the instructor. Monie

This elective course is designed to provide clinical physicians with information on the more common human congenital defects. Environmental and genetic factors that produce malformations are considered and possible mechanisms discussed.


Lectures and demonstrations on applied anatomy and embryology.

170.05. Congenital Abnormalities. (1-5) W. Prerequisite: Anatomy 101 or equivalent and consent of the instructor. Monie

Individual or group projects involving library and laboratory research on the genetics and embryology of congenital abnormalities in man and other mammals. Weekly seminar. Enrollment limited.

170.06. Experimental Endocrinology. (2) Sp. To be given in alternate years. Loutit, Papkoff

Basic study of animal hormones, their structures, functions, and interrelationships. Concepts regarding hormonal actions are derived from chemical (structure-function) and biological (in vivo, in vitro) studies. Mechanisms are discussed whenever possible.

170.08. Regional and Topographical Anatomy. (1) Su, F, W, Sp. 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. Review of Human Embryology. (1) SS1

Armstrong, Monie

An elective course of about fifteen one-hour lecture-demonstrations for those wishing to review or augment their knowledge of human embryology. It cannot be substituted for Anatomy 101, Human Development and Genetics. Enrollment limited.

170.10. Neuroanatomy Clinical Correlation. (2½) W. Garoutte

Individual patients will be presented and the neuroanatomical significance of their clinical findings discussed.


This course offers training in electron microscopic technique applicable to basic research and clinical problems.


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

170.18. Supervised Study in Anatomy. (1-5) F, W, Sp. Prerequisite: Consent of the instructor. Ralston and Staff

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

190. Laboratory Project in Anatomy. (1-5) F, W, Sp. Ralston and Staff

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

200. Topics in Reproductive Biology. (2) Sp. Lecture: 2 hours. Prerequisite: Consent of the instructor. Long

A series of lectures and discussions on recent advances in the biology of reproduction. To be offered in alternate years.

201. Radiation Effects on Genes and Chromosomes. (2) W. Prerequisite: Consent of the instructor. Wold

Concepts and mathematics of target theory relating to damage of genetic apparatus. Biophysical and biochemical studies on induction of intragenic and intergenic mutations that give insight into the structure of chromosomes and the interaction of radiation with biological material.

211. Biological Aspects of Human Development. (2) F. Prerequisite: Consent of the instructor. Enrollment limited. Lecture: 4 hours. Monie and Staff

Aspects of normal-abnormal human physical and mental development are considered and their clinical significance indicated. Relevant features of experimental mammalian teratogenesis are also discussed.


Long and Staff

Staff members will demonstrate the application of advanced laboratory methods to the analysis of research projects.

215. Cell Structure and Function. (2 or 4) Sp. Prerequisite: An elementary knowledge of cell ultrastructure and biochemistry and permission of the instructor to enroll for 4 units.

Long and Staff

An advanced presentation of the relationship between structural organization and the physiological activities of cells.

216. Developmental Biology. (1-4) F, W, Sp. Prerequisite: Consent of the instructor. Glass

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

217. Anatomy of the Head and Neck for Advanced Students. (2-6) Sp. Prerequisite: Anatomy 117.11 or its equivalent and consent of the instructor. Lecture: 2 hours. Laboratory: 6-12 hours. Coleman

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

220. Seminar. (3) F, W, Sp. Staff

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

230. Comparative Placentology and Foetal Endocrinology. (2) W. Prerequisite: Consent of the instructor. Long and Coleman

A series of discussions covering the comparative anatomical and physiological aspect of placentation and its relation to the development and the physiology of the foetal endocrine glands.

231. Molecular and Cellular Analysis of Developmentally Significant RNA. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Laboratory: 0. Caldarro

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.


Staff

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

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

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

Training in teaching in a course offered by the Department of Anatomy under the supervision of instructor in charge. Includes laboratory teaching, presentation of lecture material, experience in setting up and correcting examinations and participation in course critiques.

ANESTHESIA

110. Clinical Clerkship in Anesthesia. (½ per week) Su, F, W. Prerequisite: Medicine 130, Psychiatry 130, Ambulatory and Community Medicine 130, Medicine 131-A-B, Physiology 100, and Pharmacology 100-A-B.

Hamilton

Introduction and experience in operating room anesthesia including preoperative and postoperative evaluation and care. Cardiopulmonary resuscitation, care of the unconscious patient, and treatment of pain problems. Will be conducted at UC, SF, and UCSD.


Hamilton and Staff

Course consists of instruction and experience in cardiopulmonary resuscitation, care of the unconscious patient, and treatment of pain problems. Rotates between UC, SF, and UCSD and attendance at the teaching conferences of the department.

140.02. Clinical Clerkship. (½ per week) Su, F, W, Sp. Prerequisite: Medicine 131-A-B, Pharmacology 100, Physiology 100, and consent of the instructor. Hamilton

Clinical clerkship in approved hospital settings by special arrangement and approval of the chairman of the department.

140.03. Intensive Care Clerkship. (½ per week) Su, F, W, Sp. Prerequisite: Limited to fourth-year students with consent of the instructor.

Familiarizes students with techniques of intensive care, emphasizing clinical respiratory and circulatory physiology. Provides experience in support patients with cardiopulmonary insufficiency, Seminar and discussion groups, active participation in techniques unique to diagnosis, care and management of the critically ill.
178. Anesthesiology. (6) Sp. Prerequisite: Interns and residents. Clinic. Hamilton and Staff
The systemic effects of the various muscle relaxants, sedatives, and stimulants and the administration of general anesthetic agents.

400. Anesthesia Staff Conferences. (2-2-2) F, W, Sp. Stevens, Miller
Course includes didactic lectures in sciences basic to the specialty of anesthesia, as well as case reviews, clinical discussions, and seminars on current medical literature in anesthesia.

450. Anesthesia Clinical Work. (1½ per week) Su, F, W, Sp. First-year residents, also during either second or third year. UC Hamilton
Residents are responsible for anesthetic care and management of patients in the operating rooms and outpatient departments, under immediate supervision of the staff. Preoperative and postoperative evaluation of patients, oxygen therapy, and resuscitation are covered.

460. Anesthesia Special Assignment. (1½ per week) Su, F, W, Sp. Residents during either second or third year. UC Egger
Assignments include instruction in anesthesia for children, problems related to open heart surgery, cardiology, and opportunity for research in related fields.

ANIMAL SCIENCE

102 Principles of Laboratory Animal Sciences. (5) W. Lecture: 1 hour. Laboratory: 6 hours. Spinelli
Introduction to the selection, anatomical, and physiological peculiarities, and the prospective and postoperative care of animals. Laboratory experiments in anesthesia, surgical exercises, drug administration, perfusion techniques, and individualized experiments.

ANTHROPOLOGY

230. Culture and Personality. (2-3) F. Prerequisite: Consent of the instructor. Lecture: 2 hours (3 hours independent study) for 3 units. Kiefer, Newman
Explores the relationship between (a) culturally conditioned ways of perceiving, thinking, and communicating and (b) individual behavior and personality development.

231. Ethnopsychiatry. (2-2) W. Prerequisite: Consent of the instructor. Lecture: 2 hours for 2 units (3 hours independent study per week for 3 units). Clark, Hartog
Principles of healing systems in the treatment of mental disorders including folk healing, crosscultural comparisons, research methods, and implications for community psychiatry. Students will study local examples of folk healers or folk-healing institutions.

240. Urban Anthropology. (2-5) W. Prerequisite: Consent of the instructor. Lecture: 2 hours (3 hours independent study for 3 units). Ahlbin, Kiefer
The development and characteristics of urban industrial societies, and the culture of modern cities. Evaluation of theories and methods for understanding urban behavior. Ethnic and racial pluralism in modern cities. The relevance of anthropological concepts for urban planning.

241. Social Deviance. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Ablin
A review of theory and concepts dealing with social and cultural deviance. Focus will be on deviant life styles and subcultural groups in urban areas. A field research project will be required.

242A-B-C. Anthropological Considerations in the Community Mental Health Field. (2-3) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Independent Study: 3 hours per week for 3 units. Ablin
A survey of principles and practice in the community mental health field. Emphasis will be on the significance of sociocultural factors in the determination of community needs and the delivery of mental health services.

246. Comparative Medical Systems. (2-3) Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours (3 hours per week independent study for 3 units). Clark, Dunn, Newman
Comparative examination of traditional and contemporary systems of health care delivery with special attention to theories of disease including notions regarding etiology, prophylaxis, treatment and treatment settings, and the therapeutic encounter. Seminar includes some experience in field and clinical observation.

248. Group Study. (1-5) F, W. Prerequisite: Consent of the instructor. Lecture: 2 hours (3 hours independent study for 5 units). Clark, Dunn, Newman
Groups of two or more collaborate in 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) F, W. Prerequisite: Consent of the instructor. Staff All independent study.

255A-B-C. Seminar in Medical Anthropology. (2-3) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Independent Study: 3 or 6 hours. Clark, Newman
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. Behavioral Epidemiology. (2-3) Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours per week (1 hour independent study for 3 units). Dunn
Introduction to the study of human behavioral factors in epidemiology and medical ecology including analysis of health enhancement as well as ill-health provoking behavior. The full range of human disease and disorder is considered.

265. Genetic Anthropology and Epidemiology. (2) Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory demonstration will be included when possible.

270. Research in Population. (2-3) Sp. Lecture: 2 hours (3 hours per week independent study for 3 units). Newman
A survey of research methodologies and techniques in the study of births, deaths, and migrations and social and cultural factors in population change.

297. Special Studies. (1-5) F, W, Sp. Prerequisite: Consent of the instructor. Staff All independent study.

BIOCHEMISTRY

100A-B. Cellular Structure and Function. (1-4) F, W. Lecture and Seminars: 1 hour. Fineberg and Staff
Lectures and conferences in biochemistry including aspects of cell physiology and cellular ultrastructure, with some special emphasis in the area of drug metabolism. Fundamental knowledge is presented in the context of its applicability to clinical medicine.

120A-B. Cellular Structure and Function. (3-3-3) F, W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Fineberg and Staff
Lectures and conferences in biochemistry including aspects of cell physiology and cellular ultrastructure, with some special emphasis in the area of drug metabolism. Fundamental knowledge is presented in the context of its applicability to clinical medicine.

170.01. Human Nutrition. (2½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Staff Research in biochemistry.

170.01. Human Nutrition. (2½) Sp. Prerequisite: Biochemistry 100A-B or its equivalent.

190. Biochemistry of Metabolic Disease. (3-3) W. Prerequisite: Biochemistry 120A-B or equivalent. Lecture: 3 hours. Eller
A continuation of the study of metabolism with emphasis on the aberrations in metabolic pathways associated with diseases in man. Consideration will be given to clinical laboratory biochemical data.

150.01. Research in Biochemistry. (1½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Staff Research in biochemistry.

170.01. Human Nutrition. (2½) Sp. Prerequisite: Biochemistry 100A-B or its equivalent.

BIOCHEMISTRY

100A-B. Cellular Structure and Function. (1-4) F, W. Lecture and Seminars: 1 hour. Fineberg and Staff
Lectures and conferences in biochemistry including aspects of cell physiology and cellular ultrastructure. Fundamental knowledge is presented in the context of its applicability to clinical medicine.

101A-B. Clinical Correlation Course in Cellular Structure and Function. (1-1) F, W. Prerequisite: Only students waived from Biochemistry 100A-B will be required to take this course.

190. Biochemistry of Metabolic Disease. (3-3) W. Prerequisite: Biochemistry 120A-B or equivalent. Staff A component of Biochemistry 120A-B comprising sessions conducted jointly by members of the clinical and basic science departments, presenting cases of metabolic disorders and discussing the underlying biochemical disturbance.

200A-B. General Biochemistry. (3-3-3) F, W, Sp. Prerequisite: Calculus, physical
Discussion of selected areas of biochemical, biophysics, and biomatics.

211. Biological Transport Systems. (3) Prerequisite: Biochemistry 100A-B, Physiology 100, and Physical Chemistry 110A-B or their equivalents. Edelman, Durbin
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 the biochemical pathways involved in the regulation of rates of transport.

212. Development Biology. (3) Prerequisite: Consent of the instructor. Rutter
Biological and ultrastructural aspects of cell differentiation and embryologic development, with special emphasis on regulatory mechanisms.

213A-B. Bio-Organic and Enzyme Mechanisms. (2-2) F, W. Xanti
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. Intramolecular forces and enzyme-substrate interactions. Techniques of investigating enzyme mechanisms.

214. Amino Acid and Protein Metabolism. (2) W. Prerequisite: Biochemistry 100A-B or equivalent. Lecture: 2 hours. Tarver
The fate of body protein, protein requirements, specific dynamic action; turnover of tissues and plasma proteins. Interpretation of isotopic tracer studies. Amino-acid catalysis and formation of important biological products.

215. Preparation for Research in Biochemistry and Biophysics. (3) F, W, SS. F. W., SS. Landahl
Mathematical modeling of enzyme kinetics, metabolic and hormonal control mechanisms, cooperative interactions of macromolecules, diffusion, passive and active transport, membrane models, excitation and conduction, flow, irreversible thermodynamics. Course offers student experience in problem formulation and reading of current literature.

217. Biochemistry of Connective Tissues. (2) W. Prerequisite: Biochemistry 100A-B or equivalent and consent of the instructor. Lecture: 2 hours. Newburn
Lectures and assigned reading on chemistry, structure, and metabolism of the mucopolysaccharides, collagen, and elastin. Principles of histochemical reactions of connective tissues.

219. Current Topics. (0-5) F, W. Prerequisite: Consent of the instructor. Lecture: 1-3 hours.

Biomatics.

110B-C. Biomaterials Science. (1-1) W. Jendresen
Students are introduced to the physics, chemistry, and metallurgy of materials used in dentistry; the effect upon physical and chemical properties of materials in respect to their use. The materials systems studied are ceramics, cements, resins, waxes, colloids, and metals.

120. Biomaterials Science. (1) Prerequisite: Consent of the instructor. Jendresen
Students are presented the rationale for the use of clinical restorative materials. Each major restorative material system will be studied in respect to material manipulation and clinical application.

130. Biomaterials Science. (1) Prerequisite: Consent of the instructor. Jendresen
Students are taught to analyze accurately clinical and laboratory problems with respect to major material systems. Emphasis will be placed on understanding why clinical failures occur with selected materials and what biological responses can be expected.

150. Dental Materials Survey. (1) Prerequisite: Consent of the instructor. Jendresen
A laboratory rotation course designed to familiarize new departmental graduate students with various approaches to biochemical and biological research.

160. Biomaterials Science. (1) Prerequisite: Consent of the instructor. Jendresen
An introduction for the dental hygienist to the basic concepts associated with selected dental materials. Emphasis is placed on the use and analysis of materials commonly used in the practice of dentistry.

180. Biomaterials Science. (1) Prerequisite: Consent of the instructor. 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 all basic materials commonly used.

190. Laboratory Project in Biomaterials. (1-5) F, W, SS. Jendresen
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the division.
planning of surveys; descriptive and inferential statistics.


202. Regression, Analysis of Variance, and Design of Experiments. (4) W. Prerequisite: Biostatistics 197. Lecture: 3 hours. Laboratory: 2 hours. Elashoff. An introduction to statistics with a focus on variance and covariance, regression, and the statistical design of experiments.

261C. Biometrical Data Analysis (3). Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Elashoff. Alternative approaches to data analysis.

262A. Clinical Data Analysis I. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Elashoff. Alternative approaches to data analysis with a focus on transformations, selection bias, and model building.

262B. Biometrical Data Analysis II. (3) Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Elashoff. Data analysis with a focus on data transformation and model building.

263A. Practicum in Biostatistical Consultation. (5) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Elashoff. Supervision in statistical consultation.

263B. Practicum in Biostatistical Consultation. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Elashoff. Supervision in statistical consultation.


CHEMISTRY

11. Organic Chemistry. (5) F. Prerequisite: Chemistry 1A-B-C or equivalent. Lecture: 5 hours. Oritz de Molestiano. An introductory study of the structure, stereochemistry, reactivity, and functionality of compounds in carbon.

12. Organic Chemistry. (3) W. Prerequisite: Chemistry II. Lecture: 3 hours. Craig. A continuation of the study of compounds in carbon including some aromatic compounds.


115. Physical Chemistry. (5) F. Prerequisite: Chemistry 5 or equivalent laboratory course in quantitative analysis and differential and integral calculus. Lecture: 4 hours. Demonstration and Conference: 3 hours. Elashoff. Physical chemistry with a particular emphasis on thermodynamics.

116. Physical Chemistry. (2) W. Prerequisite: Chemistry 115 or equivalent. Lecture: 11/2 hours. Conference and Demonstration: 11/2 hours. Shetlar, Kunz, Kollman. Elementary physical chemistry with emphasis on chemical kinetics.

150. Survey of Physical Chemistry. (2) F. Prerequisite: Differential and integral calculus and college physics. Lecture: 2 hours. Scientific. Intended 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. Laboratory: 3 hours. Lee. The methods of chemical detection and analysis of the common poisons. Normally open to third- and fourth-year students.
the wards and comprehensive clinic under the direction of the attending staff. Dental consultation and treatment will be coordinated with medical care. Interns will take histories, perform oral examinations, laboratory tests, and dental treatment.

**CLINICAL LABORATORY SCIENCE**

**102A-B. Instrumentation in the Clinical Laboratory.** (2-2g) F, W. Prerequisite: Consent of the instructor. Lecture: 1 hour. Laboratory: 2 hours.

Development of student’s ability to make critical evaluation of existing and proposed clinical laboratory instrumentation; principles of operation and electronic, optical, and other physical characteristics of various clinical instruments; calibration procedures, methods for determining accuracy, and procedure of test results.

**105A-B. Immunohematology.** (1-16) W. Prerequisite: Clinical Laboratory Science 105A is prerequisite to 105B. Lecture: 1 hour. Laboratory: 1 hour.

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 anemia, immunoinhibition in pregnancy, blood component therapy, and transfusion reactions.

**106. Pharmacology.** (1) Sp. Prerequisite: Pharmacology 126B or equivalent. Lecture: 1 hour.

This course will complete the pharmacology requirements of Clinical Laboratory Science students. The course content will be similar to that of Pharmacology 126B, but will be much briefer. Emphasis will be placed on laboratory aspects of drug therapy.

**108A-B-C. Clinical Chemistry.** (2, 3g) W. Prerequisite: Degree in Chemistry or equivalent; recommendation from one faculty member. Shohet and Staff


Laboratory sessions and seminars on aspects of clinical chemistry, hematology, microbiology, blood banking, and radioisotopes are held in the Clinical Laboratories at UC and SF.

**170.02A-B. Immunohematology.** (2-2) W. Prerequisite: Clinical Pathology and Laboratory Medicine 170.02A is a prerequisite for 170.02B. Both quarters must be taken for credit.

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 anemia, immunoinhibition in pregnancy, blood component therapy, and transfusion reactions.

**170.03. Clinical Pathology Seminar.** (2) F, W, Sp.

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

**CLINICAL PATHOLOGY AND LABORATORY MEDICINE**

**140.02. Hematology Clerkship.** (1½) Su, F, W, Sp. Prerequisite: Second-year pathophysiology or equivalent; recommendation from one faculty member. Shohet and Staff

Clerks primarily in clinical evaluation of hematologic patients. When interesting problems are found, time will be available for distinct laboratory projects relevant to those problems. Clerks will act as primary consultants under close supervision of hematology residents and fellows.

**170.01. Clinical Pathology.** (2) Su, F, W, Sp.

Laboratory sessions and seminars on aspects of clinical chemistry, hematology, microbiology, blood banking, and radioisotopes are held in the Clinical Laboratories at UC and SF.

**170.02A-B. Immunohematology.** (2-2) W. Prerequisite: Clinical Pathology and Laboratory Medicine 170.02A is a prerequisite for 170.02B. Both quarters must be taken for credit.

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 anemia, immunoinhibition in pregnancy, blood component therapy, and transfusion reactions.

**170.03. Clinical Pathology Seminar.** (2) F, W, Sp.

Principles and evaluation of chemical laboratory methods used to diagnose abnormalities in metabolism and organ function.
The development and form of deciduous and permanent dentition and occlusion. Study of individual tooth form and arch form to interarch relationships as well as endodontic morphology.

151. Orientation to Dentistry. (1) W. Lecture: 1 hour. Poupard
The student is familiarized with clinical dental procedures. Subject areas covered include: orthodontics, pedodontics, oral surgery, anesthesiology, etc.

155A-B. Introduction to Clinical Prophy­laxes. (2-2) F, W. Clinic: 6 hours. Dort, Ishida
Manikin as well as practical experiences 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. Clinic: 6 hours. Prerequisite: Dental Hygiene 155A–B. 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. (2-5) F, Sp. Lecture: 2 hours. Dort
The student will identify her personal and professional role as a member of the dental health team and will be informed of general office policies and procedures. Other subjects discussed include: selection of a position, taxes, ethics, jurisprudence, and insurance.

161A-B. Orientation to Dentistry. (1-2) F, W. Lecture: 1 hour, F; 2 hours, W. Prerequisite: Dental Hygiene 151. Poupard
Continuation of Dental Hygiene 151.

160A–B-C. Advanced Clinical Oral Prophylaxes. (3-4-4) Jr. Clinic: 11 hours. Prerequisite: Dental Hygiene 155A–B and 159. Poupard and Staff
Advanced oral prophylaxes techniques including work in institutional dental clinics.

189. Special Study. (1½-2) F, W. Sp. Prerequisite: Senior class standing and approval of the instructor. Poupard
Students will select an area of interest for independent study or research. Areas may include: clinical, community, educational, institutional, or other.

199. Clinical Experience in Mobile Den­tal Clinics. (1½-3) SS. Clinic: Variable. R. Miller
Clinical experience in mobile dental clinics.


209. Laboratory Project in Dental Hy­giene. (1-2) F, W, Sp. Poupard
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the division.

DENTAL JURISPRUDENCE

Student insight into the legal problems and obligations of dental practice is broadened.

DENTAL TECHNICS

215A-C Basic Dental Technics. (2-2-4) F. Prerequisite: Consent of the instructor. Staff
Lec­tory: 6 hours F, 5 hours Sp. Stark and Staff
The first-year student is introduced to the basic technics taught in the first year in dentistry (morphology, prosthodontics, biomaterials, operative dentistry).

185. Introduction to Basic Dental Tech­nics. (2) SS. Laboratory: 18 hours (3 weeks).
Brigante
Technical orientation to the basic technics taught in the first year in dentistry (morphology, prosthodontics, biomaterials, operative dentistry).

DERMATOLOGY

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

140.01. Clinical and Research Dermato­logy. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor. 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.

140.02. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor. Epstein
Clinical clerkship in approved hospitals by special arrangement and approval of the Dean of the School of Medicine and chairman of the department.

160.01. Clinical and Research Dermato­logy. (1-5) Su, F, W, Sp. Prerequisite: Consent of the instructor. 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.

Rounds daily on inpatient dermatology patients. Informal discussions of diagnosis and management of the hospitalized dermatology patient.

160.03. Introduction to Dermatology. (1) W. Prerequisite: Consent of the instructor. Cram and Staff
This course is an introduction to the basic language, diagnostic techniques, and recognition of common skin disorders seen by the practitioner. It will consist of patient demonstrations followed by open discussions with color slides of the disease to be presented.

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

In-depth discussion of the sciences basic to an understanding of the function and dysfunction of skin including anatomy, physiology, microbiology, pharmacology, biochemistry, genetics, pathology, etc. Over a three-year period, covers all aspects of basic sciences relevant to dermatology.

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 investigation by staff members and professors from other UC departments and other universities.

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 investigation by staff members and professors from other UC departments and other universities.

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

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

Assistant residents in off-campus hospitals (in the United States and abroad) approved by the department chairman and the Dean.
Course includes training in clinical and investigatory dermatology.

ECONOMICS
150. Economics of the Health Services. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours.
Staff
Considers the health service sector of the economy. Studies its structure and the pricing, financing, and allocation of health services. Emphasis on the determinants 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. Not recommended for students who have received credit for either Economics IA or 1B.

Winters
Lectures and group discussions relating to dental practice. Subject areas covered include equipment selection, auxiliary personnel, consultation and financial procedures, 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. To be given in alternate years.
Lostroh, Papkoff
Basic information on animal hormones, their structures, functions, and interrelationships. Concepts regarding hormonal actions are derived from chemical (structure-function) and biological (in vivo, in vitro) studies. Where possible, mechanisms will be discussed.

191. Topics in Endocrinology. (1§) W. Prerequisite: Consent of the instructor. Lecture: 1 hour. To be given in alternate years.
Lostroh
Selected topics of current interest.

192. Advanced Clinical Endocrinology. (1-3) Sp. Prerequisite: Approval of Clinical Review Committee and the instructor. Clinical: 3-12 hours.
J. Sapone
Advanced instruction in the field of clinical endocrinology.

ENGLISH
151. Literature and Experience. (5§) F. Prerequisite: Open to all registered students on the campus.
Fixed
The perspective of contemporary experience as reflected in contemporary literature. A close reading and study of selected European stories, plays, and poems. Works are chosen that illustrate the relation of self to the world, the search for awareness and identity.

152. Literature and Reality. (5§) W. Prerequisite: Consent of the instructor.
Fixed
Consideration of modern literature as the expression of an intense encounter between the self and the world, emphasizing themes of alienation and search for identity, and placing the themes within a context of historic and social relationships and of culture and consciousness.

153. Literature and Society. (5§) Sp. Prerequisite: Consent of the instructor.
Fixed
Consideration of contemporary literature as not only reflecting our racism and society, but as shaping it. In addition to assigned readings, guest teachers and writers will discuss their problems in creating and presenting literature as an immediate and relevant reality.

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

FIXED PROSTHODONTICS
Lum
The basic principles of fixed prosthodontics.

115. Techniques in Fixed Prosthodontics. (2) F.
The basic techniques of fixed prosthodontics.

118-120. Fixed Prosthodontics. (1-2) F, W, Sp. Prerequisite: Fixed Prosthodontics 110 and 115; Lum; Rideout
Lectures in the treatment of fixed prosthodontics.

Fixed
Continuation of Clinical Prosthodontics 118.

120. Fixed Prosthodontics Technics. (2) F, W, Sp. Prerequisite: Fixed Prosthodontics 110 and 115; Lum; Rideout
Lectures in the application of basic sciences and research related to research and clinical practice. Students are encouraged to develop new concepts in the diagnosis, treatment planning, and treatment of clinical patients.

Noble
Clinical procedures in fixed prosthodontics. This course provides a continuation of clinical experience received in Fixed Prosthodontics 119.

Noble
Clinical procedures in fixed prosthodontics.

149. Clinical Endodontics. (2) F, W, Sp. Prerequisite: To be given in alternate years.
Hamaguchi and Staff
Continuation of Clinical Endodontics 139.

151. Literature and Experience. (1) W. Prerequisite: Consent of the instructor.
Fixed
Continuation of Clinical Endodontics 149.

J. Sapone
Advanced instruction in the field of clinical endodontics.

171.01A-B-C. Clinical Procedures in Fixed Prosthodontics. (3) Yr. Lecture: 1 hour.
Clinic: 6 hours.
Noble
Instruction and practice in the diagnosis, treatment planning, and treatment of clinical cases.

173.01A-B-C. Advanced Clinical Procedures in Fixed Prosthodontics. (2-3-5) F, W, Sp. Prerequisite: Consent of instructor.
Noble
Advanced clinical instruction and practice in the diagnosis, treatment planning, and treatment of fixed prosthodontics.

Noble
Clinical procedures in fixed prosthodontics.

178.01A-B-C. Special Study for Postdoctoral Students. (1-5) W, Sp. Research: 5-15 hours.
Noble
Original investigation in the field of fixed prosthodontics.

Noble
Individual staff members will offer...
seminar type instructions on selected topics relating to fixed prosthodontics.

189.1. Fixed Prosthodontics Clinical Practice. (1-9) F, W. Prerequisite: Fixed Prostho-
donics 149 and approval of the division chairman. Clinic: Variable. Sheets
Continues clinical experience at the level of Fixed Prosthodontics 149. 

189.2. Advanced Clinical Fixed Prosthodontics. (1-2) F, W, Sp. Clinic: 3-6 hours. Pre-
erequisite: Consent of the instructor and the Dean.

Advanced clinical procedures. Instruction will be given in full-mouth rehabilitation pro-
cedures, the use of precision attachment, and the use of parallel pins in splinting and fixed prosthodontics.

189.3. Fixed Prosthodontics Clinical Practice. (1-2) F, W, Sp. Clinic: 3-6 hours at Ve-
terans Administration Hospital. Prerequisite: Fixed Prosthodontics 139 and consent of the Clinic Review Committee. 

Advanced undergraduate instruction and experience in clinical procedures in fixed prosthodontics. 


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

FORENSIC PATHOLOGY AND MEDICINE

170.01. Forensic Pathology and Medicine. (1) Sp. Seminar: 1 hour. Trowbridge

The course covers basic legal principles; torts and ethics; medical records and documents; medical licensure and certification; forensic pathology; the expert witness; malprac-
tice and professional liability.

GENERAL DENTISTRY

149. General Dentistry. (1-9) F, W. Prerequisite: Fourth-year status or approval of the instructor. Clinic: Variable. Haln

General Dentistry is an elective course in which the student performs patient treatment in a variety of clinical settings.

189.01. Mobile Clinics. (1-3) Sp. Prerequisite: Third-year standing and satisfactory com-
pletion of all clinical and academic third-year courses. Clinic: 50-40 hours. Stark

Delivery of health care utilizing mobile clinics. Dental students will gain experience in clinical dentistry while treating children of migrant farm workers. Students will receive up
to fifty points a week under the general den-

170. HISTORY OF MEDICINE


Projections, based upon a background of the growth and development of the profession; develop “curves of probability” of future tech-


An introduction to the methodology of medicohistorical research. It is intended to prepare participants to evaluate critically medicohistorical literature, and to introduce them to doing independent research in the field of medical history.

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

Lectures and informal seminars on aspects of medical history.

170.03. Evolution of American Medicine. (1-5) F, W, Sp. Saunders and Staff

Prepared and directed readings on the philosophy of Oriental, Japanese, Indian, Tibetan, and other Non-Western systems.


Changing conceptions of therapeutics from earliest times to the present in relationship to the changing climate of thought on the nature of the psychic process and psychic dis-

170.05. History of Dentistry. (1-5) F, W. Trowbridge

An introductory course intended for all students interested in the broad conceptual developments influencing the growth of med-

170.06. Introduction to the History of Medicine. (1-5) F, W. Visotski

An introductory course intended for all 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) SS, SSII. Leake

Survey of the history and development of the various health professions and services, with consideration of economic and ethical factors involved. Paper required for two units.


Saunders and Staff

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

200. History of Historical Method and Methodology of Medical History. (2) F, W, Sp. Lecture: 2-4 hours. Staff

A special reading and discussion course on historiography and historical method with bi-


Saunders and Staff

Introduction to the history of biology.


A survey of various social and economic patterns in the various cultures and their in-


Introduction to the history of neurologi-

204. History of Non-Western Medical Systems. (1-2) Sp. Prerequisite: History of Health Sciences 170.06 or 201. Lecture and Seminar: 1-2 hours. Visotski

Directed seminars and directed readings on the philosophy of Oriental, Japanese, Indian, Tibetan, and other Non-Western systems.

205. Philosophy of Clinical Thought. (1-3) F, W, Sp. Prerequisite: Consent of the in-
structor. Lecture and Seminar: 1-3 hours. Guttentag

Reading and conferences for qualified stu-

206. Introduction to History of Health Sciences—Nursing. (2) Sp. Blau

For nurse teachers and graduate students. History of the health sciences upon which nursing practice is based. Methods and ex-

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

For students engaged in writing the thesis for the masters degree.

250. Research. (0) F, W, Sp. Prerequisite: Ad-
vancement to candidacy and permission of the graduate advisor. Staff

For students engaged in writing the disser-
tation for the Ph.D. degree.

HOSPITAL DENTISTRY

170. Emergency Medical Care Seminar. (1) F, W, Seminar: 2 hours. Prerequisite: Post- 

doctoral or fourth-year standing. Fourth-year students may take this course as an elective. Klein

Designed to prepare the oral surgeon to conduct a physical examination as a pre-
liminary evaluation before performing oral surgical procedures. Techniques of examina-
tion are demonstrated and practiced in the classroom; examination of pathologic condi-
tions conducted at bedside.
HUMAN DEVELOPMENT

201A-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Lowenthal, Clark, Spence 2 hours.

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

202A-B-C. Seminar in Qualitative Analytic Methods. (3-3-3) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Chiriboga, Pierce, Kiefer One quarter on longitudinal methods; one quarter on qualitative data analysis using students' research materials; and one quarter on methods of organizational research.

203. Seminar in Data Analysis. (3) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Rosow Students either provide their own select data from ongoing Adult Development Program research. Focus is on training in data organization, analysis, and research report writing.

211. Developmental Model of Social and Political Attitudes. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Rosow By survey, interview, and historical data, historical and developmental models of social change will be compared.

212. Anthropological Approaches to Personal Development. (2-4) F. Lecture: 2-4 hours. Clark A review of concepts and methods appropriate for the study of cultural factors in the development of identity. Emphasis will be placed on life-cycle changes in members of ethnic and subcultural groups.

220. General Seminar. (3) F, W, Su. Lecture: 2 hours. Staff Students, staff, or guests present selected topics based on current research.

221A-B-C. Life Stress and Adaptations. (5) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Lowenthal, Chiriboga Qualitative and quantitative analyses of life history protocols focusing on stress and perceptions of stress in relation to a variety of indicators of adaptation (psychological, physical, social) at various life stages from adolescence to old age.

222. Aging in Different Milieux. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Kiefer, Lutie and Staff Aging in institutions; aging among ethnic groups; cross-class comparisons of aging; aging in noninstitutional milieus, such as retirement communities; public housing, housing characterized by various densities of aged.

223. Development in Adolescence and Young Adulthood. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Lowenthal, Spence and Staff Review of theories, methods and research data on ego, personality, self-concept, and moral value changes in adolescence and young adulthood.

224. Community Politics and the Aging. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Estes Explore theories of community politics and methodologies for studying the subject. While current theoretical and methodological issues will constitute the major framework, attention will be given at the local level to analysis of policy formation process pertaining to the aging.

225. The Adult Life-Course. (4) Sp. Prerequisite: Consent of the instructor. Lecture: 4 hours. Lowenthal, Spence Analysis of social and social-psychological variables over the adult life span. Emphasis is on stability and change in these variables throughout the life course.

226. Developmental Study of Kinship Structure. (3) Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Thurnher Kinship structure in Western and non-Western societies with emphasis on life cycle perspective of family roles and relations. Consideration is given to relevant empirical studies and case material.

233. Clinical Anthropology. (2) Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Brodrick Clinical data will be examined in several forms and anthropological concepts will be applied. Assigned readings and field study of a unit or section of the hospital will be used to prepare a written and oral report.


236. Social Aspects of Death and Bereavement. (5) Sp. Prerequisite: Consent of the instructor. Lecture: 5 hours. 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.

249. Special Studies. (2-8) F, W. Sp. Prerequisite: Consent of the instructor. Lecture: 2-8 hours. Staff Students select special problems to investigate on an individual or collaborative basis. These studies may be conducted through readings, the collection and analysis of empirical data, or the development of conceptual analyses or methodologies.


INTERDISCIPLINARY COURSE

100A-B-C. The Dynamics of Family Health. (2-2-2) F, W, Sp. Seminar: 1 hour. Laboratory: 3 hours. Prerequisite: Course 100A is not a prerequisite of 100B, nor is 100B for 100C. Davis Students from the Schools of Dentistry, Medicine, Pharmacy, and Nursing working as a team. The delivery of health care. Course includes home visits, clinic appointments, observations of labor and delivery, postpartum care, and discussions of family-related problems.


INTERPERSONAL COURSE

110. Physical and Social Aspects of Mating. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Kiefer and Staff A study of the human sexual response and the role of the individual in interpersonal relationships.

120. Personality Development. (3) F, W. Lecture: 3 hours. Janis Personality development from a psychodynamic point of view. Special emphasis on the psychology of affect and cognition.

121. Social Psychology. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology from a perspective of fundamental human needs. Emphasis on the social influences on the individual, and the social aspects of individual behavior.

122. Social Psychology of Personality. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of personality, including the role that social perception and social reality play in the development of personality.

123. Social Psychology of Group Life. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group life with special emphasis on group decision-making processes.

124. Social Psychology of Group Interpersonal Relations. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group interpersonal relations with special emphasis on the role of social influence in group decision-making processes.

125. Social Psychology of Group Life. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group life with special emphasis on group decision-making processes.

126. Social Psychology of Group Interpersonal Relations. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group interpersonal relations with special emphasis on the role of social influence in group decision-making processes.

127. Social Psychology of Group Life. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group life with special emphasis on group decision-making processes.

128. Social Psychology of Group Interpersonal Relations. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group interpersonal relations with special emphasis on the role of social influence in group decision-making processes.

129. Social Psychology of Group Life. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group life with special emphasis on group decision-making processes.

130. Social Psychology of Group Interpersonal Relations. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group interpersonal relations with special emphasis on the role of social influence in group decision-making processes.

131. Social Psychology of Group Life. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group life with special emphasis on group decision-making processes.

132. Social Psychology of Group Interpersonal Relations. (3) F. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group interpersonal relations with special emphasis on the role of social influence in group decision-making processes.

133. Social Psychology of Group Life. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours. Leary Social psychology of group life with special emphasis on group decision-making processes.
MEDICAL DIAGNOSIS

415. Medical Diagnosis. (2) Su, F, W, Sp. Clinic: 6 hours. The dental intern will participate in medical history-taking, physical examinations, ordering laboratory tests and interpreting differential diagnoses on medical clinic patients under the supervision of the medical staff. Comprehensive care of patients is emphasized.

404. Medical Illustration. (14) F. Emery Fundamentals of Medical Illustration; elementary pencil sketching of bones; elementary principles of halftone and pen and ink illustration. Gross anatomy.

401. Medical Illustration. (14) W. Emery Techniques of pencil sketching of specimens; halftone on Ross board, pen and ink drawing; lettering of charts and graphs using freehand, guide, and transfer letters.


404. Medical Illustrations. (14) F. Emery Advanced techniques of pen and ink halftone drawings. Beginning color drawing (watercolor, tempera, and pastel); Pathology and histology. Design and preparation of brochures.

405. Medical Illustration. (14) W. Emery Sketching in experimental surgery and operating room. Illustration of surgical procedures in color, black and white, halftone, and pen and ink.


MEDICAL INFORMATION SCIENCE

190. Programming Concepts and Information Structures. (3) F. Prerequisite: Knowledge of one higher level programming language. Lecture: 3 hours. Laboratory: 3 hours. Wasserman Representation of programs and data in the digital computer. Information structures used for data manipulation. Nonnumeric information-handling techniques, including list processing and string processing. Implementation of data structures in existing programming languages and computer systems.


192. The Computing Environment. (1) F. Lecture: 1 hour. Starkweather Survey of present and future computing facilities available in the health care and research setting. The course involves guest speakers familiar with specific hardware and software systems available to students, faculty, and practitioners, particularly those available in the local setting.

193. Computer Systems in the Health Setting. (2) Sp. Prerequisite: 192 or consent of the instructor. Starkweather An exploration of existing systems, or those under development, which use computer systems to assist in health care, health research, or instruction of health professionals. Invited speakers and visits to specific installations will be a part of the course.

210A. Computer and Communication Systems. (4) W. Prerequisite: Consent of the instructor. Wasserman, Henley Introduction to computer system organization. Interface between system components and system software. Assemblers and loaders. Methods of translating programming languages.

210B. Computer and Communication Systems. (4) Sp. Prerequisite: Course Medical Information Science 210A or equivalent or consent of the instructor. Wasserman, Henley Operating systems concepts. File system organization and structure. Communication system organization and structure. Integration of hardware, software, and data. Data base structure. Emphasis on design of online systems.

220. Systems Analysis of Medical Care. (3) W. Prerequisite: Medical Information Science 191 and 210A. Lecture: 2 hours. Laboratory: 5 hours. Holladay Systems problems in medical facilities are analyzed for applicability of statistical methods and operations research. Emphasis on formulating problems so that quantitative techniques can be applied, and on identifying problems amenable to solution using quantitative technique. Selected techniques are introduced.
225. Design of Medical Information Systems. (3) F, W. Prerequisite: Consent of the instructor. Lecture: 4 hours. Henley

Design of previous medical information systems will be examined. Successful components of these systems will be studied in depth, with respect to cost performance and acceptability. Proposals for new systems will be presented and reviewed.

223A. Compumetrics: Probability Modeling and Simulation. (3) F. Prerequisite: Introduction to Probability and Statistics. Lecture: 2 hours. Laboratory: 3 hours. Elashoff, Heilbrun

Topics: probability, simulation, and applications of simulation models to hospital systems, health service systems, and computer systems.

230B. Compumetrics: Statistical Data Analysis. (3) W. Prerequisite: Introduction to Probability and Statistics. Lecture: 2 hours. Laboratory: 3 hours. Elashoff, Heilbrun

This course is concerned with the use of computer systems in statistical analysis and applications. Topics include experimental design, analysis of variance, regression, and correlation. This course will also be offered as a laboratory course.

230C. Seminar in Medical Information Science. (1-6) F, W. Pr. Staff

This seminar addresses topics in medical information science. Subjects chosen will range from basic to advanced, to meet the needs of students, research, and practice in the field.

230D. Dissertation. (0) F, W. Prerequisite: Consent of instructor.

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

MEDICAL TECHNOLOGY

100. Introductory Clinical Microbiology. (3) F, W. Prerequisite: Consent of instructor. Lecture: 2 hours. Hadley, Cohen

Brief survey of disciplines of clinical microbiology and serology. Introduction to laboratory technique and methods of study of data as applied to diagnostic analysis and laboratory quality control.


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

102. Environmental Microbiology. (3) W. Lecture: 2 hours. Laboratory: 6 hours. Hadley

Instruction and laboratory observation of the indigenous bacteria, fungi, and protozoa of the human. The microbiology of water, milk, food, and the hospital environment. The scientific basis and laboratory experience with sterilization and disinfection will be studied.


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


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

115. Clinical Virology. (5) S. Lecture: 2 hours. Laboratory: 5 hours. Hadley, Drew

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

120A. Clinical Immunology and Serology. (4-4) F, W, Sp, Su. Lecture: 2 hours. Laboratory: 6 hours. Hadley

Introduction to the mechanisms of immunity. Instruction and laboratory practice in serology methods used in diagnosis and the study of disease.


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

130. Epidemiology. (5) Lecture: 2 hours. Laboratory: 3 hours. Hadley, Cohen

Instruction in the epidemiology of hospital associated infections, and contagious diseases. Practical experience with microbiology laboratory procedures which may be applied to the investigation of an epidemic. Compilation of clinical laboratory data useful in surveillance of hospital associated infections.

155. Clinical Laboratory Instrumentation. (3) F. Lecture: 2 hours. Laboratory: 3 hours. Hadley, Seidlit

Instruction and practice in microbiology equipment for detecting the presence and measuring the growth of microorganisms. Practical experience with the data processing equipment and computers utilized in a clinical microbiology laboratory.

MEDICINE

110. Basic Clerkship in Medicine. (1½ per week) F, W, Sp. Prerequisite: Medicine 131A-B.

Bedside instruction in history-taking, physical diagnosis, selected topics in general medicine with presentations and demonstrations of relevant cases. This includes instruction on dermatology.

110. Basic Clerkship-Clinical Anatomy. (1) F, Su.

Clinical anatomy is a clerkship taught in small groups at the bedside. It is designed to provide clinical correlation, region by region, with the material covered in Anatomy 100.

131A-B. Introduction to Clinical Medicine. (9) F, W. Prerequisite: Anatomy 100, Pathology 101, 102, and 103; Biochemistry 100A-B; Microbiology 100; Pathology 106 may be taken concurrently; Pathology 101; Physiology 100 and 101; and Psychiatry 130 or consent of the instructor.

E. Brown

Introduction to the pathophysiologic basis of symptoms and signs and the techniques of collecting clinical data, including history-taking, examination of the patient and the use of laboratory tests. Lectures, demonstrations, bedside work, laboratories, conferences, and independent study.

140.01. Advanced Clinical Clerkship at UC, SF, and PA. (1½ per week) F, W, Sp. Prerequisite: Medicine 110. L. H. Smith, Selzer, Williams, Carbone

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. (1½ per week) F, W, Sp. Prerequisite: Medicine 110. L. H. Smith

Clinical clerkships in off-campus hospitals approved by the Dean and the chairman of the department.

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

Wood, Jacobs, Cline and Staff

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

140.04. Inpatient Medicine of College-Age Patients at CM. (1½ per week) F, W, Sp. Brunn, M. Meyer

Students make daily hospital rounds and participate in psychiatry, dermatology, chest diseases, and surgical diagnosis. They attend specialty clinics in radiology and cardiology. They spend six hours each week in individual instruction with a member of the faculty.

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

Selzer

Students participate in the activities of the Cardiology Unit, with an emphasis on methods of cardiac diagnosis, therapeutic, and electrocardiography.

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

Sokolow

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

140.07. Clinical and Physiological Aspects of Pulmonary Disease. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B or consent of the instructor.

Murray, Gold and Staff

Students examine patients in chest clinic, in the wards, and in the Intensive Care Unit, and present them at ward rounds, pulmonary function conferences, and chest radiology conferences. They participate in pulmonary function testing and do assigned reading.

140.08. Gastroenterology. (1½ per week) Su, F, W. Prerequisite: Medicine 131A-B or consent of the instructor.

Schmid

Students become a part of the gastroenterology group and participate in all activities including work-ups of patients in clinic and wards. They attend all conferences.

140.09. Cardiopulmonary Service at MZ. (1½ per week) Su, F, W. Prerequisite: Medicine 110 or consent of the instructor.

Paley

Students work up patients, follow through diagnostic program, phonocardiogram, exercise electrocardiograms, cardiac catheterization, and angiocardiographic stud-
ies. Full-time staff provides instruction in cardiac diagnosis, physiology of heart disease, and heart sounds. Students attend conferences and seminars. Reading is assigned.

**Clinical Clerkship in General Medicine at MZ** (1½ per week) F, W, Sp. Prerequisite: Medicine 131A-B.

Students work up patients and participate in activities of the Metabolic Service under supervision of attending physicians; attend Renal Clinic, presenting cases and daily rounds; help prepare material for sessions; attend hematology rounds at SF.

**Clinical Pharmacy** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B and 110.

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

**Gastroenterology** at F-A (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

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

**Clinical Cardiology at F-A (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.**

Students shall: work up patients on the wards and in the Coronary Care Unit; attend open heart surgery once a week; assist at D.C. electrical reversion; interpret electrocardiograms and vectorcardiograms; attend rounds and conferences of the Cardiology Service.

**Clinical and Research Experience in Renal Medicine** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of the instructor. Co-Requisite: Third-year status.

**Private Practice** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

**Pathophysiology of Disease** (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor.

A course designed to present major basic science concepts which govern the practice of medical subspecialties. Students devote four weeks to the study of a specialty area: e.g., metabolism, hematology, gastroenterology, immunology, and cardiovascular, pulmonary, and renal disease.

**Endocrine-Metabolic Medicine** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Forsham and Staff

Students based at Kaiser Foundation Hospital study the metabolism, hemodynamics, nephrology, and metabolism, including grand rounds in medicine.

**Clinical Endocrinology** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Gordon, Roof

The course is tailored to needs and interests of students and includes opportunities to examine selected patients in endocrine clinics and wards. Students participate in patient care and research. They attend observations, laboratory investigation, and read assigned material.

**Renal and Electrolyte Service at SF** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Humphrey's

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

**Cardiology Clerkship at MZ** (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Uhlery

Primary emphasis is on the treatment of acute and ill patients, and the Coronary Care Unit. Includes teaching in the use of monitoring and related electronic equipment, cardiovascular, and related aspects of electrocardiography and echocardiography; may work in the pulmonary function laboratory, and attend all regular teaching conferences and seminars.
Under close supervision, the student develops a mature approach to clinical cardiology by examining cardiac patients on the wards and in the clinics. Basic principles of cardiology and interpretation is stressed; students attend all seminars and conferences.

150.01 Research in Cardiovascular Physiology at F.A. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor.

The elective is designed to provide experience with routine physiological measurements, the handling and monitoring of radio-isotopes, techniques of tissue culture and various biochemical techniques. Presently the laboratory is engaged with problems of myocardial hypertrophy, cell growth, and protein synthesis.

150.02 Research in Medicine. (1½ per week) Su, F, W, Sp. L. H. Smith

Students continue previously initiated research projects under the guidance of faculty members. Programs are approved by the instructor in charge.

160.02 Clinical Allergy. (1) W, Sp. Prerequisite: Microbiology 100 and Pharmacology 100 and 101.

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

160.04 Basic Nutrition and Health Maintenance. (1-2) W, Sp. Prerequisite: Biochemistry 100A and Physiology 101 or consent of the instructor.

Havel Weekly seminars are based upon preassigned readings. The digestion and metabolism of major foodstuffs is reviewed systematically and related to the composition and quality of ordinary foods. The relationship of diet to prevention of chronic disease is emphasized.

170.01 The Medical Attitude. (1) F, W, Sp. Prerequisite: Consent of the instructor.

Gutten tag Instruction deals with an exploration of the theoretical premises on which medicine rests, of medicine's relationship to other disciplines, of the structure of patient-physician relationship, and of medicine's operational concepts.

170.02 Philosophical Problems of Clinical Medicine. (1) Su, F, W, Sp. Prerequisite: Consent of the instructor.

Gutten tag Seminars on selected writings and topics of theoretical premises underlying clinical medicine, e.g., history taking and diagnosis.

170.03 Ethical Problems in Medical Care. (2) W, Sp. Prerequisite: Consent of the instructor.

Course, partly devoted to formal presentations, partly to panel discussion, deals with such problems as preprofessional and professional bedside problems of medical care, telling the truth, experimentation on human beings, and legalization of euthanasia.

170.04 Fundamentals of Electrocardiography at F.A. (1) Su, F, W, Sp. Prerequisite: Completion of 2 years of medical school and Medicine 131A-B.

Goldman Instruction in basic electrophysiologic principles and interpretation of electrocardiograms.

170.05 Fundamentals of Electrocardiography Interpretation at SF. (1) F, W, Sp. Prerequisite: Medicine 131A-B.

Rapaport Review of physical principles of electrocardiography and clinical application of electrocardiographic interpretation.

170.06 Therapeutics. (1) Sp. Prerequisite: Basic pharmacology, physiology, biochemistry, and requirements for completion of first two years of medical school.

Melmon The course is designed to help the student develop a useful approach to the selection and administration of drugs to diseased man and to develop an appreciation of the methods which he can conveniently use to maximize efficacy and minimize toxicity.

170.07 Advanced Electrocardiography and Fundamentals of Vectorcardiography at SF. (1) Su, W, Sp. Prerequisite: Medicine 131A-B and 170.05.

Rapaport An advanced course in electrocardiographic interpretation including an introduction to vectorcardiography.


L. H. Smith Under one year research project approved by the Dean and the chairman of the department.

199. Laboratory Project in Medicine. (1-5) Su, F, W, Sp. Prerequisite: Consent of the instructor.

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


UC Smith, SF Williams, FJ Sielenger Interns and residents prepare and present case 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.

400. Interdepartmental Clinical Correlation Course. (1-4-4) F, W, Sp. Interns and residents.

UC 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 demonstrations, and directed student participation.


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


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


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


FJ Sielenger Seminars are conducted in cardiology, electrocardiology, hematology, gastroenterology, radiology, fluid electrolyte balance, endocrinology, and pathology involving discussions, required reading, and reports. Elective seminars include a chest disease conference, joint medical and surgical conference, tumor board, dermatology conference, and neurophysiopractten.


UC L. H. Smith, FJ Sielenger, SF Williams Research programs are arranged with appropriate faculty members on an individual basis.


SF Williams, FJ Sielenger Residents take an active part in the presentation and discussion of problems connected with the correlation of clinical manifestations of disease with pathosternic studies. Conferences include reference to the literature, clinical demonstrations, and laboratory work.


Sokolow Seminars (individual instruction) for residents in medicine and trainees in cardiology by cardiac consultants in the interpretation of all electrocardiograms and phonocardiograms taken at University of California San Francisco.


SF Williams, UC L. H. Smith Residents are responsible for the care of patients, under the direction of the attending staff, and participate in student teaching.


TF Roseniel 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. He consults for all other hospital services.


SF Williams Interns rotate through medicine ward and Emergency Hospital. Under the supervision of the attending staff, they are responsible for
the care of patients, history-taking, medical workups, laboratory tests, and consultation.

A modified "straight" medical internship consisting of eight to nine months service in general medicine, chest, and the emergency rooms, with three to four months spent in other hospital services.

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

MICROBIOLOGY

100. Biologic Agents of Disease. (9/6) Sp. Prerequisite: Biochemistry 100A-B. Jawetz
Fundamentals of infection and resistance, immunology, and pathogenesis of diseases caused by microorganisms. Pathogenic bacteria, fungi, viruses, and parasites are presented from the standpoint of biology, medicine, epidemiology, and treatment. Laboratory diagnosis, treatment, and prevention introduces infectious disease management.

101. Microbiologic Agents of Disease. (7/6) Sp. Prerequisite: Biochemistry 100A-B. Only students who have had the parasitology portion of Microbiology 100 may take this course.
Jawetz
Fundamentals of infection and resistance, immunology and pathogenesis of diseases caused by microorganisms. Pathogenic bacteria, fungi and viruses are presented from the standpoint of biology, medicine, epidemiology, and treatment. Laboratory diagnosis, treatment, and prevention introduces infectious disease management.

125. Microbiology. (6/6) W. Lecture: 4 hours. Laboratory: 4 hours. Jawetz and Staff
Morphology and physiology of microorganisms including bacteria, molds, yeasts, and viruses and techniques to study them. Fundamentals of infection and resistance, immunology, microbiology, and epidemiology. Problems in laboratory diagnosis, treatment, and prevention introduces infectious disease management.

126. Microbiology. (5/6) W. Lecture: 4 hours. Laboratory: 4 hours. Jawetz and Staff
A comprehensive presentation of microorganisms including bacteria, fungi, and viruses; fundamentals of infection and resistance, immunology, disinfection and sterilization and antimicrobial agents; and laboratory studies on indigenous oral flora, and applications of microbiology in general practice.

150.01. Research in Microbiology. (1½) Su, F, W, Sp. Prerequisite: Microbiology 100 and consent of the instructor. Jawetz and Staff
Research in microbiology block elective for fourth-year students.

170.01. Fundamental Concepts of Microbiology. (5/2) Su, F, W, Speck, Goldsmith
A study of communicable diseases less frequently seen in western urban communities, but which represent significant problems in many other areas of the world.

190. Medical Microbiology. (5/6) Sp. Lecture: 5 hours. Jawetz and Staff
Lectures and discussions on morphology and physiology of microorganisms, including bacteria, molds, yeasts, viruses, and techniques employed to study them. Fundamentals of infection and resistance, immunology, microbiology, epidemiology, and laboratory procedures.

198. Supervised Study in Microbiology. (1-3/6) F, W, Sp. Prerequisite: Consent of the instructor. Jawetz
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 in Microbiology. (1-5/6) F, W, Sp. Jawetz
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

203. Immunohematology. (5/6) F. Prerequisite: Biochemistry 100 and Microbiology 100. Lecture: 3 hours. Offered in alternate years. Goodman
Structural and functional aspects of transfusions and antigens, including chemical and genetic basis of immunogenetics; structural and thermodynamics of antigens-antibody interactions; applications of isotope labeling and radioautography of proteins; and density gradients and analytical ultracentrifugation.

204. Immunohematology. (5/6) W. Prerequisite: Microbiology 100 or equivalent instruction in basic immunology. Lecture 3 hours. Offered in alternate years. Linscott
An advanced course covering antibody-antibody interactions, with special emphasis on their biological importance: experimental hyper-sensitivity, transplantation immunology, immunological unresponsiveness, crotic reactions, and the role of the complement system.

206. Pathogenic Fungi. (2/6) F. Prerequisite: Microbiology 100. Lecture: 2 hours. Halde
A systematic treatise of the fungi responsible for human disease, emphasizing pathological, epidemiological, and diagnostic laboratory procedures.

207. Molecular Biology of Selected Bacterial Viruses. (4/6) Sp. Prerequisite: Microbiology, biochemistry, or consent of the instructor. Lecture: 2 hours. Laboratory: 6 hours. Boyer, Roulland-Dussoix
Molecular biology of certain bacterial viruses will include the genetics and biochemistry of the bacteriophage lambda and related phages. The lecture presentations will be supplemented with laboratory experiments involving many of the current techniques of bacteriophage genetics, biochemistry, etc.

208. Advanced Virology. (3/6) W. Lecture: 3 hours. Offered in alternate years. Levinson
Physical and chemical characterization of animal, bacterial, and plant viruses: dynamics of virus multiplication; biochemistry of virus-cell interaction; virus-induced alteration in properties of host cells in several systems; tumor viruses inhibition of viral multiplication by specific agents; approaches to chemotherapy.

Supervised study under the direction of a research investigator on problems in immunohematology.

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

Research in Microbiology.

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

MORPHOLOGY

110A. Morphology of Human Dentition. (1) F. Lecture: 1 hour. Prerequisite: Morphology 110A and 115A. Noble
The application of individual tooth and arch form to interarch relationships.

110B. Applied Morphology. (1) W. Lecture: 1 hour. Prerequisite: Morphology 110A and 115A. Noble
The development and form of the primary and permanent teeth.

115A. Morphology of Human Dentition. (2) F. Laboratory: 6 hours. Prerequisite: Morphology 110A to be taken concurrently. Hamaguchi
Study of individual tooth form and relationship to adjacent anatomical structures.
115B. Applied Morphology, (2) F. Laboratory: 6 hours. Prerequisite: Morphology 110A and 115A. Hamaguchi
The application of individual tooth and arch form to interarch relationships.

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

401. Clinical Neurological Surgery at UC (1½ per week) F, W, Su. Prerequisite: Neurology 110 and consent of the instructor. Wilson
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 Neurological Surgery, (1½ per week) F, W, Sp. Prerequisite: Consent of the instructor. UC Adams
Second-year residents examine and participate in gross autopsies on patients from the Neurological Surgery Service.

Recent literature in neurology and neurological surgery is presented. Discussion is led by the faculty with participation of the attending staff.

199. Supervised Study in Neurology, (1-5) F, W, Sp. Prerequisite: Consent of the instructor. Wilson
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 Neurology and Neurosurgical Surgery, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B, and Neurology 110. UC Adams

This elective period will accommodate students above second year. Clinical responsibilities will be assigned accordingly. Students may choose to spend any period of time at one of four hospitals (UC, SF, LA, and F, one student per hospital).

400. Clinicopathological Conferences, (2-2-2) Su, F, W, Sp. Prerequisite: Consent of the instructor. Wilson
Residents discuss clinicopathological aspects of cases, and their correlation with the literature and special studies. Faculty and visitors discuss developments in related fields. Second-year residents organize conferences and participate in gross autopsies on patients from the Neurological Surgery Service.

404. Specialty Seminars, (1-5-1) Su, F, W, Sp. UC Adams, Wilson, Boldrey
Seminars include studies in neuropathology, electroencephalography, neurophysiology, and investigative neurological surgery. Attendance and participation in irregularly scheduled topical seminars on subjects in neurology, neurological surgery, and related fields also is required.

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 senior resident has certain administrative, teaching, and clinical responsibilities.

Students serve as clinical clerks in the inpatient services and outpatient clinics. Attendance at departmental clinical rounds, seminars and conferences is expected.

140.01. Advanced Clinical Neurology at UC, SF, LA, (1½ per week) Su, F, W, Sp. Prerequisite: Neurology 110. Fishman
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 is required.

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

140.03. Study of Cerebrovascular Disease, (1½ per week) Su, F, W, Sp. Prerequisite: Neurology 110. Yatsu
The Stroke Program at SF offers an opportunity for a comprehensive multidisciplinary approach to the evaluation of stroke patients. Conferences, rounds, and research seminars are held weekly.

Participation in childhood neurological studies being carried out in the department including work in Convulsive Neurology, Cerebral Palsy, and Developmental Clinic and visits to special programs for children with neurological handicaps.

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

450. Combined Staff Conference, (2-2-2) Su, F, W, Sp. F Connolly Residents responsible for examining and caring for patients, assisting in surgical procedures, and performing diagnostic procedures under supervision.

Residents discuss the clinical approach to the evaluation of stroke patients, including history-taking, neurological examination, laboratory tests, diagnostic procedures, and consultation.

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

Students serve as clinical clerks in the inpatient services and outpatient clinics. Attendance at departmental rounds, seminars and conferences is expected.

150.02. Neuropathology, (1½ per week) F, W, Sp. Prerequisite: Anatomy 103 and Pathology 100. Ashbury
Tissue pathology of diseases of the nervous system will be explored in greater depth in the postmortem room and by gross and microscopic techniques.

150.03. Advanced Neurology (Major, Pathways), (1½ per week) F, W, Sp. Four-, or twelve-week block elective. Prerequisites: Medicine 110 and Neurology Neurosurgery 110. Ashbury
Special experience in both clinical neurology and neuropathology is offered by special arrangement. It will include postmortem room experience, case study by neuropathologic techniques, clinical-pathologic correlations, and research opportunities.

189. Supervised Study in Neurology, (1-5) F, W, Sp, Su. SS I, SS II. Prerequisite: Consent of the instructor. Fishman
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 Neurology, (1-5) F, W, Sp, Su, SS I, SS II. Prerequisite: Consent of the instructor. Fishman
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

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

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

Residents responsible for examining and caring for patients, assisting in surgical procedures, and performing diagnostic procedures under supervision. Residents also present patients at conferences and attend seminars and rounds at UC.

Opportunities for research in one of the departmental laboratories by arrangement with the chairman.

150.02. Neuropathology, (1½ per week) F, W, Sp. Prerequisite: Anatomy 103 and Pathology 100. Ashbury
Tissue pathology of diseases of the nervous system will be explored in greater depth in the postmortem room and by gross and microscopic techniques.

150.03. Advanced Neurology (Major, Pathways), (1½ per week) F, W, Sp. Four-, or twelve-week block elective. Prerequisites: Medicine 110 and Neurology Neurosurgery 110. Ashbury
Special experience in both clinical neurology and neuropathology is offered by special arrangement. It will include postmortem room experience, case study by neuropathologic techniques, clinical-pathologic correlations, and research opportunities.

189. Supervised Study in Neurology, (1-5) F, W, Sp, Su. SS I, SS II. Prerequisite: Consent of the instructor. Fishman
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 Neurology, (1-5) F, W, Sp, Su, SS I, SS II. Prerequisite: Consent of the instructor. Fishman
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

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

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

Residents responsible for examining and caring for patients, assisting in surgical procedures, and performing diagnostic procedures under supervision. Residents also present patients at conferences and attend seminars and rounds at UC.
findings in selected cases of neurologic interest and histopathologic study and discussion of surgical and postmortem specimens from neurologic and neurosurgical patients.

403. Research in Neuropathology. (1-10) Su, F, W, Sp. Elective. Second- and third-year residents U.C. Malamud Course involves pathologic and clinicopathologic research into various aspects of neuropathology. Specific subjects of research are chosen in conjunction with members of the staff.

404. Research in Electroencephalography. (1-10) Su, F, W, Sp. Elective U.C. Fishman 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.


413. Clinical Pediatric Neurology. (1½ per week) Su, F, W, Sp. U.C. Berg, Diamond Course offers experience in the diagnosis and management of children with acute and chronic neurologic disorders. Outpatient clinics are held weekly for pediatric convulsive disorders and behavioral and learning problems of the school child.

415. Clinical Neurosurgery. (1½ per week) Su, F, W, Sp. U.C. Wilson Residents are responsible for the care of patients in the wards and outpatient clinic, under the direction of the attending staff, including history-taking, neurologic examination, laboratory tests, special diagnostic and therapeutic procedures, and consultations.


417. Clinical Neurophysiology. (1½ per week) Su, F, W, Sp. Elective. U.C. Hoyt Residents learn to interpret electroencephalograms under the supervision of experienced electroencephalographers. They interpret electroencephalograms on patients they have seen clinically and individual instruction available as required. Instruction is accredited by the Board of Qualification of American Electroencephalographic Society.

418. Clinical Training in Electromyography. (1½ per week) Su, F, W, Sp. U.C. Library Students learn the application of electromyography in the diagnosis of patients seen in the wards and in the outpatient clinic with individual instruction as required.


420. Clinical Neuropathology. (1½ per week) Su, F, W, Sp. Elective at UC and LPNI. U.C. Malamud Residents spend three months or more in the Neuropathology Laboratory at LPNI performing superficial autopsies and pathologic studies of brains from neurological, neurosurgical, and psychiatric patients.

421. Clinical Neurological Surgery. (1½ per week) Su, F, W, Sp. F.A. Ashbury Residents are responsible for the care of patients in the wards and outpatient clinic, under the direction of the attending staff, including history-taking, neurologic examination, laboratory tests, special diagnostic and therapeutic procedures, and consultations.

422. Clinical Pediatric Neurology: (1½ per week) Su, F, W, Sp. U.C. Berg, Diamond Course offers experience in the diagnosis and management of children with acute and chronic neurologic disorders. Outpatient clinics are held weekly for pediatric convulsive disorders and behavioral and learning problems of the school child.


425. Clinical Neurophysiology. (1½ per week) Su, F, W, Sp. Elective. U.C. Hoyt Interns rotate through neurology wards and, under supervision of the attending staff, are responsible for the care of patients including history-taking, neurologic examinations, laboratory tests, and diagnostic procedures.

NURSING

101B. Introduction to Nursing. (1) F. Prerequisite: Consent of the instructor. Adams Introduces nursing students to the role of their profession in today's society and provides an orientation to a specific system of teaching and learning.

102A. Concepts of Health and Disease. (5) F. Prerequisite: Consent of the instructor. Abbey Broad overview of illness as it affects the individual. Functional and structural changes in disease, and diagnostic, therapeutic, palliative, and preventive methods in current use are studied. Content for each quarter is based on specific patient models.

102B. Concepts of Health and Disease. (3) F, W, Sp. Prerequisite: Consent of the instructor. Abbey Broad overview of illness as it affects the individual. Functional and structural changes in disease, and diagnostic, therapeutic, palliative, and preventive methods in current use are studied. Content for each quarter is based on specific patient models.

102C. Concepts of Health and Disease. (5) F, W, Sp. Prerequisite: Consent of the instructor. Abbey Broad overview of illness as it affects the individual. Functional and structural changes in disease, and diagnostic, therapeutic, palliative, and preventive methods in current use are studied. Content for each quarter is based on specific patient models.

112. Small Group: Theories of Illness and Concepts of Health and Disease. (3) F, W, Sp. Lecture: 2 hours. Laboratory: 3 hours. E. White The course is designed to provide a sound theoretical basis in the principles and issues involved in the study, establishment, and functioning of special groups. Focus on application of theory to relevant nursing experiences.

114A. Introduction to Nursing Problems. (6) F. Prerequisite: Consent of the instructor. Abbey Orientation to an analytical process for the solution of nursing problems, to the role of the nurse, to patient and nurse-physician relationships, to professional communication techniques. Introductory integrated content and practice in all clinical areas.

114C. Introduction to Nursing Problems. (8) F, Sp. Prerequisite: Consent of the instructor. Abbey A lecture-discussion class that explores language as a symbolic system and as an instrument in describing emotional experiences. Along with general theoretical consideration of language, emphasis will be placed on disturbed communication as depicted in schizophrenic behavior.

120A. Concepts of Illness. (2) F, W, Sp. Prerequisite: Second-year standing in School of Nursing or consent of the instructor. Abbey Overview of interruptions in normal functions of major organ systems. The manifestations, diagnostic, therapies, and prognosis of local and systemic interruptions are considered, as they serve as basis for nursing observations, judgments, and actions.

120B. Concepts of Illness. (2) F, W, Sp. Prerequisite: Second-year standing in School of Nursing or consent of the instructor. Abbey Overview of interruptions in normal functions of major organ systems. The manifestations, diagnostic, therapies, and prognosis of local and systemic interruptions are considered, as they serve as basis for nursing observations, judgments, and actions.

120C. Concepts of Illness. (2) F, W, Sp. Prerequisite: Second-year standing in School of Nursing or consent of the instructor. Abbey Overview of interruptions in normal functions of major organ systems. The manifestations, diagnostic, therapies, and prognosis of local and systemic interruptions are considered, as they serve as basis for nursing observations, judgments, and actions.

124A. Nursing Problems in Major Health Interventions. (8) F, W. Prerequisite: Second-year standing in School of Nursing or consent of the instructor. Staff Designed to increase precision in nursing decisions and skills essential to therapeutic practice.
nursing interventions. Students will plan, give, and evaluate care for designated patients of all age groups and differing cultures and in increasingly complex situations.

124B. Nursing Problems in Major Health Interruptions. (8) F, W. Prerequisite: Second-year standing in the School of Nursing or consent of the instructor. **Staff**

Designed to increase precision in nursing decisions and skills essential to therapeutic nursing interventions. Students will plan, give, and evaluate care for designated patients of all age groups and differing cultures and in increasingly complex situations.

124C. Nursing Problems in Major Health Interruptions. (8) W, Sp. Prerequisite: Second-year standing in the School of Nursing or consent of the instructor. **Staff**

Designed to increase precision in nursing decisions and skills essential to therapeutic nursing interventions. Students will plan, give, and evaluate care for designated patients of all age groups and differing cultures and in increasingly complex situations.

131. Advances in Health Sciences. (3) W, Sp. Prerequisite: Third-year standing in the School of Nursing or consent of the instructor. **Staff**

Consideration of advances in the various disciplines within the health sciences as a basis for predicting future nursing roles and professional responsibilities.

134A. Problems Related to Professional Roles in Nursing. (9) F. Prerequisite: Third-year standing in the School of Nursing or consent of the instructor. **Staff**

Concepts and practice essential for understanding nursing roles in complex situations; participating in nursing care of patients with complicated problems, functioning as a nurse giving comprehensive care, as a team member or leader, and sharing responsibility with auxiliary personnel.

134B. Problems Related to Professional Roles in Nursing. (9) F, W, Sp. Prerequisite: Third-year standing in the School of Nursing or consent of the instructor. **Staff**

Concepts and practice essential for understanding nursing roles in complex situations; participating in nursing care of patients with complicated problems, functioning as a nurse giving comprehensive care, as a team member or leader, and sharing responsibility with auxiliary personnel.

134C. Problems Related to Professional Roles in Nursing. (9) F, W, Sp. Prerequisite: Third-year standing in the School of Nursing or consent of the instructor. **Staff**

Concepts and practice essential for understanding nursing roles in complex situations; participating in nursing care of patients with complicated problems, functioning as a nurse giving comprehensive care, as a team member or leader, and sharing responsibility with auxiliary personnel.

153. Nursing Observations in Fluid Imbalances. (3) Sp. Prerequisite: Second-year standing in the School of Nursing or consent of the instructor. **Abbey**

An exploration of nursing observations directly related to care of patients with body fluid imbalances.

154A. Nursing in School Health Programs. (5) F. Prerequisite: Consent of the instructor. **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. (4) W. Prerequisite: Consent of the instructor. **Rose**

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.


A course dealing 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) W. Prerequisite: Consent of the instructor. **Hardgrove**

A practical introduction to play designed to increase nursing skills in promoting growth, communication, and mental health in young children. Experiences and demonstrations with play materials and techniques used.

157. Nursing Management of Common Pediatric Illnesses. (18) W. Prerequisite: Consent of the instructor. **Dunbar and Staff**

Theory related to essential content areas and specific knowledge necessary for professional nurses beginning to function as pediatric nurses. Emphasis placed on most common illnesses of infancy and childhood.

158. Health Issues in Population Stabilization. (38) W. Prerequisite: Consent of the instructor. **Abbott**

Theory and research relevant to social,
Lecture: 2 hours. Laboratory: 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.

155. Clinical Uses of Drugs. (3) F, W, Sp. Prerequisite: Second-year standing in School of Nursing. **Takano**

A course dealing 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) W, Sp. Prerequisite: Consent of the instructor. Lecture: 1 hour. Laboratory: 6 hours. **Hardgrove**

A practical introduction to play designed to increase nursing skills in promoting growth, communication, and mental health in young children. Experiences and demonstrations with play materials and techniques used.

157. Nursing Management of Common Pediatric Illnesses. (4§) W. Prerequisite: Consent of the instructor. **Dunbar and Staff**

Theory related to essential content areas and specific knowledge necessary for professional nurses beginning to function as pediatric nurse practitioners. Emphasis placed on most common illnesses of infancy and childhood.

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

Theory and 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, Sp. Prerequisite: Consent of the instructor. **Mann**

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

160. Health Maintenance in Infancy and Childhood. (4§) F, Sp. Prerequisite: Consent of the instructor. **Dunbar and Staff**

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

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

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

162. Nursing Care of Children With Deviations in Development. (2-4§) F, W, Sp. Prerequisite: Consent of the instructor. **Staff**

Theory and practice related to prevention, case finding, and care of children with deviations in development including the mentally retarded. Focus on nurse's role as a community resource in promoting optimal development of these children living at home.

180. UCSF as a Health Care Institution. (2-4) F, W. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 0-6 hours. **Harding, Barnes**

Analysis of UCSF as a health care institution. This course will provide students from the various professional schools the opportunity to study collectively current issues in health care in order to relate those issues to their environment.

181. Law and the Practice of Nursing. (2-5) F, Sp. Lecture: 2 hours. Laboratory: 3 hours. **Tennenhouse**

Survey of fundamental and critical current issues in the 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. (3-5§) W, Sp. Prerequisite: Consent of the instructor. **Fleshman**

Processes and means of incorporating health education into professional practice: identification of audience, delineation of specific pertinent health concern, and exploration of modes of transmitting health information. Evaluation methods will be explored.

197. Group Independent Study. (1-5) F, W, Sp. Prerequisite: Consent of the instructor. **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 topics for study related to their area 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. Problems of Administration in Nursing. (2§) F. Prerequisite: Consent of the instructor. Archer
Theories of administration applied to the administration of nursing services or schools of nursing.

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

202. Conceptual Models in Nursing. (3§) W. Schatzman, Hill
Comparative study and critical analysis of major conceptual models in nursing. Emphasis will be placed on models that are prototypes for the following theoretical frameworks: Systems, symbolic interaction, developmental, and adaptation theories.

204A–B–C. Comparative Nursing Administration. (2–3, 2–3, 2–3§) F, W, Sp. Prerequisite: Consent of the instructor.
Comparative analysis of nursing with emphasis on nursing administration in the United States and other selected countries using perspectives from anthropological, educational, historical, organizational, philosophical, and sociological contexts applicable to each country. Particularly recommended for international students.

205. Processes of Supervision. (3–6§) W, Sp. Prerequisite: Nursing 201 or Nursing 200 or the consent of the instructor. Lecture: 2 hours. Laboratory: 3–12 hours. Sprowles
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 arranged for and guided by the faculty.

206. Microteaching. (4§) F, W, Sp. Staff
Analysis of the selected teaching components of reinforcement, stimulus variation, questioning, set induction, and closure utilized in individual and group instruction with applications and practice in a microteaching laboratory setting.

207. Research in Teaching. (2–4§) F. Prerequisite: Doctoral students only, consent of the instructor. Lecture: 2 hours. Laboratory: 0–6 hours. 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. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 3 hours. Sitman
Examination from historical, sociological, economic, and nursing perspectives of the phenomena surrounding emerging professional nurse roles. Selected examples from student contact with people practicing in emerging roles as well as published descriptions provide bases for exploration.

210A. Family Dynamics, Pathology, and Therapy. (2–4§) W. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 0–6 hours. Archer
Seminar which focuses on selected concepts and theories of family dynamics, systems, pathology, and treatment. Students will use clinical experiences, observations of families, tapes, etc., in addition to literature on families as a base for discussion.

210B. Family Dynamics, Pathology, and Therapy. (2–4§) Sp. Prerequisite: 210A or equivalent. Lecture: 2 hours. Laboratory: 3–6 hours. Moore
This course focuses on principles and issues in family therapy, various methods for intervening into family systems, marital therapy, and research in families. Clinical practice with families is required and supervision is provided.

211A. Introduction to Research: Perspectives and Styles of Research and Researchers. (3§) F. W. Prerequisite: Elementary statistics or equivalent. Lecture: 2 hours. Laboratory: 3 hours. Staff
Lectures and small group sections which 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. Prerequisite: Consent of the instructor. Staff
Sections with different substantive foci devoted to the development of the individual nurse as a consumer of research endeavors which will emphasize 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 B. Staff
Data collection, analysis, and reporting of a research project.

212A. Physiological Concepts in Nursing. (2-4§) F. Prerequisite: Consent of the instructor. Abbey
This course is designed to promote the understanding and application of physiological principles to cross-clinical nursing. A. Basic science considerations. B. Integrative aspects. C. Selected functional modifications.

212B. Physiological Concepts in Nursing. (2-4§) W. Prerequisite: Consent of the instructor. Abbey
This course is designed to promote the understanding and application of physiological principles to cross-clinical nursing. A. Basic science considerations. B. Integrative aspects. C. Selected functional modifications.

212C. Physiological Concepts in Nursing. (2-4§) Sp. Prerequisite: Consent of the instructor. Abbey
This course is designed to promote the understanding and application of physiological principles to cross-clinical nursing. A. Basic science considerations. B. Integrative aspects. C. Selected functional modifications.

213A. Nursing Measurements and Patient Monitoring. (2-4§) W. Prerequisite: Nursing 212A and consent of the instructor. Goldstein
Fundamentals of electronics, transducers, and instrumentation directly applicable to the modes of obtaining physiological data from patients.

213B. Nursing Measurements and Patient Monitoring. (2-3§) W. Prerequisite: Nursing 213A and consent of the instructor. Abbey
Selection and use of instrumentation applicable to patient monitoring, nursing research, and teaching.

215A. Health in the Community. (3§) F. W. Prerequisite: Consent of the instructor. Seminar: 2 hours. Laboratory: 3 hours. Staff
Exploration of theories, concepts and principles pertaining to the practice of community health nursing with focus on positive health factors and interactions within families, groups, and communities.

215B. Health Care Planning in Community. (3§) F. W. Prerequisite: Consent of the instructor. Seminar: 2 hours. Laboratory: 3 hours. Archer
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 on the role of the community health nurse in health planning.

215C. Community Health Issues. (5§) Sp. Prerequisite: Nursing 215A or 215B and consent of the instructor. Seminar: 2 hours. Laboratory: 3 hours. Sprowles
Exploration of community health issues previously identified in community health nursing. Opportunity to explore theories and to test their applicability to community and family health.

215D. Strategies of Community Organization. (3§) Sp. Prerequisite: Consent of the instructor. Archer
Exploration of strategies of institutional analysis, community assessment, and methods of community organization and development, enabling nurses to facilitate others' capacities to define, plan for, and meet their own physical, social, and mental health priorities.

216. Maternal Child Nursing. (3§) F. W. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 3 hours. Mercer
Survey of major phenomena utilizing concepts, theories, and laboratory experiences within child-bearing and child-rearing: pregnant couple, enlarging family, mother-child couple, progressing to evolving multiplicity of total family interactions, and life experiences in health and illness.

217. The Child and Illness. (3§) F. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 3 hours. Tesler
Theory and practice related to the effect of illness and hospitalization on the young child and its family. Emphasis will be on the nurse’s role in minimizing trauma and fostering growth.

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

219. Nursing Care of Acutely Ill Child. (3§) W. Prerequisite: Consent of the instructor. Tesler, Ward
Study of the nursing care of the acutely ill child. Theory and practice focus on exploration of the pathophysiological processes and their nursing management. The students will employ the problem-oriented framework to assess and manage patient problems.
Exploration of community health issues previously identified in community health nursing. Opportunity to explore theories and to test their applicability to community and family health.

216. Maternal-Child Nursing. (3) F. Pre-requisite: Consent of the instructor. Highley
Survey of major phenomena utilizing concepts, theories, and laboratory experiences within childbirth and childrearing: pregnant couple, matrix of enlarging family starting with mother-child couple progressing to evolving multiplicity of total family interactions and life experiences in health and illness.

Theory and practice related to the effect of illness and hospitalization on the young child and its family. Emphasis will be on the nurse’s role in minimizing trauma and fostering growth.

218. Maternal Identity: Role Transition. (2-3) Sp. Lecture: 2 hours. Laboratory: 0--3 hours. Highley
Role change, as dramatized by maternal role identity, will be used to examine transition as a lifelong developmental construct. Patient data will be utilized to examine theoretical concepts and generate new theory.

220. Advanced Seminar in Nursing Research. (3) F, W, Sp. Prerequisite: Nursing 211A and B, or equivalent and consent of the instructor. Staff
A seminar intended for doctoral students to discuss methods and problems in current nursing research.

224. Current Trends in Group Psychotherapy. (3) Sp. Prerequisite: Nursing 243 and 244 or consent of the instructor. White
Seminar 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.

Advanced seminar on psychotherapeutic nursing process, emphasizing communication theory and skills, learning theory, interview structures and processes, language and thought disorders. In laboratory, students will apply theories, principles of therapy, and behavioral change with patients demonstrating a range of psychopathology.

226. Nursing in Long-Term Illness. (3) F, W, Sp. Prerequisite: Consent of the instructor. Hallburg
Intensive study of problems related to long-term illness. Explorations of the interrelationships of various cultural, psychosocial, and pathophysiological factors involved in continuing health problems. Field experience included.

227A-B. Seminar in Psychological Approaches to Comprehensive Nursing Care. (3-3) W, Sp. Prerequisite: Nursing 225 or equivalent and consent of the instructor. Staff
Study of psychological aspects of care which synthesizes components of the clinical specialties in nursing and concepts of biological and behavioral sciences and the humanities. Study of psychiatric nursing theory as it can be applied to practice in nonpsychiatric settings.

228. Communications - Theoretical and Philosophical. (2-4) F, W, Sp. Prerequisite: Consent of the instructor. A. Davis
The concept of communication has become one of the overlapping areas in a number of disciplines. This course examines research studies, polemical essays, and philosophical writings that have made the concepts and problems of human communication central to their investigation.

229. Crisis Intervention. (2-4) W, Sp. Prerequisite: Consent of the instructor. Staff
A two-hour seminar to discuss innovative uses of crisis intervention in selected nursing areas. Focus on underlying theory; i.e., Lindeman, Erickson, Harris, Lazarus, and Caplan. Special emphasis on application in the community.
23.01. Femininity and Sexuality. (3) W, Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 3 hours.

Zalat, Murphy

Theories and concepts of femininity, masculinity, and sexuality throughout the life cycle. Explores the wide range of human sexual expressions, behaviors, and dysfunctions. Focuses on better understanding of self and others to facilitate more effective nursing interventions.

23A. Nursing Administration. (2-4 F) W, Sp. Prerequisite: Consent of the instructor. Staff

Advanced study in the theory and practice of nursing administration in schools of nursing or nursing services.

23B. Dynamics of Leadership. (2-4) W. Prerequisite: Nursing 232A or consent of the instructor. Lecture: 2 hours. Laboratory: 0-6 hours.

Bailey

Analysis of interactive variables and functional relationships of leadership characteristics of the leader, follower, and health care environment. Focuses on ideas, theories, and research related to leadership behaviors, styles, and strategies. Laboratory includes computer simulation.

23C. Problems in Leadership. (2.5) Sp. Prerequisite: Nursing 232A or B, or consent of the instructor. Lecture: 2 hours. Laboratory: 0-6 hours.

Bailey

Seminar focuses on 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.

23D. Coping Styles of Children. (3) W. Prerequisite: Consent of the instructor. Dunbar

Examination and assessment of individual coping styles in young children. Theoretical framework based upon Murphy, Lazarus, Menninger, and others. Laboratory data will be used to explore nursing interventions relating to stress periods and coping patterns in children.

23E. The Threat of Death in Clinical Practice. (3) W. Prerequisite: Consent of the instructor. Lowenberg

Seminar providing opportunity for discussion about multiple issues which come into play when adult patients face death. Discussion will focus on meaning of dying from perspective of persons undergoing the experience and on problems of health professionals when patients are dying.

23F. Expectant Parent Group Education. (3) W, Sp. Prerequisite: Consent of the instructor. Abbott

Theoretical sessions related to methodology and techniques of conducting expectant parent discussion groups. Laboratory experience as group leaders. Seminar discussions of the application of theories and principles of groups to student experience.

23G. Survey of Child Development. (5) F. Prerequisite: Consent of the instructor. Waechter

Survey of the major theories and research findings related to normal physical, intellectual, and emotional development in childhood and adolescence.

23H. Development of the Infant and Preschool Child. (5) F. Prerequisite: Consent of the instructor. Waechter

Exploration of the major theories and research findings dealing with the physical, intellectual, and emotional development of the child from birth to school age.

23I. Development in Middle Childhood. (3) W. Prerequisite: Consent of the instructor. Waechter

Exploration of the relevant theories, literature, and research findings dealing with normal cognitive, emotional, and social development during the elementary school years.

23J. Adolescent Development. (3) Sp. Prerequisite: Consent of the instructor. Waechter

Exploration of relevant theory, literature and research findings dealing with normal development during the adolescent period.

23K. Career of Patients with Pulmonary Problems. (3) F. Prerequisite: Consent of the instructor. Staff

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 health care delivery.

23L. Care of Patients with Pulmonary Problems. (3) Sp. Prerequisite: Consent of the instructor. Staff

Investigation of nontherapeutic, unintended physiologic effects of selected nursing interventions commonly with patients with cardiopulmonary dysfunctions. Clinical laboratory included.

23M. Physical Assessment of Cardiopulmonary Status. (5) F. Prerequisite: Consent of the instructor. Flood

Intensive study of the criteria, methodology, and principles utilized in physical assessment of cardiopulmonary status as they apply to the nursing assessment of adults in health and illness. Observation and interpretation of patient data in the clinical laboratory.

23N. Psychophysiological Concepts in Action. (3) F. Prerequisite: Consent of the instructor. Waechter

In-depth psychophysiological exploration of concepts of anxiety, stress, body image, and adaptation as they relate to and influence nursing practice.

23O. Theories of Group Psychotherapy. (2-4) W. Prerequisite: Nursing 245 or consent of the instructor. White

Theories of group psychotherapy based on psychoanalytic, interpersonal and communication theories pertinent to the practice of group psychotherapy by nurses. Exploration of differing models of therapy, basic principles and techniques of group therapy, and role of psychiatric nurse as leader.

23P. Well-Young Adult Health. (3-3-3) F, W, Sp. Prerequisite: Consent of the instructor. Floyd

A comprehensive study of ongoing health education for new Populations of patients. Focuses on a selected area of special problems in nursing and health sciences for nurturance and nursing role.

23Q. Longitudinal Studies: Child-Bearing Child-Rearing. (1-2, 1-2, 1-2) F, W. Prerequisite: Consent of the instructor. Waechter

Longitudinal study and appraisal of developments in established families from developmental framework including identification of critical periods, stress, and adaptation.

23R. Group Independent Study. (1-5) F, W, Sp. Prerequisite: Consent of the instructor. Staff

Groups of two or more collaboratively in clinical investigations, and other studies of special problems in nursing and health sciences under the direction of faculty. Students may select areas related to their long-term interests and future research or clinical program.

23S. Independent Study. (1-5) F, W, Sp. Prerequisite: Consent of the instructor. Staff

Individual study with emphasis on special problems in nursing. Students may select areas of study which are related to their area of interest or future goals.

23T. Research. (1-8) F, W, Sp. Prerequisite: Admission to doctoral study and consent of the instructor. Staff

23U. Research in Human Communication. (3) W, Sp. Prerequisite: 211A or equivalent.

Davis

Seminar to examine selected research focusing on human communication. Such research topics as interaction, social context, and language will be explored.

23V. Advanced Studies in Community Health Nursing. (4-4-4) F, Yr. Prerequisite: Consent of the instructor. Staff

Study and analysis of research implementing current theories and concepts, formulation of hypotheses for Community Health Nursing; synthesis of knowledge from behavioral and biological sciences, exploration of innovations, search for significant dimensions of nursing care.
120. Nutrition. An intensive study of theory and practice of nutrition with the study of metabolism, nutrition requirements of the diet. Several sessions are included. (2-12) F, W, Sp. Prerequisite: Consent of the instructor.

232. Community Mental Health Nursing and the consent of the instructor. Nursing 276A is not prerequisite. Children and youth; focus on the two-person relationships. Child psychiatric majors receive supervised experience for two units.

405A-B-C. Family Therapy. In-depth application of theory of psychiatric nursing with children and youth in a psychotherapy setting. Techniques of psychotherapy with a total family-oriented approach will be directed to such issues as vegetarian diet, stress, family planning, and Gynecology. (4-6) F, W, Sp. Prerequisite: Consent of the instructor.

406A-B-C. Advanced Psychiatric Nursing of Adolescents and Youth. (4-6) F, W, Sp. Prerequisite: Consent of the instructor.

A research project under the direction of the faculty.

198. Supervised Study in Obstetrics and Gynecology. (1-5) Su, F, W, Sp. Prerequisite: Obstetrics and Gynecology 110. Page and Staff Library 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) F, W, Sp, Su. Prerequisite: Consent of the instructor. Page and Staff A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

400. Staff Conferences. (1-1-1-1) Su, F, W, Sp. Page Conferences comprise formal discussions by staff, faculty, and visiting lecturers.

401. Surgical Pathology Seminar. (1-1-1-1) Su, F, W, Sp. UC Hill, McKay Seminar includes the presentation of pathologic material from the obstetrical and gynecologic services with formal instruction and discussions.

402. House Staff Seminars. (1-1-1-1) Su, F, W, Sp. Page Seminars include presentations of special topics, literature reviews, and discussions. Discussion of resident staff functions also are held.

450. Clinical Obstetrics and Gynecology. (1½ per week) Su, F, W, Sp. CHS Webb, SF Smith, UC Page Residents are responsible for the care of patients in the hospital and outpatient clinic. Formal and individual instruction is conducted.

460. Clinical Gynecology. (1½ per week) Su, F, W, Sp. SF Smith Residents intern through gynecology wards and clinics. They are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examination, laboratory tests, and consultation.

125. Applied Dental Morphology and Physiology of Occlusion. (2) Lecture: 1 hour. Prerequisite: Oclusion 120 to be taken concurrently.

Schuchard and Staff The application of the subject of occlusion to clinical diagnostic procedures.

180. Principles of Occlusion. (1) Lecture: 1 hour. Prerequisite: Operative Dentistry 180. Schuchard and Staff The etiology of functional disturbances, analysis of occlusal relationships of the opposing arches and formulating therapy will be presented. The principles of occlusion as they apply primarily to adult clinical dentistry will also be discussed.

OPERATIVE DENTISTRY

115A. Operative Technics. (1) Lecture: 1 hour. Prerequisite: Operative Dentistry 115A must be taken concurrently with Operative Dentistry 116.

115B-C. Operative Technics. (1-1-1) Lecture: 1 hour. Clinic and demonstration: 2 hours. Prerequisite: Operative Dentistry 115A-C must be taken concurrently with Operative Dentistry 116.


130A-B-C. Operative Theory. (3-1-1½) Lecture: 5 hours F; 1 hour W; 1 hour Sp. Prerequisite: All previous operative lecture, laboratory, and clinical courses.


Continuation of Operative Dentistry 139.

189. Advanced Operative Dentistry. (1½ per week) F, W, Sp, Su. Prerequisite: Consent of the instructor. Hogan and Staff This course must be taken concurrently with Operative Dentistry 139.

Continued in the same course covering quadrent dentistry, washed field techniques, clinical restorations, analysis of restorative research, and clinical applications of the various restorative procedures.

190. Advanced Operative Dentistry Theory. (1) Lecture: 1 hour. Prerequisite: Operative Dentistry 139A-B-C.

190A. Advanced Operative Dentistry Theory. (1) Lecture: 1 hour. Prerequisite: Operative Dentistry 190.

190B. Advanced Operative Dentistry Theory. (1) Lecture: 1 hour. Prerequisite: Operative Dentistry 190. Schuchard and Staff The etiology of functional disturbances, analysis of occlusal relationships of the opposing arches and formulating therapy will be presented. The principles of occlusion as they apply primarily to adult clinical dentistry will also be discussed.

OPHTHALMOLOGY

402. Specialty Seminars. (6-6-6) F, W, Sp. Elective for residents at ME, SF, HCH, and PA. UC Hogan Conferences include grand rounds, case presentations of hospital patients, review of recent literature in ophthalmology, and assigned reading with required reports.

490. Ophthalmology Seminars. (1-1-1) F, W, Sp. UC Hogan Residents prepare and present diagnostic and therapeutic problem cases. Discussions by faculty and visitors follow. Residents also present papers on various aspects of medicine and ophthalmology which are discussed by faculty members.

198. Supervised Study in Ophthalmology. (1-5) F, W, Sp. Hogan and Staff A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.


199. Laboratory Project in Ophthalmology. (1-5) F, W, Sp. Hogan and Staff A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

OPHTHALMOLOGY

Core Clerkship—Surgery 110 and 111 includes lectures and clinical experience in the diagnosis and care of eye diseases.

140.01. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor. Hogan and Staff Clinical clerkship in approved hospitals by special arrangement and approval by the Dean and the chairman of the department.
residents in eye surgery and the Eye Bank program. Specialty clinics include: Scleral lens, ocular trauma, vitreoretinal, and cornea. Residents are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases.

45. Clinical Ophthalmology, (1½ per week) Su, F, W, Sp, 5 M, 2.2 Fine Residents, under supervision, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases. Speciality clinics at UC cover glaucoma and external diseases. Residents consult for other hospital services.

45. Fourth-Year Residency, (1½ per week) Su, F, W, Sp, 5 UC Hogan Residents take a one-week rotation at UC or at any approved institution subject to the approval of the department chair and the Dean.


49. Clinical Ophthalmology, (1½ per week) Su, F, W, Sp, 5 Goodner Residents act as attendings for the attending staff, are responsible for patient care in wards and in the follow-up clinic, including diagnosis, treatment, and consultation. This rotation is combined with patient-care assignments at the Ophthalmology Service.

ORAL BIOLOGY


121. Oral Biology. (5) F. Lecture: 4 hours. Laboratory: 4 hours. Prerequisite: Oral Biology 126 or consent of the instructor. Christie and Staff

Introduction to oral biology correlating morphology, chemistry, physiology, and clinical aspects.

122. Current Oral Pathology. (2) Sp. Lecture: 2 hours. Hansen and Staff

A seminar designed to acquaint post-doctoral students with current advances, techniques, trends, and developments in the field of oral pathology.

123. Dental Therapeutics. (2-2) W. Seminar: 2 hours. Prerequisite: Pharmacology 126 or equivalent. Goodson

The course will cover current aspects of preoperative and postoperative dental medication, anesthesia, antibiotic, and steroid therapy; also the handling of adverse drug reactions and medical emergencies will be considered.


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.
in research in oral biology in a systematic man-
er. Course literature will be critically re-
viewed by students under faculty supervision,
or by faculty or guest lecturers.


298. Thesis (0) F, W, Sp. Prerequisite: Ad-


ance to candidacy and permission of the


graduate advisor. Staff


299. Staff


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


Practice in teaching in a course in oral


biology under the supervision of the instruc-
tor in charge.


A wide spectrum of selected topics re-


tated to oral biology are presented with em-


phasis on basic and applied research method-


ology, pertinence of problems, significance of


findings, and critical evaluation of data.


Lectures and seminars on diseases of the


oral region. Disease entities are studied from a
clinical and histomorphological standpoint

with emphasis on etiology and pathogenesis.


409. Oral Medicine. (1) F, W, Sp. Clinic: 3 hours. Prerequisite: Dental degree and con-


sent of the instructor. Ware, Silverman and Staff


Participation in the Oral Medicine Clinic


apply knowledge of history-taking and differ-


ential diagnoses; utilize various diagnostic
techniques such as biopsy, cytology, and cer-


tain clinical pathology laboratory tests; inter-


pret results; prescribe treatment and follow-


up; hospital rounds; and weekly seminars.


4092. Oral Medicine. (1) F, W, Sp. SS. Clinic: 3 hours. Prerequisite: Dental degree and consent of the instructor. Ware, Taylor and Staff


Participation in the Temporomandibular Joint Clinic applying knowledge of history-


taking and differential diagnosis; utilizing such diagnostic techniques as laryngographic X


rays, occlusal analysis, and other specific joint
tests; interpret results; prescribe treatment; and


follow-up with patient reviews.


ORAL DIAGNOSIS


116A-B-C. Clinical Dentistry. (2.2-3) F, W, Sp. Prerequisite: 1 hour. Clinic: 3 hours F, T, 3 hours W, 6 hours Sp. Douglass


An introduction to concepts of dental


health and disease and a recognition of these


through a multidisciplinary clinical orienta-


tion program.


130. Oral Diagnosis and Treatment Plan-


ning. (1) F, W, Sp. Seminar: 10 hours per year. Prerequisite: Third-year standing.


Brady and Staff


All aspects of examination and diagnosis as they apply to the practice of dentistry will be presented and discussed. Experience in treatment planning will be provided.


139. Clinical Oral Diagnosis. (Maximum of


Brady and Staff


Credit will be assigned on a point basis for independent case work-ups, case presenta-


tion, and additional time spent in the emer-


gency clinic.


159.01. Oral Diagnosis Rotation. (1) F, W, Sp. Clinic: Block Rotation: 27 hours. Prereq-


uity: Third-year standing in oral diagnosis.


Brady and Staff


Clinical experience and small group in-


struction is provided in oral diagnosis, emer-


gency dental care, clinical photography, and


roentgenologic interpretation.


149. Clinical Oral Diagnosis. (Maximum of


Brady and Staff


Continuation of Oral Diagnosis 159.


149.01. Oral Diagnosis Rotation. (1) F, W, Sp. Clinic: Block Rotation: 27 hours. Prereq-


uity: Fourth-year standing in oral diagnosis.


Brady and Staff


Continuation of Oral Diagnosis 159.


ORAL ROENTGENOLOGY


121. Roentgenologic Interpretation. (1) Sp. Lecture: 1 hour. Parks


Parks


The lectures cover basic theoretical


knowledge of the use of X ray as an important
diagnostic aid in dental practice in prepara-


tion for later learning the actual skill of


taking anatomically accurate dental X rays


and dental roentgenograms. Parks


diagnosis.


diagnosis.


ORAL SURGERY


130A-B-C. Oral Surgery. (1) F, W, Sp. Prerequisite: Oral Surgery 130A-B-C. Huebsch and Staff


Relationship of gross anatomical struc-


ures of the head and neck are studied during


laboratory dissection. Emphasis will be placed


on the correlation of cadaver dissection find-


ings to diagnosis and operating room surgery.


175. Oral Surgery. (10) Su. Prerequisite: Limited to oral surgery interns. Hospital and Clinic: 90 hours. Huebsch and Staff


Principles of surgery and local anesthesia


as related to the mouth and clinical operations


on patients.


175.01A-B. Oral Surgery. (5-5) F, W, Sem-


inar: 2 hours. Hospital and clinical practice: 9 hours. Prerequisite: Limited to oral surgery interns. Continuation of Oral Surgery 175.


175.02. Oral Surgery. (12) Su. Seminar: 2 hours. Hospital and clinical practice: 12 hours. Prerequisite: Limited to oral surgery residents. Huebsch and Staff


Continuation of Oral Surgery 175.01.


175.04B-C. Oral Surgery. (12) Su. Hospital and clinical practice: 24 hours. Prerequisite: Limited to oral surgery residents. Huebsch and Staff


Hospital procedure, ward rounds, and clinical practice in several hospitals; treat-


ment of jaw fractures, osteomyelitis, cellulitis, and other complicated conditions. Attendance is required at the tumor clinic and in the ex-


perimental surgery training program.


175.04B-C. Oral Surgery. (12) Su. Lecture: 2 hours. Hospital and clinical practice: 9 hours. Prerequisite: Limited to oral surgery residents. Huebsch and Staff


Continuation of Oral Surgery 175.04 with


the addition of surgery of the jaws for cor-


relation of such facial deformities as progra-


throm, apertognathia, and retrognathia. Tem-


poromandibular joint surgery is taught.


175.04A-B. Oral Surgery. (12) Su. Hospital and clinical practice: 30 hours. Prerequisite: Oral Surgery 175.01B-C. Limited to oral surgery residents. Huebsch and Staff


Continuation of clinical oral surgery. Cer-


tain periods each week devoted to supervised


instruction of undergraduate students.


175.06A-B-C. Oral Surgery. (10) F, W, Sp. Hospital and clinical practice: 32 hours. Prereq-


uity: Oral Surgery 175.05. Limited to oral surgery residents. Huebsch and Staff


Continuation of Oral Surgery 175.05.
Heusch and Staff Additional clinical experience for students who have completed all clinical requirements.


Limited experience in hospital oral surgery to include assisting and performing oral surgery procedures. Aspects of premedication as related to the ambulatory patient. Orientation in hospital decorum and operating room procedures.

189.03. Hospital Oral Surgery. (1-3) F, W. Sp. Clinic and Seminar: SF. Prerequisite: Oral Surgery 110A-B and approval of the instructor and the Clinic Review Committee.

Heusch and Staff Limited experience in hospital oral surgery to include assisting and performing oral surgery procedures. Aspects of premedication as related to the ambulatory patient. Orientation in hospital decorum and operating room procedures.

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

489.1. Clinical Oral Surgery. (1) F, W, Sp. Prerequisite: Enrollment in dental internship program. Clinic: 1½ day · Courage This course is designed to teach the dental intern exodontia procedures under close supervision in the oral surgery clinic. The trainee takes responsibility for care of the oral surgery patient including preoperative evaluation, surgery planning, and postoperative care.

489. Oralofacial Anomalies. (2) F. Lecture: 2 hours · Lawson Normal development of speech, consideration of speech patterns, habits, and defects as related to dental and orofacial problems. 

170. Oropharyngeal Anomalies. (2) F. Seminar and Clinic: 5 hours. Prerequisite: Oral Surgery 110A-B and approval of the instructor. 

Harvold, Chierici and Staff Diagnostic and therapeutic habilitation of the patient with orofacial malformations. Discussions will include principles and techniques of construction of obturators, speech appliances, and retention bridges.

406A-B-C. Oropharyngeal Orthopaedics. (1-3) F, W. Sp. Seminar, Laboratory, and Clinic: 3-9 hours. Prerequisite: D.D.S. degree or equivalent.

Harvold and Staff Diagnosis of orofacial malformations and current preventive and corrective measures. Emphasis will be placed on the interrelationship of morphology and physiology and the coordination of treatment by the various disciplines involved.

407. Oropharyngeal Prosthetics. (1-3) W. Seminar, Laboratory, and Clinic: 3-9 hours. Prerequisite: D.D.S. degree or equivalent.

A course designed to acquaint the student with many facets of prosthetic management of acquired oral defects. Relationship of prosthesis to speech, mastication, deglutition, oral biology, and surgery will be discussed. The interrelationship and management of these problems will be stressed.

408A-B-C. Speech Habilitation. (1-3) F, W. Sp. Seminar, Laboratory, and Clinic: 3-9 hours. Prerequisite: D.D.S. degree or consent of the instructor.

Chierici, Harvold Normal development of speech, etiology, and diagnosis of speech defects; principles and methods of remedial procedures, with special emphasis on patients with orofacial malformations or defects.

ORTHODONTICS

121. Introduction to Growth and Development. (1) Sp. Lecture: 1 hour · Meyers A description of 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. (1-1) F, W. Lecture: 1 hour. Prerequisite: Orthodontics 121. Scholz Principles and treatment of the problems most commonly seen by the general practitioner.


141. Applied Growth and Development. (1) F. Lecture: 1 hour. Prerequisite: Orthodontics 121, 131A-B, and 132. Meyers Application of general principles of growth and development to specific malocclusions and facial anomalies.

160. Principles of Orthodontics. (1) W. Lecture: 1 hour · Harvold and Myers This is a discussion of recognition, etiology, and principles of orthodontics for the dental hygienist.

170A-B. Fundamentals of Orthodontics. (4-2) F, W. Seminar: 4 hours; F; 2 hours, W. 

Classification, etiology, and diagnosis of malocclusion. Study of the dentition and the relationships of dental and cranial structures.

170C. Fundamentals of Orthodontics. (2) Sp. Prerequisite: Orthodontics 170A-B. West Continuation of 170A-B.

171B-C. Orthodontics in Periodontic Practice. (1-1) W. Sp. Lecture: 1 hour. Prerequisite: Approval of instructor and enrollment in a postdoctoral specialty program. Staff 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. Sp. Lecture: 2 hours · Mathews Research methods in the study of growth with findings relative to sites of growth, serial development of pattern, factors influencing facial growth.

171.02. Biology of Dentoalveolar Development. (2) Sp. Prerequisite: Orthodontics 171.01 A-B-C. Lecture: 2 hours · Mathews Embryology of the face and palate, biology of cartilage and bone as applied to dentoalveolar 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 the instructor and enrollment in a postdoctoral specialty program. Lecture: 2 hours · West and Staff This course includes orthodontic principles and techniques that are applicable in a pedodontics practice.

171.01A-B-C. Orthodontics in Pedodontic Practice. (1-1-1) F, W, Sp. Prerequisite: Orthodontics 171.03A-B-C. Lecture: 1 hour · West and Staff Continuation of 171.03A-B-C.

172A. Cephalometrics. (2) F. Seminar: 2 hours · Poulton Use of lateral headfilms; reliability of landmarks, applications in dentistry. Technique of tracing; evaluation of relationships, technique of superimposition are discussed and illustrated.

172B. Cephalometrics. (2) W. Seminar: 2 hours · Poulton Evaluation of various analyses used in orthodontic diagnosis, including growth changes in serial studies.

172B1-C. Introduction to Orthodontic Research. (2-1) W. Sp. Lecture: 2 hours; 1 hour Sp. Baumrind Introduction to design and analysis of clinical investigations. Special emphasis is
245 Courses

placed on critical reviews of selected scientific literature in terms of appropriate design, hypothesis testing, and generalization.

170.02A-B. Supervised Orthodontic Research (1-1) F, W, Prerequisite: 170.01B-C.
Sheldon, Baumrind
Participation in group and individual clinical investigations including experience in hypothesis generation, sampling, measurement, data acquisition, and data analysis.

179.01A-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.

173.02 Special Study. (1) F, W, Sp. Research: 3 hours.

173.03A-B-C. Treatment Planning. (3-3-3) F, W, Sp. Seminar: 3 hours.
West Staff Seminar.

173.04. Treatment Planning. (3-3) SSII, Seminar: 5 hours.
West Staff Seminar.

173.05. Special Study. (1-1) SSII, Seminar: 5 hours.
Baumrind Research project and preparation of thesis.

173.06. Treatment Evaluation. (3-3) SSII, Seminar: 5 hours.
West Staff Seminar.


174C. Ortho Pale Orthodontics. (2) F, Seminar: 2 hours.

176B-C. Comparative Orthodontic Concepts. (2-2) W, Seminar: 2 hours. Poulton Critical evaluation of orthodontic treatment procedures to provide orthodontic students with a knowledge of techniques differing from those taught in clinical courses.

Scholtz Practice management and office administration.

West and Staff Discussion of occlusion from the standpoint of the orthodontist and periodontist and from the standpoint of oral rehabilitation.

179.01A-B-C. Clinical Orthodontics. (5-5-5) F, W, Sp. Laboratory and clinic: 15 hours.
West and Staff Laboratory instruction precedes clinical experience. A minimum of 1,000 hours are included in the series of courses Orthodontics 179.01A-B-C, 179.02, 179.03A-B-C, and 179.04.

179.02. Clinical Orthodontics. (5) SSII. Clinic: 15 hours.
West and Staff Continuation of Orthodontics 179.01A-B-C.

179.03A-B-C. Clinical Orthodontics. (5-5-5) F, W, Sp. Clinic: 15 hours. West and Staff Continuation of Orthodontics 179.02.

179.04A-B-C. Clinical Orthodontics. (5-5-5) SSII, Clinic: 15 hours. West and Staff Continuation of Orthodontics 179.03A-B-C.

Scholtz Discussion of diagnosis, prognosis, and approach to treatment of malocclusions. Includes treatment timing, limitations, and inter-disciplinary problems.

Scholtz Various concepts of occlusion will be evaluated as they affect habituation problems and functional problems of the temporomandibular joint.

189. Clinical Orthodontics. (4-4-1) F, W, Sp. Prerequisite: Orthodontics 121 and 131A-B. Third-year students may register for the spring quarter. Fourth-year students may register for the fall, winter, and spring quarters.
Scholtz Treatment of orthodontic problems related to general dental practice.

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

ORTHOPAEDIC SURGERY

Care Clerkship—Surgery 110 and 111 includes seven to eight orthopaedic 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. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. U.C. Murray

Students, assigned to inpatient and outpatient services, receive instruction and experience in examination and treatment of patients. Assistance in surgery and in use of treatment modalities is required. Clinical demonstrations, seminars, and conferences form the basis for didactic instruction.

140.02. Orthopaedic Surgery Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Murray Orthopaedic surgery clinical clerkships are offered off-campus hospitals approved by the department chairman and the Dean.

140.03. Orthopaedic Surgery Clinical Clerkship at PMC. (1½ per week) F, W, Sp. Prerequisite: Surgery 110 and 111. King and Staff Instruction involves case demonstrations, consideration of fracture and diagnosis problems, and problems in reconstruction of the extremities. Patients are examined and their X-rays reviewed.

140.04. Rehabilitation Clinical Clerkship. (1½ per week) Su, F, W. Prerequisite: Medicine 153A-B. Bard Rehabilitation clinical clerkships are offered off-campus hospitals approved by the Dean and the chairman of the department.

170.01. Biomechanics of the Locomotor System. (1) F, W, Sp, Su, SS. Prerequisite: Consent of the instructor. Inman Correlation of anatomy and function with demonstrations on patients.

400. Demonstrations in Orthopaedic Pathology. (1) F, W, Sp. First- and second-year residents. U.C. Smyth A didactic course in orthopaedic pathology conducted as demonstrations and presentations by faculty and students instructed by gross and microscopic specimens and case studies.


402. Seminars in Physiology of Musculoskeletal System. (1) F, W, Sp. U.C. Morris Seminars cover connective tissue metabolism, muscle function, bone and joint physiology, pre-operative and postoperative management of patients; wound infections; microbiology; and surgical principles.


404. Seminar in Orthopaedic Literature. (1) F, W, Sp. Residents at C, F, F, SF, UC, and F.A. U.C. Morris Seminars are student presentations of selected orthopaedic surgery subjects featuring historical review complete with bibliography. They are moderated by an assigned faculty member.


UC Johnston UC Bovill, SS F. Larsen, UC Samilon Research projects are provided in orthopaedic surgery under the direction of a faculty member. Research activities include instruction in scientific methods, statistical analysis, and manuscript preparation.


407. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. U.C. Murray Seminars include presentation of problem cases by residents for consideration of diagnosis and treatment and discussion by the attending staff.

408. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. UC Bovill 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. SS E. Larsen Conference with emphasis on children’s problems in which residents make case presentations of inpatients for review and new patients for consideration of diagnosis and therapeutic plan.

411. Orthopaedic Surgical Conference. (1) Su, F, W, Sp. F.A. Maurer Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.

412. Orthopaedic Clinical Seminars. (1) Su, F, W, Sp. CHMUC Rowe, H Smith, SM W. Johnston Seminars are held in rotation at each of these hospitals with residents from all three hospitals attending. They include literature
review and demonstrations related to surgical approaches, anatomical dissections, diagnosis, and treatment.

413. Medical Staff Conference. (1) Su, F, W, Sp. UC 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 (conferences).


430. Conference on Rehabilitation. (1) F, W, Sp. UC Specht This conference includes case presentations, lectures, and discussion on new developments in rehabilitation.

431. Conference on Rehabilitation. (1) Su, F, W, Sp. UC Bard This conference includes case reviews of patients referred for rehabilitation and special studies on comprehensive management including evaluation and disposition of patients (mental, social, vocational, prosthetic, psychiatric, and other paramedical factors).

432. Seminars in Rehabilitation Literature. (2) Su, F, W, Sp. UC Specht Current literature in physical medicine and rehabilitation is presented. Seminars include presentation of selected topics, literature review, and discussion. Discussion is moderated by a faculty member.

450. Clinical Adult Orthopaedics. (1½ per week) Su, F, W, Sp. F Cox, PMC Niebauer, KP J. Johnson, M2 Collot, G L Larsen, M L Perry, T L Larsen, F R Hartwig, UC Murray 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 Electrodiagnosis. (1½ per week) Su, W, Sp. UC Hirschberg, Wong Residents are instructed in electrodiagnosis and in techniques of electromyography by means of clinical demonstrations.

459. Clinical Orthopaedics. (1½ per week) Su, F, W, Sp. SF Bovill Interns rotate through orthopaedic wards and followup clinics. They are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examination, X-ray conferences, and consultation.

460. Clinical Orthopaedics, Rehabilitation. (1½ per week) Su, F, W, Sp. UC Bard Residents are responsible for patient care in the wards under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, rounds, and consultations.

461. Clinical Orthopaedics. (1½ per week) Su, F, W, Sp. UC Specht 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 (conferences).

480. Clinical Orthopaedics, Rehabilitation. (1½ per week) Su, F, W, Sp. UC Specht Residents are responsible for patient care in the wards under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, rounds, and consultations.

481. General Otolaryngology. (1½ per week) Su, F, W, Sp. M Z Collot, G L Larsen, H L Perry, T L Larsen, F R Hartwig, UC Murray Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.


Otolaryngology

Core Clerkship—Surgery 110 and 111 include lectures and case presentations on the examination and diagnosis of otolaryngological diseases, particularly those related to the head and neck.

140.02. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 151A, B.

Clinical clerkships in off-campus hospitals are approved by department chairman and the dean.

140.03. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor.

149. Laboratory Project in Otolaryngology. (1 per week) Su, F, W, Sp. Prerequisite: Consent of the instructor.

150. Laboratory Project in Otolaryngology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor.

151. Clinical Otolaryngology. (1½ per week) Su, F, W, Sp. C Castro, M D Lyon, UC Sooy Residents under supervision are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations. Senior resident has certain administrative, teaching, and clinical responsibilities.

154. Clinical Otolaryngology. (1½ per week) Su, F, W, Sp. A Ross Residents under supervision are responsible for patient care in the wards and outpatient clinics including history-taking, physical examinations, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations. Senior resident has certain administrative, teaching, and clinical responsibilities.
outpatient clinics including history-taking, physical examination, laboratory tests, pre-operative and postoperative care, minor surgery, audiometry, vestibular testing, consultations, and Officers of the Day duties, resident has certain administrative, teaching, and clinical responsibilities.

452. Technique of Endoscopy. (1½ per week) F, W, Sp. All residents except at F. McKay, Heyneman and Staff


455. Parasitology

155. Medical Parasitology. (3) W. Lecture: 2 hours; laboratory demonstration: 2 hours. McKay, Haferkamp, 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

100. Systemic Pathology. (6) F. Margaretten

Recent advances and classical concepts of diseases as they affect each of the organ systems are presented. Emphasis is given to correlation of functional and morphologic characteristics of diseases of organ systems.


The basic principles of pathology are presented in lectures, laboratories, and seminars. Morphologic and functional abnormalities in disease processes will be considered from ultrastructural, cellular, and tissue levels.

126. General Pathology. (5) F. Lecture: 5 hours; laboratory: 6 hours. Prerequisite: Anatomy 110 B-C and Physiology 110 B-C.

The fundamental principles of pathophysiologic and physiologic changes incident to abnormal states. Inflammation, infection, degenerations, regeneration and repair, metabolic, vitamin and endocrine disturbances, and the fundamental principles of pathophysiology are discussed.

135. Pathology. (4) F. Prerequisite: Anatomy 115 and 116; Biochemistry 120 A-B; and Physiology 120 and 125. Lecture: 3 hours; laboratory: 3 hours. McKay, Howes, and Staff

The fundamental principles of pathophysiologic changes incident to abnormal states. Inflammation, infection, degenerations, regeneration and repair, metabolic, vitamin and endocrine disturbances, and tumors are discussed.

150-01. Surgical Pathology. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Surgery 110. Ramsey, Roseau, McKay, and Staff

In the laboratory and seminars, student observe and participate in the study and diagnosis of surgical specimens. The technique of frozen sections and the preparation of surgical pathology conferences are discussed.

150-02. Surgical Pathology and Pathomorphological Examination at SF (1½ per week) Su, F, W, Sp. Prerequisite: Pathology 100. McKay, Howes, Margaretten, and Staff

Interns, under supervision of the attending staff, are responsible for patient care in wards and clinic, assistance at operations. Diagnosis and treatment of surgical conditions in the head and neck area is stressed.


SF Tipton

Interns, under supervision of the attending staff, are responsible for patient care in wards and the follow-up clinic, including history-taking, examination, and consultation. This rotation, in combination with patient care assignments in the Ophthalmology Service, provides a comprehensive background in ear, nose, and throat disease.

170-01. Clinical Cytology. (1½ per week) Su, F, W, Sp. Prerequisite: Pathology 100 and 101. Moody, and Staff

Clinical clerks in off-campus hospitals approved by the dean and the chairman of the department.


HCM Ramsey, Roseau, McKay, and Staff

The students participate in the work-up of autopsies and surgical specimens. They will be actively involved, given responsibility, and work closely with the faculty and house staff.

170-05. Neuropathology. (2) W. Prerequisite: Pathology 100.

Emphasis will be placed on clinical-pathologic correlation of neurological diseases by means of study of gross and microscopic material and participation in conferences.


Moon, Roseau, and Staff

Presentation of selected current cases seen in the Hospital Pathology Laboratory. Discussion of pathologic findings and correlation with history, physical findings, radiologic findings, and treatment.

170-07. The Autopsy and Its Clinical Applications. (1½) F.

Haferkamp

Course on autopsies.


Sp. Prerequisite: Consent of the instructor and chairman of the department.

Moon, Margaretten, and Staff

Studies in pathology at other institutions with the approval of the chairman of the department.

180-01. Pathology. (5) F. Lecture: 5 hours. Prerequisite: Anatomy 118 and Physiology 125. McKay, Howes, and Staff

Parallel courses in pathological anatomy and physiological anatomy.

180-02. Research in Pathology. (1-5) F, W, Sp. Prerequisite: Consent of the instructor and chairman of the department.

Moon, and Staff

Research in pathology and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

199. Laboratory Project in Pathology. (1-55) F, W, Sp. Prerequisite: Consent of the instructor.

Moon, and Staff

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

203A-B. Theoretical and Applied Pathology. (3-6) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 3-4 hours Laboratory: 6-6 hours.

Moon, and Staff

Lectures in general and systemic pathology and laboratory work in the surgical pathology laboratory. Study of pathologic techniques and tissue specimens. Emphasis will be given to lesions of the oral cavity. Opportunities provided to correlate clinical observations with biopsy material.


Moon and Staff

Faculty members and visiting professors discuss recent developments in diagnosis and research in pathology.


Moon and Staff

For graduate students engaged in writing the thesis for the masters degree.

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

Moon and Staff

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


Moon and Staff

Faculty members and visiting professors discuss recent developments in diagnosis and research in pathology.


McKay, Margaretten, and Staff

Seminars focusing upon the pathology of special areas of the body are conducted by specialists in the area under discussion. Correlation between the clinical manifestations of the disease and the gross and microscopic findings is emphasized.


McKay, Haferkamp, and Staff

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

Conference includes the collection of data and materials, summary of histories, and cita-
tion of pertinent literature by faculty. Residents participate in clinicopathological con-
ferences where emphasis is placed on correla-
tion of clinical manifestations with disease by clinical laboratory and autopsy findings.

SF, UC, F. Moon
Theory and methodology of pathologic anatomy, interpretation and correla-
tion of data, and study of literature.

SF, UC, F. Moon
Theory and methodology of pathologic anatomy, interpretation and correla-
tion of data, and study of literature.

PEDIATRICS

110. Required Clerkship in Pediatrics. (1/2 per week) F, W, Sp. Prerequisite: Medi-
cine 110 and Pediatrics 110. Grumbach, Grossman
Practical work including teaching in the ward, Newborn Nursery, and outpatient clinics with emphasis on case assignments. Seminars covering major aspects of pediatrics and infec-
tious diseases and procedure demonstra-
tions.

140.01. Advanced Clerkship. (1/2 per week) Su, F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110.
Grumbach, Grossman
Advanced clerkship at UC, SF, L, C. CHMC.
Includes an intensive care nursery, outpatient department acute care unit at UC; outpatient department at SF; inpatient and outpatient at CHMC; inpatient and outpatient at K, L.

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

Malloy and Staff
Community programs will be arranged for students interested in gaining experience in community pediatrics. Placement programs will include comprehensive care, public health, school health, private practice, and social agencies settings.

140.04. Pediatric Cardiology. (1/2 per week) Su, F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110.
Rudolph
Experience in cardiac evaluation and treatment including clinical work up in the ward and clinic, cardiac catheterization, angiography, children's electrocardiography, sur-
gical management, and postoperative care.

140.05. Pediatric Private Practice. (1/2 per week) F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110.
L. Smith
Working experience with a pediatrician on the clinical faculty as he sees patients in his office and in the hospital.

140.06. Infections Diseases. (1/2 per week) F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110.
Leone
Participation in the care of patients in the infectious disease ward and in the work of the microbiology laboratory. Small investigative projects may be undertaken.

R. C. Brown
Supervised participation in care of hos-

tional and ambulatory adolescent patients. The processes of normal physical and psycho-
logical growth at this particular stage of life are discussed in seminars with pediatricians, internists, psychiatrists, social workers, psychologists, nutritionists, and other allied health personnel.

140.08. Mental Retardation in Children. (1/2 per week) F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110.
Collin
Course includes participation in the daily work and care of the retarded children at SS and attendance at teaching conferences.

Grumbach
Clinical clerkship in on-campus hospitals approved by the department chairman and the Dean.

140.10. Pediatric Outpatient at CHMC. (1/2 per week) Su, F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110.
Garden and Staff
Students are assigned to the general diag-
nostic clinic for work with selected patients, experience in pediatric emergency clinic, and in selected specialty clinics and "team" con-
ferences. Selected clinical research projects may be undertaken.

140.11. Pediatric Cardiology at CHMC. (1/2 per week) Su, F, W, Sp. Prerequisite: Pediatrics 110 and Medicine 110. Higashino
Students participate in clinical experience including outpatient clinic, care of ward patients, cardiology pulmonary laboratory, cardio-
vascular conference, peroperative and post-
operative care of surgical patients, and partici-
aption in pediatric electrocardiography and vec-
trocardiography. Children's electrocardiography, children's electrocardiography, sur-
gical management, and postoperative care.

Grumbach
All time to be spent on the inpatient serv-

e at UC and SF where student has clinical responsibility for selected pediatric patients.

Dower
All time to be spent on the outpatient serv-
e at UC and SF where student has clinical responsibility towards pediatric patients.

Grumbach, Grossman
Work under the direction of Dr. Olney in management of pediatric and management as-
pects of childhood diabetes. Students have an opportunity to participate in the opera-
tion of the camp program and treatment of many aspects of diabetes.

140.15. Outpatient Pediatrics at UC. (1/2 per week) F, W, Sp. Prerequisite: Pedi-
atrics 110 and Medicine 110.
Dower and Staff
Experience in direct patient care in the following clinics: General Pediatrics (includ-
ing acute cases) WOI, Baby, Family Clinic, subspecialty clinics in medical and surgical pediatrics, and Child Study Unit. Individual programs arranged by Clinic Director and Chiefs of special areas.

Higashino, Higashino
Clinical experience in pediatric nephrol-

ogy encompassing Pediatric Service at UC and SF. Experience with selected dis-

eses, with particular emphasis on the biochemical and genetic mechanisms involved in the pathogenesis and transmission of these conditions.

GRUMBACH, KAPLAN
Clinical experience in newborn nursery and Newborn intensive care unit with em-
phasis upon physiological adaptations to extra-
uterine life.

Giammona
Students participate in patient care in close association with the House Staff and clinical fellows both in wards caring for sick children and in Newborn Intensive Care Unit, and in rounds and conferences conducted by senior staff.

Giammona
Students participate in the comprehensive care of children. Experience with various ill-
nesses is provided in appropriate specialty clinics. A wide variety of child care problems will be seen during visits to offices of current pediatricians participating in the program.

Deamer
Diagnosis and treatment of asthma, al-
lergic rhinitis, eczema, and pollinosis.

Malloy
Experience in direct patient care in the Pediatric Screening Clinic.

Clinical experience in pediatric endocrinol-
y and metabolism. Completion of Pediatric Service at UC and SF. Experience with endocrinological disorders, diabetes mellitus, and insulin therapy. Research projects may be arranged with instructors.

Higashino
Clinical experience in human cytogenetic studies in children. Emphasis on laboratory work with exposure to clinical problems and patients.
Courses

150.03. Experimental Cardiovascular Physiology. (1½ per week) F, W, Sp. Prerequisite: Courses in Physics. Grumbach and Staff

Rudolph, Hoffman

Project by arrangement with instructors.


Student research projects under guidance of faculty members. Programs must be approved by instructors. Students may initiate or continue research projects under guidance of faculty members.


Kitterman

Seminars in neonatology including fetal and newborn respiratory and cardiovascular physiology and selected aspects of the clinical care of newborn babies.


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.

199. Laboratory Project in Pediatrics. (1-5) F, W, Sp. Prerequisite: Consent of the 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.

499. Pediatric Staff Conference. (1½) Su, F, W. Interns and residents.

UC Grumbach

Conferences include house staff preparation and presentation of patient care histories with reference to the literature, laboratory work, and special studies. Faculty members and consultants from other departments as well as other universities discuss recent developments in their respective fields.


UC Gooding

Conferences include review and discussion of recent X-ray studies of pediatric cases in the wards and outpatient service.


UC Grumbach

Seminar includes review and discussion of selected cases of unusual interest, reports on special topics with review of recent literature, and clinicalopathological conference on pediatritic cases.


Residents, under supervision, are responsible for patient care in the wards and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment. In addition, the chief resident has certain administrative, teaching, and clinical responsibilities.


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.


SF Grossman

Interns rotate through newborn nursery, pediatric wards and clinic, communicable diseases ward, and emergency room. They are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examination, laboratory tests, and consultation.

PEDODONTICS

125. Pedodontic and Orthodontic Techniques. (1) Per. Laboratory: 30 hours.

Morris, West and Staff

Procedures include preparations for restoration of primary teeth with amalgam and stainless steel crowns; adaptation of bands and wires for active and passive appliances to intercept or treat malocclusion; practice in bracket welding and appliance fabrication.

130A–C. Pedodontics. (1) Yr. Prerequisite: Operative Dentistry 125A–B. Grumbach and Staff

125. Lecture: 1 hour. Five recent X-ray studies of pediatric cases in the wards and outpatient service.


Clinical diagnosis, plan of treatment, dietary analysis and counseling, fabrication of appliances of children requiring tooth guidance, space management, and preventive orthodontics.


Continuation of Pedodontics 139.

149.01. Clinical Pedodontics Rotation. (2 total) F, W, Sp. Clinical rotation: 60 hours. Prerequisite: This course must be taken concurrently with Dental Auxiliary Utilization 199.01.

Pedodontic restorative procedures will be performed during a two-week block rotation. The present concepts of four-handed dentistry will be applied while rendering comprehensive care for children. Units are assigned upon completion of clinical requirements.


Continuation of Pedodontics 170A–B–C.


Morris and Staff

Assigned readings of current and classical literature in pedodontics and allied specialty areas with review and discussion of each reading assignment to prepare student to evaluate critically dental literature.


Morris and Staff

Continuation of Pedodontics 171A–B–C.

172A–B–C. Clinic and Seminar. (2–2–2) F, W. Clinic and seminar: Totals 60 hours each quarter. 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.

175. Clinical Pedodontics. (3) SS. Prerequisite: 170.02. Clinic: 18 hours. Morris and Staff

Providing dental care for non-English speaking migrant population utilizing facilities of mobile clinic.

174. Pedodontic Seminar. (2) SS. Prerequisite: 171A–B–C. Seminar: 1 hour. 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.

175A–B–C. Treatment Planning and Surgery Seminars. (1–1–1) F, W, Sp. SS. Seminar: 1 hour. Shibata and Staff

Students present and discuss management of their cases which are either planned for treatment or currently under treatment. They are expected to defend their treatment plans and therapeutic procedure based on relevant literature and clinical experience.

176. Pediatric General Anesthesia. (5) SS. Children's Medical Center, East Bay. 90 hours. Schroeder and Staff

An introductory course in general anesthesia to familiarize the student with the problems and risks attendant upon general anesthesia, the agents used, and methods of delivery. Clinical experience under close supervision will be provided to each student.

177. Pediatric Hospital Dentistry. (2) F, W. Hospital Dentistry: 6 hours. Morris and Staff

Students will be assigned to an interdisciplinary health care team, and will be responsible for delivering dental care for all in-hospital patients. Definitive dental care will be provided on the ward as well as in the operating room.

180B–C. Pediatric Dental Practice. (1) W. Lecture: 1 hour. Prerequisite: Completion of third-year pediatric lecture series and approval of the Dean. B. Smith

Documented discussions on occlusion, mixed dentition analysis, malocclusions, missing incisors and premolars, hypoplasia, anomalies, injuries, and oral manifestations of systemic disease. Designed for students considering pedodontics as a specialty. Counseling is provided for postdoctoral education.

189.01. Clinical Practice in Pedodontics. (1½–2½) F, W. Prerequisite: Pedodontics 189.01 A–B–C and completion of clinical pedodontics and all third-year clinical and didactic courses in operative dentistry. Clinic: Variable. Enrollment is subject to the approval of the Clinical Review Committee. Morris and Staff

This course provides credit for additional clinical experience in pedodontics.
PERIODONTAL THERAPY
179A-B-C. Periodontal Therapy. (2-2-2) F, W, Sp. Lecture: 1 hour. Laboratory: 3 hours. Dresen
Dynamics of inflammation and its role in the periodontal tissues. Shiibata and Staff
Advanced clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
179A.C. Periodontal Therapy. (4-4-4) F, W, Sp. Clinic: 12 hours. Prerequisite: Periodontology 170A-B-C. Shiibata, Green and Staff
Advanced surgical procedures in management of periodontal lesions.
179B. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 170A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
179C. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 170A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
180A.B-C. Periodontal Surgery. (3-3) F, W, Sp. Research: 3-3-3 hours. Zipkin, H. R. 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 plans and therapeutic procedure based on relevant literature and clinical experience.
180B. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
180C. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
181A-B-C. Periodontal Therapy. (2-2-2) F, W, Sp. Lecture: 1 hour. Laboratory: 3 hours. Dresen
Dynamics of inflammation and its role in the periodontal tissues. Shiibata and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
181A.C. Periodontal Therapy. (4-4-4) F, W, Sp. Clinic: 12 hours. Prerequisite: Periodontology 171A-B-C. Shiibata, Green and Staff
Advanced clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
181B. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 171A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
181C. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 171A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
182A-B-C. Periodontal Surgery. (3-3) F, W, Sp. Research: 3-3-3 hours. Zipkin, H. R. 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 plans and therapeutic procedure based on relevant literature and clinical experience.
182B. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
182C. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
183A-B-C. Periodontal Therapy. (2-2-2) F, W, Sp. Lecture: 1 hour. Laboratory: 3 hours. Dresen
Dynamics of inflammation and its role in the periodontal tissues. Shiibata and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
183A.C. Periodontal Therapy. (4-4-4) F, W, Sp. Clinic: 12 hours. Prerequisite: Periodontology 183A-B-C. Shiibata, Green and Staff
Advanced clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
183B. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 183A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
183C. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 183A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
184A-B-C. Periodontal Surgery. (3-3) F, W, Sp. Research: 3-3-3 hours. Zipkin, H. R. 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 plans and therapeutic procedure based on relevant literature and clinical experience.
184B. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
184C. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
185A-B-C. Periodontal Therapy. (2-2-2) F, W, Sp. Lecture: 1 hour. Laboratory: 3 hours. Dresen
Dynamics of inflammation and its role in the periodontal tissues. Shiibata and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
185A.C. Periodontal Therapy. (4-4-4) F, W, Sp. Clinic: 12 hours. Prerequisite: Periodontology 185A-B-C. Shiibata, Green and Staff
Advanced clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
185B. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 185A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
185C. Periodontal Therapy. (2) SS. Clinic: 60 hours. Prerequisite: Periodontology 185A-B-C. Shiibata, Green and Staff
Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.
186A-B-C. Periodontal Surgery. (3-3) F, W, Sp. Research: 3-3-3 hours. Zipkin, H. R. 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 plans and therapeutic procedure based on relevant literature and clinical experience.
186B. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
186C. Periodontal Surgery. (2) W. Seminar: 2 hours. Raust
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.
155. Radiopharmaceuticals. (18) W. Prerequisite: Pharmaceutical Chemistry 152 or 160. Lecture: 1 hour. Peng, Price

A study of radionuclides used in nuclear medicine as pharmaceuticals. Dosage form design and related aspects will be discussed.

154. Pharmaceutical Quality Control. (2) W. Prerequisite: Pharmacy 655. Pharmacy 656 completed or in progress. Lecture: 2 hours. Brochmann-Hansen

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.

155. Physical Measurements. (4) Sp. Prerequisite: Physics 6A-B-C and Mathematics 16A-B, or equivalent. Lecture: 3 hours. Laboratory: 3 hours. F. Goyan

The fundamentals of physical measurement applied to the selection and use of common scientific instruments.


Experiments in pharmaceutical analysis applied to drug entities, dosage forms, and samples of biological origin.


Analytical theory and techniques for determining drugs and metabolites in biological fluids.

158. 158. Radiosotope Measurements. (1) Sp. Prerequisite: Pharmaceutical Chemistry 153 or consent of the instructor. Laboratory: 3 hours. Peng

Detection and measurement of radionuclides commonly used in biology and medicine.


This course will treat the principles in physical decay of radionuclides, characteristic of nuclear emissions, interaction with matter, and related aspects in radioactivity.


Emphasis of the course will be on the use of instruments and various methods in detection and measurement of radioactive material, and correlation to physiological responses. Lecture: 1 hour. Powell, Price

This course will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.

170. Group Studies Course. (1–4) F, W. Prerequisite: Permission to enroll must be obtained from the instructor or student's advisor. No final examination. Graded on a pass/fail basis.

Group study of selected topics in pharmaceutical chemistry.

188. 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.

190. Laboratory Project in Pharmaceutical Chemistry. (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. Physical Chemical Properties and Biological Activity. (1) W. Prerequisite: Consent of the instructor. Lecture: 1 hour. Kollman

Lectures and conferences dealing with the relationship between physical properties and biological activity with special emphasis on the uses of modern techniques in the connection.

201. Advanced Survey of Medicinal Chemistry. (2) F. Prerequisite: Consent of the instructor. Lecture: 2 hours. Jorgensen

A basic study of the concentration-time course of drugs and their metabolites, methods of pharmacokinetic analysis, and the design of dosage regimen. Laboratory emphasizes the application of modern techniques in analysis and analog computers.

211. Selected Topics in Pharmaceutical Chemistry. (4) F, W, Sp. Prerequisite: Pharmaceutical Chemistry 120. Jorgensen

Selected topics in pharmaceutical chemistry, with emphasis on relationships between structure, physical properties, and biological activity.

212. Advanced Aspects of the Kinetics of Drug Absorption and Disposition. (5) F. Prerequisite: Chemistry 115. Calculus background is suggested. Lecture: 2 hours. Laboratory: 3 hours. Rowland, Torer and Staff

A basic study of the concentration-time course of drugs in the body. Laboratory emphasizes the application of modern techniques in analysis and analog computers.

213. Basic Considerations in the Kinetics of Drug Absorption and Disposition. (5) F. Prerequisite: Chemistry 115. Calculus background is suggested. Lecture: 2 hours. Laboratory: 3 hours. Rowland, Torer and Staff

A basic study of the concentration-time course of drugs in the body. Laboratory emphasizes the application of modern techniques in analysis and analog computers.

214. Advanced Aspects of the Kinetics of Drug Absorption and Disposition. (5) Sp. Prerequisite: Pharmaceutical Chemistry 213 and Biochemistry 202 or its equivalent. Lecture: 2 hours. Laboratory: 3 hours. Riegelman, Benet and Staff

Advanced consideration of pharmacokinetics including compartment models, assessment of intrinsic absorption and disposition parameters, and correlation to physiological responses with the concentration-time course of a drug. Laboratory will include analog and digital computational methods.


Eilers

Nature of receptors at the biochemical level, action of drugs at the level of feedback mechanisms, the physical chemical aspects of drug activity, and allosterism vs. isomerism as bases for hypothesis building.


Genetic mechanism and drug action, cell division and antimetabolites, adaptive phenomena in relation to control mechanisms, and the uncoupling agents.

220. Graduate Seminar Program. (1) F, W, Sp. Staff

A program involving the presentation of core material in pharmaceutical chemistry in the medicinal chemistry and pharmaceutics 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. Graded on a pass or fail (not pass) basis.

230A. Spectroscopy. (4) Sp. Prerequisite: Chemistry 162 or equivalent. Lecture: 5 hours. Laboratory: 3 hours. Shetlar

The theory and application of molecular electronic and vibrational spectroscopy and circular dichroism. Given in alternate years.

230B. Spectroscopy. (4) Sp. Prerequisite: Chemistry 162 or equivalent. Lecture: 3 hours. Laboratory: 3 hours. Kollman, Weinkam

The theory and application of nuclear magnetic resonance and electron-spin resonance; mass spectrometry. Given in alternate years.

231. Spectroscopy. (2) Sp. Prerequisite: Pharmaceutical Chemistry 280A. Lecture: 2 hours. Shetlar

Selected topics in spectroscopy and related areas. The content of this course
PHARMACOGNOSY

128-C. Dental Pharmacology. (28) W. Sp. Prerequisite: Physiology 110B-C and Biochemistry 116. Lecture: 2 hours; W; 5 hours, Sp.

The object of this course is to acquaint the dental and dental hygiene students with the fundamentals of pharmacology. Various classes of drugs are examined in regard to actions, absorption, fate, excretion, and toxicity. Agents useful in dentistry are emphasized.

129. Toxicology. (2) W. Prerequisite: Pharmacology 125 and 136. Lecture: 2 hours.

Hodge, Hine, Staff

The occurrence, mode of action, recognition, and treatment of poisoning by environmental chemicals and therapeutic agents.

130. Pharmacology and Toxicology. (3) W. Prerequisite: Consent of the instructor. Lecture: 3 hours.

Katzung, Hine, Staff

Basic courses in the study of drug action on systems from the subcellular level to the intact animal.

131. Pharmacological Techniques in Pharmacology. (3) W, or Sp. Prerequisite: Consent of the instructor. Laboratory: 9 hours.

Katzung

Principles and applications of physiological techniques used in the study of drugs.

Emphasis placed on the study of cardiovascular and autonomic agents.

132. Special Topics in Pharmacology and Toxicology. (1-5) F, W, Sp. Prerequisite: Consent of the instructor. Lecture: 1-3 hours.

Lob, Staff

A seminar type course covering various aspects of pharmacology and toxicology.

134. Pharmacology and Toxicology. (4) W, Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours.

Katzung, Hofland, Staff

A laboratory course in biochemical techniques as commonly applied to investigations of drug action.


Featherstone, Katzung

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


Katzung and Staff

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

206A-B-C. General Pharmacology. (3-4, 1-3, 1-5) F, W, Sp. Pre-requireite: Consent of the instructor and Biochemistry 206A; also Physiology 120B and C.

E. Way, Burkhalter, Sutherland and Staff

Lecture-conference course dealing with fundamental aspects of interactions between chemical compounds and the components of biological systems. Mechanisms of drug action at molecular, biochemical, membrane, tissue, and organ levels of the cardiovascular, muscular, and central nervous systems are considered.

209. Molecular Mechanisms of Action of Biologically Active Substances. (3) F, W, Sp. Prerequisite: Pharmacology 194 or consent of the instructor. Lecture: 3 hours.

Ann, Staff

Advanced biochemical experimentation and theories concerning the mechanism of action of biologically active substances on a molecular level. The content of the course, beyond certain theoretical material, varies with each participant and consists of guided experiments in novel subjects.

Courses 259


Hine, Meyers, Hodge, Pasi

A detailed examination of the field of toxicology as it relates to agricultural, environmental, forensic, industrial, military, regulatory, and therapeutic problems. Emphasis
placed on mechanisms of action of toxic substances. Current advances and classical concepts of toxicology are presented.

220. Seminar. (0-3) F, W, Sp. Staff
Seminar to discuss present methods and problems in current teaching and research in pharmacology and toxicology.


292. Physiological Techniques in Pharmacy.
(3) W. Prerequisite: Pharmacology 206A or equivalent and consent of the instructor. Laboratory: 9 hours. Kang, Principles and applications of physiological techniques used in the study of drugs. Emphasis is placed on the study of cardiovascular and autonomic agents.

298. Thesis. (8) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser. Staff
For graduate students engaged in writing the thesis for the masters degree.

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

Sutherland and Staff
Opportunity is provided to participate in a formalized way in the teaching of pharmacy under the direction of the faculty.

PHARMACY

110. Orientation in Pharmacy. (2) F. Conference and field observation; 3-4 hours.
An introduction to the scope of pharmaceutical practice involving field trips to and participating in the various settings where the pharmacist and the patient interact.

115. Pharmaceutics and Physical Pharmacy.
(4) W. Prerequisite: Chemistry 115 and Consent of the instructor. Staff
Study of how various dosage forms have utility as drug delivery systems in particular clinical situations, including a discussion of physical and biological factors which interact and dominate the design of delivery systems, Laboratory preparation of basic drug delivery systems.

116. Pharmaceutics and Physical Pharmacy.
(4) Sp. Prerequisite: Pharmacy 115 and Chemistry 116. Lecture: 3 hours. Laboratory and conference: 3 hours. Orr, Lem
A continuation of Pharmacy 115, plus a consideration of the importance and use of drug standards.

129. Biopharmaceutics: Special Aspects of Physiological Availability of Drugs.
(4) Sp. Prerequisite: Pharmacy 128. Lecture: 3 hours. Conference and laboratory: 3-4 hours. Tozer, Rowland
The interrelationships among the properties and pharmaceuticals, their dosage forms, and their pharmacodynamic effects.

130. Clinical Pharmacy.
(5) F. Prerequisite: Pharmacy 125. Lecture: 4 hours. Conference: 2 hours. Craig, Kimble, Riegelman and Staff
Orientation to selected areas of medical practice, the clinical evaluation and comparison of drugs used in these areas, and the biopharmaceutics of the drug combinations and products.

131. Clinical Pharmacy.
(6) W. Prerequisite: Pharmacy 130. Lecture: 5 hours. Conference: 2 hours. Kimble, Benet, Riegelman and Staff
A continuation of Pharmacy 130.

132. Clinical Pharmacy.
(7) Sp. Prerequisite: Pharmacy 131. Lecture: 6 hours. Conference: 2 hours. Kimble, Benet, Riegelman and Staff
A continuation of Pharmacy 131.

133. Preclinical-Orientation.
(1½) F. W. Prerequisite: Third-year standing. Conference: 3 hours. Tong, Shimomura
An orientation to clinical services, including patient interview techniques, monitoring, charting; training in literature retrieval and analysis; limited patient exposure.

137. Drug Information Analysis Services (DIAS) Rotation.
(1½) F, W, Sp. Prerequisite: Pharmacy 136. Shimomura, Tong
Actual experience in systematic retrieval of drug information in response to requests by DIAS.

140. Biologic Products.
(3) F. Prerequisite: Third-year standing. Lecture: 3 hours. K-H. Lee
A survey of the chemical, physical, and biochemical properties of hormones and vitamins and other nutritional products as they relate to pharmaceutical practice. Diet therapy and the role of the pharmacist.

141. 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 clinical use, including enzymes, blood and its derivatives, plasma substitutes, hemopoietic preparations, and biologic products.

145. Clinical Pharmacy.
(4) F. Prerequisite: Fourth-year standing. Conference: 2 hours. Riegelman and Staff
Orientation to selected areas of medical practice, the clinical evaluation and comparison of drugs used in these areas, and the biopharmaceutics of the drug combinations and products.

146. Clinical Pharmacy.
(5) W. Prerequisite: Pharmacy 145. Lecture: 4 hours. Conference: 2 hours. Riegelman and Staff
A continuation of Pharmacy 145.

147. Clinical Pharmacy.
(3) Sp. Prerequisite: Pharmacy 146. Lecture: 2 hours. Conference: 2 hours. Benet and Staff
A continuation of Pharmacy 146.

148. Inpatient Clinical Clerkship.
Tong, Adler, Kimble and Staff
Supervised experience in the patient care area pharmacy service. This course may not be repeated.

149. Outpatient Clinical Clerkship.
(6) F, W, Sp. Prerequisite: Pharmacy 129.
Tong, Adler, Kimble and Staff
Supervised experience in the Ambulatory and Community Medicine Outpatient Clinics, including Comprehensive Care Clinic, Pediatric Clinic, and Primary Care Clinic. This course may not be repeated.

151. Community Health Education.
(2) Sp. Lecture and Discussion: 2 hours; participation in at least 4 community health education programs.
Benen
To train students for participation in community health programs dealing with drug abuse education and other drug-health related areas, such as poison prevention, venereal disease, and birth control. This course is to be graded pass or no pass, and may be repeated for credit.

155. External Drug Products.
(4) F. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 6 hours. Schwarz
Discussions of laboratory exercises on the formulation of products for external use, including both drugs and cosmetics. The course deals with the properties of such products and their ingredients.

156. Biologic Products.
(2) W. Prerequisite: Third-year standing. Lecture: 2 hours. Lee
A discussion of the pharmaceutical aspects and evaluations of the therapeutic values of biologic preparations in current clinical use, including enzymes, blood and its derivatives, plasma substitutes, hemopoietic preparations, and biologic products.

160. Hospital Pharmacy.
Oswang, Riddiough
Recommended for students who plan to apply for the resident program in hospital pharmacy. Other students admitted only with the consent of the instructor.

170. Group Studies Course.
(1-4) F, W, Sp. Prerequisite: Consent of the instructor and adviser. No final examination. Graded on a passed-not passed basis.
Staff
Group studies of selected topics in pharmacy.

180. Drugs and Society.
(3) W. Lecture: 3 hours. Prerequisite. Basic course sequence in pharmacology and consent of the instructor. Limited to 16 students. Term paper required.
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.

186. Supervised Study in 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.

199. Laboratory Project in Pharmacy.
(1-5) F, W, Sp. Staff
A laboratory research project under di-
Principles of management, specially directed to developing familiarity with current problems peculiar to community pharmacy. Attention is placed on elements in locating, organizing, operating, and adapting a pharmacy.

Consideration of the fundamental concepts of accounting and its applied uses, special emphasis upon the accounting requirements of the community pharmacy. Problem cases and demonstrations are presented.

Staff
Group studies of selected topics in pharmacy administration.

200A-B. Legal Problems Related to Health Care. (2-2-2) F, W, Sp. Prerequisite: Third-year standing. A is prerequisite to B, and B to C, but completion of entire sequence is not required. No final examination. Nielsen
Conducted in cooperation with law students who are teamed with students from professional schools on this campus to investigate aspects of their respective disciplines, with particular emphasis upon the legal implications arising therefrom.

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.
Nordschow
This course is designed to present the foundation of the structure and function of the human body, 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. Nordschow
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 lower limb and review is stressed.

101A. Pathology. (3) F. J. Lee
A general summary of the fundamentals of pathology with special emphasis on the correlation between pathological processes and the clinical signs, symptoms, and course of diseases. During the quarter, gross pathology is demonstrated and autopsy material is available.

102A. Physiology. (3) F. Lukin
A review of certain aspects of human physiology, with special attention to cardiovascular system and metabolism. Specific aspects of pathologic physiology are considered, especially in relation to stroke and heart disease. Applications of physical principles to physiology are discussed.

103A. Neuroanatomy. (2) F. Garoutte
The development of the human nervous system with special reference to structure and functional relationships.

Lectures and laboratory practice in electrotherapy, kinesiology, and tests and measurements. Emphasized are therapeutic use of electricity in certain pathologic conditions; analysis of musculoskeletal function in normal and abnormal states; methods of performing, recording, and interpreting tests and measuring procedures.

104B. Physical Therapy Procedures II. (6) W. Nordschow, Ahrens
Lectures, demonstrations, and laboratory practice in hydrotherapy, massage, and therapeutic exercise. Emphasized are therapeutic uses of water and of massage techniques applied to various pathologic problems and techniques of administration of exercises commonly used in orthopaedic, medical, and neurological conditions.

104C. Physical Therapy Procedures III. (6) Sp. Gilbert and Staff
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. (5) W. Specht
Lectures and clinical demonstrations covering peripheral vascular problems, geriatric patients, various types of arthritis, muscular dystrophy, spinal cord injury, cerebrovascular accidents, the brain-damaged child, neck pain, and back pain.
Lectures and clinical presentations of medical and neurolologic patients and designed to increase the student’s understanding of the basic interrelationship of structure and function of the various body systems. Conditions requiring physical therapy treatment are fully discussed.

Lectures in orthopaedic surgery, pediatrics, psychiatry, surgery, obstetrics, gynecology, geriatrics, and dermatology are presented.

117B. Neuro muscular Physiology. (2). W. Raulton.
A study of the physiology of striated muscle and peripheral nerve in relation to controlling mechanisms within the central nervous system. Special attention is paid to the physiological disturbances which occur in various types of human motor disability.

The study of procedures necessary for the total care of patients.

A study of professional attitudes and obligations and the organization and administration of a department of physical therapy. Laboratory work includes observation in outpatient clinics and a clerkship in an approved hospital by special arrangement of the Clinical Staff.

410D. Clinical Clerkship. (14) Su. Gilbert and Staff.
Clinical clerkships consist of one-month assignments in three different institutions or agencies. Under supervision, students participate actively in clinical evaluation and care of patients. Clinical clerkship lectures are also scheduled.

PHYSIOLOGY

100. Organ System Physiology. (6). Sp. Prerequisite: Anatomy 100, 102, and 103; Biochemistry 100A-B; Physiology 101; or consent of the instructor. Lecture and conference: 6 hours. Laboratory: 4 hours. Staub and Staff.
Normal function of the respiratory, cardiovascular, renal, and gastrointestinal systems and the metabolic functions of the body as a whole are studied in lectures, conferences, laboratory exercises, demonstrations, and clinical illustration.

101. Endocrinology. (4). W. Prerequisite: Anatomy 100, Biochemistry 100A-B or consent of the instructor. Biochemistry 100B may be taken concurrently. Lecture: 5 hours. Laboratory: 3 hours. Ganong and Staff.
The structure and function of the endocrine glands and selected aspects of endocrine pharmacology and pathology will be studied in lectures, demonstrations, and clinical conferences.


Introduction to organ systems with emphasis on nervous, endocrine, circulatory, respiratory, and alimentary function in vertebrates. Importance of organ systems for the success of multicellular forms will be the focus. Fundamental cell processes will also be discussed, emphasizing differentiated function.

120. Mammalian Physiology. (5). W. Prerequisite: Physiology 125 required for students in School of Pharmacy; may be taken separately by graduate students only with consent of the instructor. Lecture: 3 hours. Mines.
Study of the integrative systems of the mammalian organism, particularly the nervous and endocrine systems.

Introduction to mechanisms by which mammals, especially man, function. The interaction of internal and external environments and their relation to the functions of cells and muscular, circulatory, respiratory, gastrointestinal, and excertory systems.

150.1 Research in Physiology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor. Kellogg and Staff.
Individual research in endocrinology, neuroendocrinology, respiratory physiology, neurophysiology, cardiovascular physiology, cell physiology, or other areas offered by individual staff members.

150.2 Research in Endocrinology. (1½ per week) F, W, Sp. Prerequisite: Consent of the instructor. Research in endocrinology carried out in the Department of Physiology.

170.02. Electronic Instrumentation. (2) F. Prerequisite: Consent of the instructor. Lecture: 1½ hour. Comroe, Staub and Staff.
Seminars on cardiovascular and pulmonary systems. Several sessions on experimental methods and cardiopulmonary problems. Work presented is discussed and evaluated by the faculty and fellows. For credit, students present a critical evaluation of one of the seminars.

199. Laboratory Project in Physiology. (1-5). Sp. Prerequisite: Consent of the 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.

Directed reading organized in seminar or tutorial fashion to review aspects of physiology under supervision of a member of the faculty.

201. Physiology of Vision. (2) Sp. Prerequisite: Physiology 110 or equivalent or consent of the instructor. Lecture: 2 hours. Brown.
Study of the mechanisms underlying vision. Consideration is given to chemistry and anatomy of the visual system, but the emphasis is upon neurophysiology, with coverage of the visual system from the photoreceptors to the visual cortex.

Seminars on cardiovascular and related basic sciences. They acquaint students with biological investigation, research methods, and ways of evaluating research. Students taking this course for credit present a critical evaluation of one of the seminars.

Seminars on cardiovascular and pulmonary systems. Several sessions on experimental methods and cardiopulmonary problems. Work presented is discussed and evaluated by the faculty and fellows. For credit, students present a critical evaluation of one of the seminars.

220. Seminar: Topics in Physiology. (1) W. Prerequisite: A minimum of six course units of introductory physiology. Rothman.
This seminar will discuss selected topics in physiology. Readings will be drawn from primary and secondary sources.

250. Advanced Neurophysiology. (3) W. Prerequisite: Anatomy 103 or equivalent or consent of the instructor. Lecture: 1 hour. Meurer.
Consideration of problems in the functioning of the nervous system. The emphasis will be on dynamic and electrophysiological processes rather than on the topographical or neuroanatomical aspects of neural function.

251. Electroencephalography. (2) W. Prerequisite: Endocrinology and neural sciences or consent of the instructor. Lecture: 1-3 hours. M. Dallman.
Mechanism for regulation of endocrine function by central nervous system and the influence of hormones on the nervous system will be considered in view of anatomical, biochemical, physiological, and behavioral data in the literature. May be taken repeatedly.

255. Topics in Neurophysiology. (2) W. Prerequisite: Previously or concurrently Anatomy 103. Meurer and Staff.
Concepts in neurophysiology and their experimental basis. This course is an elective supplement to the material presented in the core course, Anatomy 103.

260. Physiology of the Auditory, Vestibular, and Other Sensory Systems. (2) F. Prerequisite: Consent of the instructor. Lecture: 2 hours. Merzenich.
Lectures and demonstrations providing basic information about the physiology of the auditory system, vestibular system, chemical senses, and somatosensory system. Material will include historical and current concepts derived from relevant psychophysics, neuroanatomy, and neurophysiology.

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. Students may enroll for any number of quarters.

267. Advanced Cardiovascular, Renal, and Pulmonary Physiology. (2) F, W, Sp. Prerequisite: Physiology 100 or equivalent. Comroe, Coleridge and Staff.
This course includes critical reviews of topics of current importance, presentation of unsolved problems by staff, and critical evaluation of published articles by the group. The
220. Endocrinology Seminar. (1) F, W. Prerequisite: Consent of the instructor. Lecture: 1 hour. Wahlgren, Staff

Guest lectures alternating with reports of research in progress by members of the campus Graduate Group in endocrinology. A different topic of endocrinological interest is the subject of guest presentations each quarter. Students may count as an upper-class seminar credit.

223. Graduate Student Seminar. (1–2) F, W. Sp. Prerequisite: Consent of the instructor. Lecture: 1½ hours. Kellogg

Supervised experience in studying selected topics in the physiological literature, writing abstracts, delivering lectures, and discussing them. Topics are varied so that registration may be repeated (recommended for at least 5 terms). Students should arrange assignments with instructor in advance.

230. General Physiology: A Molecular Approach. (1) F. Prerequisite: Consent of the instructor. A working knowledge of elementary physics, calculus, physical chemistry, and biology is expected. Lecture: 4 hours. Botto, Durbina

This course introduces a physicochemical approach to the mechanisms of fundamental cellular processes—transport, excitation and conduction, contraction, and regulation.

250. Research. (1–8) F, W, Sp. Prerequisite: Consent of the instructor. Ganong and Staff

Research in endocrinology carried out in the Department of Physiology.

258. Thesis. (8) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser. Staff

For graduate students engaged in writing the thesis for the masters degree.

259. Dissertation. (8) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser. 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 the instructor. Lecture: Variable. Laboratory: Variable. Staub, Comroe

Practice in teaching physiology under faculty supervision. In various quarters, students will supervise laboratory work, conduct conferences, deliver lectures, and assist in preparing and grading examinations, according to their stage of development.

301. Scientific Writing. (0) F, Sp. Prerequisite: Consent of the instructor. Enrollment limited. Lecture: 5 hours. Morrow, Comroe

Seminar—workshop program designed to show students how they can best put into words, tables, and figures what they have done in the laboratory—and how to do so in a concise, precise, and logical form.

302. Group Practice in the Art of Lecturing. (0) F, W. Prerequisite: Consent of the instructor. Enrollment limited. Lecture: 1½ hours. Staub, Comroe, Coleridge

A course in teaching techniques. Students present short lectures and video tapes of these presentations are analyzed by self- and group-criticism.

PREVENTIVE DENTISTRY AND COMMUNITY HEALTH

111. 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 community, national and professional needs, and how they are met.

120. Behavioral Science. (1) W. Lecture: 1 hour. Wycoff

This course is an introduction to the basic concepts, theories and findings of the social sciences. The application of these concepts and modes of reasoning to pressing social problems and the delivery of health services is the dominant theme.

121. Research Design. (1) F. Lecture: 1 hour. Wycoff

A course which presents basic principles of biostatistics. Introduces the concept of experimental reliability, fundamental principles of sampling techniques, selection of data, and the variability. The student plans, develops, and writes a research protocol.

140. Community Health Problems and Practice. (3) F, W. Sp. Clinic—Seminar: 24 hour rotation. Wycoff and Staff

Dental students will work in community clinics which serve deprived areas. Both seminars and supervised clinical experience will be designed to provide the student with the knowledge and skill needed to deliver dental care to the community, improving the health knowledge and behavioral patterns of the people they are treating.

148. Community Health Methodology. (2) F. Field trip: 4 hours weekly. Silverstein and Staff

Dental hygiene students will work in the North Oakland Community with the Children and Youth Project staff. Students will be assigned to area schools where an oral screening will be done. Students will also make home visits.

150. Applied Preventive Dentistry. (2) Sp. Lecture: 2 hours. Laboratory: 2 hours. Gold

Applied preventive dentistry will examine the principles, philosophy, and methodology of preventive dental practices. Literature reviews, discussions, nutrition analyses, special projects, visits to dental practices will be employed to understand the workings of a successful preventive dental practice.


Instruction in the use of nutritional counseling and the phage microscope as an adjunct to preventive dentistry. Students will learn how to perform a computerized nutritional analysis on clinic patients.

188. B.C. Community Health Methods. (2–2–2) F, W, Sp. Lecture: 1 hour. Laboratory: 3 hours. Wycoff and Staff

Four students will assist the staff of the Hunter’s Point-Bayview Community Health Service. Each will be assigned with a medical student to a family health team. Students work with team members in the neighborhood identifying health problems and arranging care.

199. Laboratory Project in Preventive Dentistry and Community Health. (1–5) F, W, Sp. Prerequisite: Consent of the instructor. Staff

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

PSYCHIATRY


Four-week assignment to an outpatient or inpatient psychiatric service. Students, under supervision, are responsible for patient evaluation and participation in treatment planning and implementation, attend seminars related to clinical work and field visits to other types of psychiatric facilities.

130. Basic Clerkship: Communication Skills. (2) F. Brodsky

Provides students with examples of different interviewing techniques and history-taking procedures as utilized with patients of different ages, illnesses, and sociocultural backgrounds. Students interview patients directly and through the medium of television tapes, engage in supervisory and self-evaluative sessions.


Introduces psychiatry as a clinical discipline. Basic science data relevant to behavioral disorders are briefly presented. The main focus is on interviewing techniques and description of psychopathological syndromes. Lectures, interviews of patients, videotape demonstrations, seminars and independent study are covered.

140.01. Clinical Psychiatry. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of the instructor. L. Epstein

Participation under close supervision in keeping with students’ level of experience and special interests in clinical psychiatric treatment of adult or child inpatients or outpatients.

140.02. Clinical Clerkship. (1½ per week) F, W, Sp. Prerequisite: Consent of the instructor. L. Epstein

Clinical clerkship in off-campus hospitals approved by the Dean and the chairman of the department.

150.01. Psychiatric Research. (1½ per week) F, W, Sp, Su. Prerequisite: Consent of the instructor. Callaway

Participation according to student’s level of experience in experimental work in the department in such areas as neurophysiology, operant conditioning, psychopharmacology, immunochemistry, and nonlexical communication. All work is under the close supervision of faculty members.

150.02. Block Elective in Human Development. (1½ per week) F, W, Sp, Su.

Clark, Lokenshaw and Staff

Guided reading and research in human development. Work may be focused upon culture and personality studies; the social psychology of human development; socialization including the role of values; adaptive processes at various stages of the life cycle.

160.01. Psychopathology of Speech and Language. (2) F, W, Sp. Prerequisite: Consent of the instructor. Outland

A clinical course focusing on speech and language pathology. Students’ eligibility depends on previous experience with psy-
A weekly session designed to increase psychological perception and self-awareness in interaction with others. Both group and individual dynamics will receive attention. This course may be taken repeatedly for credit.

160.04. Personality Assessment in Clinical Psychiatry: Theory and Practice. (1) W. Prerequisite: Psychiatry 130. 
Brody 

An opportunity to observe and audit diagnostic and psychiatric interviews conducted by a faculty member and one patient to continue for an academic quarter. Discussions will follow the interviews. Limited to three students per instructor.

Brody 

Practical experience in psychotherapeutic work with outpatients to increase the students' understanding of psychopathology, psychodynamics, and psychotherapeutics. Students are assigned one patient a week under supervision of a faculty member. Assigned reading, seminars, and chart writing.

160.08. Psychosomatic Case Conference. (1 1/2) F, W, Sp. Prerequisite: Consent of the instructor. 
Bender 

Cases will be presented in rotation by social work students. Emphasis will be placed on the interrelationship between psychological, social, and somatic factors. Although primarily intended for social work student psychiatric residents and other mental health professionals are welcome.

Berbling 

Langle: Porters interview patients and their characteristics and case histories used as cases for discussions of psychiatric diagnosis. A seminar format allows for free discussion between students and instructors.

160.10. Introduction to Suicidology. (2) F. Prerequisite: Consent of the instructor. 
E. Cohen 

Suicide is surveyed from a multidisciplinary approach in weekly seminars led by persons actively working in this field. Students will investigate an aspect of the problem which particularly interests them, and will present their findings to the group.

160.11. Seminar: Views of the Meaning of Psychosis. (1 1/2) F. Prerequisite: Consent of the instructor. 
Feinberg and Rutter 

This is an elective seminar designed for students who have an interest in exploring in depth the phenomenon of psychosis, from biological, Freudian, communications theory and Jungian-Liangian points of view, with readings and clinical experience in each area.

Cowan, Duncan 

An intense, personal experience in fundamental group phenomena through a study of “here and now” group behavior, followed by application of principles thus derived to group settings in the medical school environment.

Colman 

Investigate current concepts useful in implementing behavior change systems (psychosubtherapy, hospital wards, community mental health centers, etc.). Theoretical contributions from organizational models, operant conditioning, operations research, ethological theories, etc., will be applied to specific design situations.

Colman, Duncan 

An intense, personal experience in fundamental group phenomena through a study of “here and now” group behavior, followed by application of principles thus derived to group settings in the medical school environment.

160.15. Substrates of Behavior. (2) Sp. Hazen 

This elective course is designed primarily for students electing the behavioral sciences pathway and is concerned with the biological determinants of behavior. Relationships between behavior and neurophysiology, neuroanatomy, biochemistry, genetics, and endocrinology will be examined.

160.16. Further Studies of Self-Analytic Phenomena. (1) F, W. Prerequisite: 160.01. 
Cohen 

Purpose of this course is to enable medical students to continue the study of the problems of morbidity and mortality resulting from self-assault. Subjects to be covered and the modus operandi will be determined by the interests of the students.

180.01. Introduction to Interviewing and Evaluation. (1 1/2) F, W, Sp. Prerequisite: Psychiatry 130. 
Brody 

An opportunity to observe and audit diagnostic and psychiatric interviews conducted by a faculty member and one patient to continue for an academic quarter. Discussions will follow the interviews. Limited to three students per instructor.

180.02. Seminar: Views of the Meaning of Psychosis. (1 1/2) F. Prerequisite: Consent of the instructor. 
Feinberg and Rutter 

This is an elective seminar designed for students who have an interest in exploring in depth the phenomenon of psychosis, from biological, Freudian, communications theory and Jungian-Liangian points of view, with readings and clinical experience in each area.

180.03. Group Interaction Process. (1) F, W, Sp. Prerequisite: Consent of the instructor. 
Cowan, Duncan 

An intense, personal experience in fundamental group phenomena through a study of “here and now” group behavior, followed by application of principles thus derived to group settings in the medical school environment.

180.04. Personality Assessment in Clinical Psychiatry: Theory and Practice. (1) W. Prerequisite: Psychiatry 130. 
Brody 

An opportunity to observe and audit diagnostic and psychiatric interviews conducted by a faculty member and one patient to continue for an academic quarter. Discussions will follow the interviews. Limited to three students per instructor.

Brody 

Practical experience in psychotherapeutic work with outpatients to increase the students' understanding of psychopathology, psychodynamics, and psychotherapeutics. Students are assigned one patient a week under supervision of a faculty member. Assigned reading, seminars, and chart writing.

180.08. Psychosomatic Case Conference. (1 1/2) F, W, Sp. Prerequisite: Consent of the instructor. 
Bender 

Cases will be presented in rotation by social work students. Emphasis will be placed on the interrelationship between psychological, social, and somatic factors. Although primarily intended for social work student psychiatric residents and other mental health professionals are welcome.

Berbling 

Langle: Porters interview patients and their characteristics and case histories used as cases for discussions of psychiatric diagnosis. A seminar format allows for free discussion between students and instructors.

180.10. Introduction to Suicidology. (2) F. Prerequisite: Consent of the instructor. 
E. Cohen 

Suicide is surveyed from a multidisciplinary approach in weekly seminars led by persons actively working in this field. Students will investigate an aspect of the problem which particularly interests them, and will present their findings to the group.

180.11. Seminar: Views of the Meaning of Psychosis. (1 1/2) F. Prerequisite: Consent of the instructor. 
Feinberg and Rutter 

This is an elective seminar designed for students who have an interest in exploring in depth the phenomenon of psychosis, from biological, Freudian, communications theory and Jungian-Liangian points of view, with readings and clinical experience in each area.

Cowan, Duncan 

An intense, personal experience in fundamental group phenomena through a study of “here and now” group behavior, followed by application of principles thus derived to group settings in the medical school environment.

Colman 

Investigate current concepts useful in implementing behavior change systems (psychosubtherapy, hospital wards, community mental health centers, etc.). Theoretical contributions from organizational models, operant conditioning, operations research, ethological theories, etc., will be applied to specific design situations.

Colman, Duncan 

An intense, personal experience in fundamental group phenomena through a study of “here and now” group behavior, followed by application of principles thus derived to group settings in the medical school environment.

180.15. Substrates of Behavior. (2) Sp. Hazen 

This elective course is designed primarily for students electing the behavioral sciences pathway and is concerned with the biological determinants of behavior. Relationships between behavior and neurophysiology, neuroanatomy, biochemistry, genetics, and endocrinology will be examined.

180.16. Further Studies of Self-Analytic Phenomena. (1) F, W. Prerequisite: 180.01. 
Cohen 

Purpose of this course is to enable medical students to continue the study of the problems of morbidity and mortality resulting from self-assault. Subjects to be covered and the modus operandi will be determined by the interests of the students.

190.01. Introduction to Interviewing and Evaluation. (1 1/2) F, W, Sp. Prerequisite: Psychiatry 130. 
Brody 

An opportunity to observe and audit diagnostic and psychiatric interviews conducted by a faculty member and one patient to continue for an academic quarter. Discussions will follow the interviews. Limited to three students per instructor.

190.02. Seminar: Views of the Meaning of Psychosis. (1 1/2) F. Prerequisite: Consent of the instructor. 
Feinberg and Rutter 

This is an elective seminar designed for students who have an interest in exploring in depth the phenomenon of psychosis, from biological, Freudian, communications theory and Jungian-Liangian points of view, with readings and clinical experience in each area.

190.03. Group Interaction Process. (1) F, W, Sp. Prerequisite: Consent of the instructor. 
Cowan, Duncan 

An intense, personal experience in fundamental group phenomena through a study of “here and now” group behavior, followed by application of principles thus derived to group settings in the medical school environment.
199. Laboratory Project in Psychiatry. (1-5) F, W, Sp. Prerequisite: Consent of the instructor.
   L. Epstein and Staff
   A laboratory research project under direction of the faculty with the approval of the chairman of the department.

   Consideration of situational and interpersonal approaches to changing human behavior. Conditioning, behavior modification, cognitive restructuring, group process, and other models will be compared. Therapeutic, educational, organizational, and social settings for change will be examined.

   Faculty members and visiting professional persons present new developments in psychiatry and related fields.

   Cases are presented by faculty. Clinical aspects are discussed and the neuropathological findings are demonstrated. Students take an active part in the discussions of correlation between clinical and pathological findings with emphasis on their neuropsychiatric significance. Parallel reading is required.

402. Orientation to Psychiatric Research. (1½) Tu, F, W, Sp. L. Epstein and Staff
   Guided tours through the research facilities of Langley Porter Neuropsychiatric Institute and introductory presentations of research projects by individual investigators.

404. Personality Assessment. (1) F, W.
   LPNI Fisher
   Seminar presents techniques of assessing personality and intellectual functions in relation to psychodiagnostic evaluations and study of prognosis with psychotherapy. Discussion of development, design, and theory of clinical psychological methods and clinical applications and demonstrations with appropriate case material.

   Elective. Prerequisite: Psychiatry 404
   Focus is on personality theories other than Freudian; e.g., Lewin, Allport, Sheldon, and Rogers. Course includes an examination, study, and discussion of contemporary personality theories, their concepts, systematic applications to the behavioral sciences, and research potentials. Parallel reading is required.

   LPNI Callaway
   Course consists of supervised clinical and basic research in behavioral abnormalities, psychopathology, and experimental psychiatry. Specific subjects for research are chosen in conjunction with members of the staff.

   LPNI Yeager
   Course includes techniques of clinical electroencephalography and the interpretation of electroencephalograms.

   Elective. LPNI Malanudd
   Discussion of the neuropathology of neurological and psychiatric disorders with illustrations from gross and microscopic material. Parallel reading is required.

   LPNI Ruesch
   Brief review of the various fields of contemporary behavioral science and social psychiatry. Parallel reading is required.

   LPNI Ruesch
   Residents pursue original investigations in the fields of social psychiatry and allied subjects. They are expected to set up a research project, make observations, record and analyze data, engage in relevant reading, and discuss findings and conclusions with the senior staff.

   LPNI Wheelwright
   Seminar includes discussions of C. G. Jung's Analytic Psychology, systematic consideration of the historical developments, theory, and clinical applications. Illustrative case material is presented; residents participate in presentation and discussion of clinical material. Parallel reading is required.

   Starkweather
   Seminar presents a review of digital computing and its applications in psychiatry. Residents explore these concepts through their own programming efforts.

   LPNI Phillips
   Survey of the literature in child development and child psychiatry. Parallel reading is required.

   LPNI Callaway
   Discussion of readings on major problems in contemporary psychiatric research. Advance registration is required.

   Supervised research with computer methods for the simulation of behavior in clinical interactions. Applications of computers to the analysis of human communication.

419. Child Development and Personality. (1½) F.
   Required of child psychiatry first-year residents. Elective for all other residents.
   Seminar focuses on the psychological study of the child, clinical and experimental methods of investigation, and research in clinical child psychology. Content includes theory and assessment of intelligence and personality. Parallel reading is required.

450. Clinical Psychiatry. (1½ per week) Tu, W, Sp. For residents at LPNI, SF, and UC.
   Elective for all others.
   C. Ryan, CM Pavelson.
   LPNI Simon, SF Morton, UC Brody
   Residents are responsible for the study and treatment of psychiatric patients under the supervision of senior staff and members of the teaching staff. Parallel reading is required.

451. Advanced Clinical Psychiatry. (1½ per week) Tu, W, Sp. Required for all fourth- and fifth-year residents at LPNI.
   LPNI Simon
   Training in administration, supervision, teaching, research, consultation, and treatment.

   LPNI Swerek, C. Ryan
   Residents in child psychiatry are responsible for the diagnosis and treatment of children with psychiatric problems and for therapeutic work with their parents under the supervision of the senior staff.

   Required for second-year residents in child psychiatry.
   LPNI Swerek
   In addition to clinical work, the residents in child psychiatry are required to supervise the work of others and to preside over treatment reviews and interagency conferences.

   Required for second-, third-, fourth-, and fifth-year residents in training for research.
   LPNI Ruesch
   Residents are responsible for the diagnosis and treatment of hospitalized and ambulatory patients under supervision. The selection of patients, the particular treatment program, and the follow-up are all part of a research design reviewed and planned with the senior staff.

455. Psychiatric Liaison. (1½ per week) Tu, W, Sp. Elective. Psychiatry 450 and 455 may not be taken concurrently. UC Berhinger
   Supervised psychiatric consultations to other departments, supervised psychotherapy with hospitalized and ambulatory patients with psychosomatic disorders, and clinical research in psychosomatic medicine.

   O. Brown
   Seminars and field work deal with the theory and practice of community psychiatry under the supervision of the senior staff. Seminars and field work cover appropriate major seminars of community psychiatry. Parallel reading is required.

   LPNI Murphy
   residents present selected cases to members of the clinical faculty and invited consultants. All students participate in the discussion of cases. Parallel reading is required.

   LPNI Cress
   residents present selected cases to the seminar leader. Usually each patient is interviewed briefly before the group. All students participate in the discussion of cases with emphasis on diagnosis and planning of treatment.

463. General Orientation. (3) Tu.
   LPNI Simon
   Orientation for newly appointed residents to the clinical faculty and invited consultants. All students participate in the discussion of cases. Parallel reading is required.

   LPNI Simon
   Seminar focuses on the understanding of clinical psychiatric syndromes, treatment approaches, and techniques; and the fundamental concepts of social psychiatry.
Courses

499. Clinical Psychiatry. (1½ per week) Su, F, W, Sp. Interns rotate through inpatient wards and outpatient clinics where they are responsible for the initial medical and psychiatric evaluation and management of new patients, under the direction of the attending staff, including history taking, physical examination, laboratory tests, and consultation.

PSYCHOLOGY

113. Human Growth and Behavior. (3) F. Prerequisite: First-year standing or consent of the instructor. Attiksson Examination of patterns and sequences of human development. Exploration of human behavior and maturation with a view to the influences affecting the human condition through the life span. Various theoretical bases are explored in conjunction with biological and psychosocial concepts.

130A. B. Psychology for Dental Students. (1-1) F, W, Sp. 1 hour. Laboratory: 1 hour. Introduction to personality theory as a basis for understanding and dealing with the psychological problems encountered in dental practice.

150. Psychology for Dental Hygienists. (3) Sp. Lecture: 1 hour. Laboratory: 0-3 hours. Introduction to personality theory as a basis for understanding and dealing with the psychological problems encountered in dental practice.

160. Psychology for Dental Hygienists. (1) F. Lecture: 1 hour. Laboratory: 1 hour. Understanding of the dynamics of human behavior, the psychological factors which enter into and influence dental treatment. Students' clinical cases are discussed and analyzed by dynamic application of behavioral theory.

180.02. Psychological Aspects of Treatment Planning. (3) Sp. Lecture: 1 hour. This course integrates students' basic training from the specialty courses in dentistry with knowledge of the psychological considerations necessary to individualize treatment. Appropriate treatment may then be planned to the practitioners' awareness of the unique needs of patients.

180.03. Advanced Psychology for Dental Hygienists. (1) Sp. Prerequisite: Psychology 160. Seminar: 1 hour. Seminar discussions on the emotional aspects of interpersonal transactions among office personnel, therapists, and patients.

181. Group Dynamics. (2-4) F. W. Adelson theories of group process and leadership; methods for studies of group behavior; principles for understanding group functioning; overview of research; dynamics of planned change. Laboratory provides opportunity for increasing insight and skill as a participant-observer in a small group.

196. 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.


201A-B. Seminar in Medical Psychology. (2-2) Yr. Prerequisite: Consent of the instructor. Morrison, Harris Seminar discussions of clinical work in medical psychology and psychiatry, reports of research and current literature by students and staff, and lectures by faculty. Parallel reading.

202. Basic Physiological Psychology. (2-3) W. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 0-3 hours. Peck Designed for the student with minimal preparation in physiology, anatomy, or physiological psychology. This course emphasizes the role of brain processes in emotion, motivation, attention, learning, and species-typical behavioral patterns.

206. Aggression and Violence. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Peck Designed for the student with minimal preparation in physiology, anatomy, or physiological psychology. This course emphasizes the role of brain processes in emotion, motivation, attention, learning, and species-typical behavioral patterns.

208A-B. Psychology of Thinking and Information Processing. (3-3) W, Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 3 hours. Staff. Major approaches to the fields of human perception and cognition, viewed as processes by which humans obtain and use information. Emphasis will be placed on individual differences. Students will prepare and participate in demonstration experiments.

208A. B. Theories of the Computer in Psychology. (2-2) W, Sp. Prerequisite: Psychology 208 or equivalent and consent of the instructor. Lecture: 2 hours. Starkweather
Theories of memory storage processes. Consideration of human and animal experimental data about agents which facilitate or disrupt memory functions.

219. Tests and Measurement. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Galin

O'Sullivan

Psychological test construction, including sampling, item analysis, standardization, reliability, and validity.

220. Seminar in Growth and Behavior. (4) F. Sp. Prerequisite: Consent of the instructor. Lecture: 4 hours.

Schaw

An interdisciplinary working graduate seminar to cover the relevant literature from infancy to old age with a theoretical focus on psychoanalytic ego psychology in the light of related fields (anthropology, sociology, history, physiology, and genetics).

221. B. Community Psychology: Basic Concepts, Major Processes and Core Systems. (2-4, 2-4) W. Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 0-3 hours.

Ekman

Introduction to community psychology and to the basic concepts, major processes, and core systems with which specialists in community psychology, community health, and epidemiology and health are concerned. Intensive study of particular processes and systems.

222. The Special Biography. (6) F. Prerequisite: Consent of the instructor. Schaw

Seminar in historical change as seen in the lives of charismatich leaders. Lives of Gandhiji, Luther, Malcolm X, Newton, Bolivar and Freud will be examined. Students are expected to present short studies.

223. Clinical Inference and Research Strategies. (4) Sp. Prerequisite: Consent of the instructor. Schaw

Research seminar on the use of clinical procedures in research. The staff's exploration of Projective Techniques (TAT) in cultural, clinical, and research contexts. Also, research on personal orientation as focus for participants' presentation of related clinical procedures or techniques.

224. Tutorial in Psychological Statistics. (2-4) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 1-3 hours. Laboratory: 0-3 hours. Ornstein, Galin

Reading and practice in methods of data analysis, tailored to the background and needs of the particular student.

225. Directed research on various topics related to drug abuse, its treatment, and its prevention.

226. Attention and Perception in Schizophrenia. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Atkinson

This seminar will review the literature related to attention and perception in the schizophrenic process, with emphasis on implications for methodology and future research.

227. Attention and Selective Perception: Neuropsychological Aspects. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours.

Galin

Brain mechanisms relating to attention. Information from animal and human studies with brain stimulation, single neuron recording, electroencephalography, measurement of cortical evoked potentials, and the effects of brain lesions.

228. Brain Hemisphere Specialization. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours.

Galin

Review of evidence from studies of human brain injuries and "split brain" surgery. Localization of cognitive style; analytic vs. synthetic modes of experiencing the world; unity and disunity in consciousness.

229. Clinical Prediction. (3) W or Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours. Stone

Problems in the validation of clinical psychological procedures; specification of the measurement characteristics of psychological data; contrast of methods of information processing; analysis of criterion behavior; efficacy of clinical judgment.

230. Preclinical Determinants of Learning Ability. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours.

Galin

Research discussions of various experimental treatments which can result in enhanced or disrupted adult learning abilities when administered prenatally.


Stone

Selected topics in the area of perception, memory, problem solving, and other cognitive processes. The student will be expected to produce a critical and synthetic review of some aspect of the literature.

232. Psychotherapy Research. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. O'Sullivan

Directed research on various topics related to drug abuse, its treatment, and its prevention.

233. Attention and Perception in Schizophrenia. (1-3) F, W, or Sp. Prerequisite: Consent of the instructor. Laboratory: 2-4 hours. O'Sullivan

Supervised research experience including an introduction to biochemical and histological techniques for the study of neural tissue.

234. Investigation into Human Consciousness. (3) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 3 hours.

O'Sullivan

Readings in the psychology and physiology of conscious experience.

235. Research in Community Psychology. (2-4) F, W, or Sp. Prerequisite: Psychology 209C or equivalent and consent of the instructor. Lecture: 1 hour. Laboratory: 1-3 hours.

Adelson, Kalis

Research methods in community psychology and community mental health, including community mental health agencies, community psychology, community psychiatry, the metamethods approach, and program evaluation. The student must be involved in an ongoing project.

236. Environmental Psychology. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours. Malin

Introductory survey of human environmental and emotional response to the physical environment; effects of climate, pollution, noise, crowding, and other urban physical features; research strategies for studying human psychophysiology in nature and artificial environments.

237. Behavioral Neurochemistry. (2) F, W, or Sp. Prerequisite: Consent of the instructor. Lecture: 2 hours.

Kaminsa

Readings in chemistry related to psychological phenomena; the biochemical bases of the effects of drugs, hormones, and disease states on cerebral function.
131A-B. Hours. Laboratory: 0-6 hours. 

Laboratory: 0-6 hours.

Prerequisite: Consent of the instructor. Lecture: 2 hours. Laboratory: 3 hours. 

Clinical research investigations of human brain-behavior functions, emphasizing the relationships between the higher cognitive components of behavior and the brain's anatomy and disorders. The laboratory consists of supervised neuropsychological evaluations of brain-damaged patients.


Supervised classroom or tutorial teaching experience.

RADIOLOGY

100. Introduction to Clinical Radiology. (2) F, W, or S. Prerequisite: Psychiatry 190, Medicine 130, Pathology 100, Anatomy 100 and 103; Medicine 131A-B concurrently. 

Course provides instruction in basic aspects of therapeutic and diagnostic radiology and nuclear medicine. Illustration of diagnostic and therapeutic modalities in specific disease areas and provision of instruction in use of radiologic resources.

140.09. Clinical Clerkship in Diagnostic Radiology at SF. (1½ per week) Su, F, W. Prerequisite: Medicine 313A-B. 

Clinical clerkship in approved hospital by special arrangement and with the Dean's Office and the Chairman of the Department of Radiology. 

140.03. Clinical Clerkship. (1½ per week) Su, F. W. Prerequisite: Medicine 313A-B. 

Clinical clerkship in approved hospital by special arrangement and with the Dean's Office and the Chairman of the Department of Radiology. 

140.04. Clinical Clerkship in Nuclear Medicine. (1½ per week) Su, F. W. Prerequisite: Medicine 313A-B. Consent of the instructor. 

Observation of basic nuclear medicine procedures and participation in diagnostic tests employing radioisotopic tracers. Completion of Radiology 140.03, 140.02, 170.08, 170.09, meet the State of California requirements for licensure to use radioactive isotopes in clinical medicine. 

140.05. Roentgen Diagnosis at MZ. (1½ per week) Su, F, W. Prerequisite: Medicine 313A-B. 

Students serve a clerkship in the Diagnostic Division of the Department of Radiology. They observe performance of radiologic procedures, interpretation of films, attend conferences and learn basic philosophy of conducting radiologic examinations and the rules of interpretation. 

140.06. Clinical Clerkship in Radiation Therapy at MZ. (1½ per week) Su, W, F, Prerequisite: Medicine 313A-B. 

Castronovo Participation in examination of cancer patients under treatment in the Claire Zeller Institute and Mount Zion Hospital. Students participate in rounds, conferences, and clinics, and will demonstrate the use of newer radiotherapeutic techniques. 

140.07. Diagnostic and Therapeutic Radiology. (1½ per week) Su, F, W. Prerequisite: Medicine 313A-B. 

Clinical clerkship in roentgen diagnosis and therapeutic radiology. Two weeks are spent in roentgen diagnosis and two weeks in therapeutic radiology. Some of the material in roentgen diagnosis and clinical clerkship in radiation therapy is included. 

140.08. Clinical Clerkship in Cardiovascular Radiology. (1½ per week) Su, W, F, Prerequisite: Medicine 313A-B. 

Clinical clerkship in cardiovascular radiology provides opportunity to become acquainted with the radiologic studies of the cardiovascular system through active participation in the examinations and their interpretation. 

140.10. Roentgen Diagnosis at F. (1½ per week) Su, W, F, Prerequisite: Medicine 313A-B. 

Clinical clerkship in diagnostic radiology including seminars in radiology of the chest, bones, gastrointestinal tract, and neuroradiology. Students will observe in fluoroscopy and special procedures including catheterization, arteriography. Modification of the course material will be arranged to suit individual needs. 

140.11. Radiology Clerkship at C. (1½ per week) Su, W, F, Prerequisite: Medicine 313A-B. 

Burchette Includes all types of radiologic procedures, pediatric radiology, and radiation therapy with emphasis on the radiologist as a consultant to other specialists as related to use and indications for all radiologic techniques. 

140.12. Radioactivity Laboratory. (1½ per week) Su, W, F, Prerequisite: Medicine 313A-B. Consent of the instructor. 

Kaufman, Lamle Course is designed to teach accurate measurement of radioactivity techniques for biomedical purposes. 

140.13. Radiology and Medical Diagnosis. (1½ per week) Su, W, F, Prerequisite: Medicine 313A-B. 

Price and Staff }
Numerous research projects are being conducted in the department and facilities are available for new ones. Residents are encouraged to take advantage of these opportunities.

406. Elements and Clinical Applications of Radiation Physics. (Su, F, W, Sp.) Perez-Mendez

The elements of radiological physics are studied in a series of lectures and problem assignments. The basic phenomena experienced in producing, measuring, and absorbing radiation are illustrated. The course is designed to give residents in radiology the necessary background to practice radiology.


A survey of basic concepts of radiation actions at various levels of biological organization. Lectures will be oriented to the radiology resident and will include somatic and genetic effects of radiation and tumor response.


Interspecialty seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature are presented. This course includes surgical and medical-radiological rounds, consultative tumor board, clinical-pathological conferences, and other departmental grand rounds.


Interspecialty seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature are presented. These include medical-surgical, clinicopathological, chest, medical X-ray, rheumatology, neurology, and neurological surgery conferences; consultative tumor board; and surgical and orthopaedic grand rounds.

411. Introduction to Nuclear Medicine. (2) Su, F, W, Sp. Prerequisite: Given concurrently with Radiology 421. Price and Staff

An introduction to nuclear medicine. Emphasis will be given to the fundamental principles of radionuclide concentrates and their applications in nuclear medicine.


Course includes review of the surgical pathology material and attendance at autopsy sessions.


Course includes presentation of pathological material of special interest with emphasis on the correlation of diagnostic X-rays and pathological findings and a study of the pathology of patients under radiation treatment.


A seminar course with laboratory involvement designed to acquaint the student with the current knowledge of physics applicable to diagnostic radiology. Topics to be covered include generation and extraction of radiological information, image conversion, recording methods, and special-purpose equipment.


Study of principles of radiobiology and their application to radiotherapy. Seminars deal in depth with textbooks, selected readings, and prepared seminars dealing with understanding of mechanisms of action of radiation in clinical radiotherapy. Oriented to radiotherapy fellows and residents.


Clearer, Patt

An analysis of cell population growth in tissues, tumors, and cultures. Detailed emphasis is given to radioactive tracers (thymidine and its biochemistry) and experimental methods for studying cell proliferation in vivo and in vitro (e.g., autoradiography).


Prerequisite: Residents assigned to nuclear medicine section and consent of the instructor.

421. Nuclear Medicine Physics. (2) Su, F, W, Sp. Prerequisite: Residents assigned to nuclear medicine section.

A seminar-seminar course, with some practical sessions to provide the resident with a basic knowledge of radiological physics with special reference to those aspects relating to therapeutic radiology.


A lecture-seminar course, with some practical sessions to provide the resident with a basic knowledge of radiological physics with special reference to those aspects relating to therapeutic radiology.

455. Radioactivity Laboratory. (I½ per week) Su, W, Sp.

Price and Staff

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.


Residents, under supervision, are responsible for the diagnostic activities of the department including photographic conferences and reports, history-taking, and physical examinations. In addition, the chief resident has certain administrative duties relative to the resident training program.


Residents are responsible for the diagnostic and therapeutic activities of the department including diagnostic consultations and reports, history-taking, and physical examinations. Residents assigned to nuclear medicine section.


Course intended for all first-year residents in radiology and provides an introductory survey of radiobiology, diagnostic X-ray physics, radioactivity, and radiation instrumentation.

463. Concepts of Treatment Planning and Dosimetry in Therapeutic Radiology. (5) Su. Prerequisite: Residents assigned to therapeutic radiology.

V. Smith

A workshop course to provide residents in therapeutic radiology with the elements of treatment planning dose calculations.
REMOVABLE PROSTHODONTICS

110B-C. Elementary Complete Denture Prosthodontics. (3-3) W. Sp. Lecture, seminar, and laboratory: Variable. Total: 7 hours per week. Prerequisite: Removable Prosthodontics 110B-C. Augsburger

The parts of a removable partial denture and their functions are presented in seminar sessions. In the laboratory, instruction and experience is provided in fabricating a removable partial denture.

126D. Partial Dentures. (3) F, W, Lec­­ture, seminar, and laboratory: Variable. Totals 7 hours per week. Prerequisite: Removable Prosthodontics 110B-C. Parker

Demonstration-participation in construct­­ing complete dentures for a patient.

130C. Orofacial Prosthodontics. (1) Sp. Lecture: 1 hour. Chierici and Staff

Biologic principles underlying prosthodontic treatment of patients with congenital and acquired malformations, defects, and dys­­functions. This will include the development of normal and abnormal speech related to prosthodontics. The basis for prosthodontic therapy in temporomandibular joint disor­­ders is also presented.

159. Clinical Removable Prosthodontics. (1½) F, W, Sp. Prerequisite: Third-year standing in removable prosthodontics. Regli and Staff

Clinical instruction. Third-year lectures and seminars must be taken concurrently.

161. Treatment Planning and Partial Denture Design. (3) F, W, Prerequisite: Third-year standing. Hemphill

Treatment planning and design of re­movable partial dentures.

149. Clinical Removable Prosthodontics. (6½) F, W. Prerequisite: Removable Prosthodontics 139. Regli and Staff

171A-B-C. Complete Prosthodontics. (4-4-4) F, W, Sp. Lecture: 1 hour. Laboratory and clinic: 9 hours. Regli, Parker and Staff

Instruction in clinical and laboratory pro­­cedures related to complete prosthodontics. 172A-B-C. Complete Prosthodontics. (4-4-4) F, W, Sp. Lecture: 1 hour. Laboratory and clinic: 9 hours. Regli, Parker and Staff

Instruction in clinical and laboratory pro­­cedures related to complete prosthodontics.

172D. Partial Prosthodontics. (5) S­­S. Lecture: 1 hour. Laboratory and clinic: 12 hours. Regli, Parker and Staff

Clinical practice on patients for partial and complete prosthodontics.


Instruction in clinical and laboratory procedures related to complete prosthodontics. Course will include in-service hospital treatment at Veterans Hospital, San Francisco.


Original investigation in the field of re­movable prosthodontics.

177. Prosthodontics Seminar. (4) F, W, Sp. Seminar: 4 hours. Prerequisite: Students in Removable Prosthodontics Certificate Program must register for this course each quarter and summer session for entire program. Regli, Parker and Staff

Review of the literature related to pros­thodontics.

180. Prosthodontics. (1) W. Lecture: 1 hour. Prerequisite: Removable Prosthodontics 130C. Regli, Parker and Staff


Clinical practice on patients for partial and complete prosthodontics. This will include the development of normal and abnormal speech related to prosthodontics. The basis for prosthodontic therapy in temporomandibular joint disor­­ders is also presented.

SOCI­­OLOGY

112. American Society and Its Problems. (3) Sp. Prerequisite: Consent of the instructor. Staff

Presentation of prominent sociocultural features of dominant systems in American so­­ciety. Integration and dis­­ruption between and among these systems with attention to major social problems which result; e.g., racism, in­­equality, youth, dis­­junction between technol­­ogy and humanistic values.
120A. Philosophy and Logic of Scientific Method. (3) W. Prerequisite: Second-year standing in the School of Nursing or consent of the instructor.

Davis Focuses on impact of different philosophical schools on development of science, logic or scientific method, statistical concepts, use of theories and models in defining problems, of hypotheses verification, description of empirical methods, their advantages and limitations.

120B. Statistical Concepts. (2) Sp. Prerequisite: Second-year standing in the School of Nursing or consent of the instructor. Sociology 120A is not prerequisite to Sociology 120B.

An introduction to concepts underlying statistical techniques; criteria for selection; how, where, and when used; logic of statistical inference; discussion of probability; discussion of biostatistics included.

122. Health and Illness in American Society. (3) F. Prerequisite: Consent of the instructor.

Staff Broad survey of features of American society that produce either health or morbidity or both. A variety of significant factors will be explored in conjunction with ideological implications for the quantity and quality of health care services.

125. Issues in Black-White Relations. (3§) Sp. Prerequisite: Consent of the instructor. Sociology 120A is not prerequisite to Sociology 125.

Johnson A survey of historical, sociological, and political analysis of the origin of Caucasian attitudes towards the black community; and analysis of the origin of contemporary attitudes towards the black minority and the effects in black-white relationships.

132. The Individual and Society. (3§) F. Prerequisite: Third-year standing or consent of the instructor.

Olesen The relationship of social structures to individuals and their behaviors. The emphasis will be on individuals as members of society rather than on individuals or society as such.

154. Perspectives on Women’s Roles in Health Care Delivery. (3§) Sp. Lecture: 3 hours. Prerequisite: Consent of the instructor.

Olsen, Newman Analysis of sex roles in general and women’s roles in particular in health care receipt and delivery with particular emphasis on career-oriented problems to health professions, images of women in therapeutic situations, and cross-cultural features of health care.

206. Sociology of Deviant Occupations. (2-4) W. Prerequisite: Consent of the instructor. Lecture: 2-4 hours. Prerequisite: Consent of the instructor. Lecture: 2-4 hours.

Olesen Analysis of social behavior utilizing concepts of territoriality, proscriptions, social schema; review of relevant animal studies, as well as such concepts as privacy; consideration of cross-cultural uses of space.

209. Sociological Analysis I. (4) F. Prerequisite: Consent of the instructor. Prerequisite: Sociology 212A is prerequisite to Sociology 209.

Davis An introduction to concepts underlying social problems and a substantive survey of such leading contemporary problems as race relations, juvenile delinquency, the role of women in American society, and the distribution of health services in the United States.

198. Supervised Study in Sociology. (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.

201. Sociology of Psychiatry. (3) Sp. Lecture: 3 hours. Prerequisite: Consent of the instructor. Staff

Schatzman, Strauss Psychiatric practices, professional and occupational careers, and institutions conceptualized sociologically, as historic, symbolic systems and interactional processes.

205. The Sociology of Health Professions and Occupations. (4) F. Lecture: 4 hours. Prerequisite: Consent of the instructor. Staff

The nature of occupational roles and professions, their constellation in hospitals and clinics, the medical division of labor, specialties and specialization, professional and occupational ideologies, the sociology of work relationships, careers.

210A. Sociology of Devalued Occupations. (2-4) W. Prerequisite: Consent of the instructor. Lecture: 2-4 hours.

Olesen Review and analysis of occupational theory with special reference to the trends, both social and psychological, involved in work customarily considered “dirty” or devalued. Analysis of the organization of such work, the life styles of the persons who pursue it.

212A. Sociology of Health Care. (2-4) W. Prerequisite: Consent of the instructor.

Schatzman An inquiry into the nature of the organizational forms by which health care is distributed with particular emphasis on hospital organization and the interaction between health care personnel.

167. Social Organization of Health Care (with Primary Emphasis on Hospitals). (2) F. Prerequisite: Consent of the instructor. Staff

An introduction to the social, ethical, and institutional perspectives on social organization, occupation and life style to health and illness, and therapeutic interaction of laymen and health professionals.

210A-B. Sociological Analysis II and III. (2-2) W. Prerequisite: Sociology 209 and consent of the instructor. Staff

Glaser Techniques, methodology, and logic of analysis of data to generate a sociological perspective and substantive theory.

211A-B. Sociological Analysis IV and V. (2-2) F, W. Prerequisite: Sociology 209 and 210A-B and consent of the instructor. Staff

Glaser Techniques, methodology, and logic of generating formal sociological theory.

212A. Sociological Theory. (2-2) W. Prerequisite: Sociology 212A is prerequisite to Sociology 212B. Consent of the instructor. Staff

An examination and evaluation of classical and recent contributions to sociological theory. The central aim is the generation of a critical capacity with respect to received theory in both its formal and substantive varieties.

213. Studies in Participant Observation. (3) W. Prerequisite: Consent of the instructor. Staff

An advanced seminar dealing with theoretical and conceptual problems in various courses.
areas of social psychology. Recent developments in theory and concept will be reviewed in the light of advancing knowledge in the field.

233. Seminar in Urban Social Relations. (3) F, W, Sp. Prerequisite: Consent of instructor. Strauss A graduate research seminar on selected topics bearing on the social psychology of urban living and the sociology of cities.

234. Urban Financial Systems. (4) F. Prerequisite: Consent of the instructor. Glaser The sociological problems and processes involved when people deal with banks, lawyers, accountants, savings and loans, brokers, finance companies, investment counselors—as they surely must do to store money, use money, obtain credit and loans, invest money, etc.

249. Studies in Sociology. (1-8) F, W, Sp. Prerequisite: Consent of the instructor. Staff Students select special problems to investigate on an individual or collaborative basis. These studies may be conducted through readings, the collection or analysis of empirical data, or the development of conceptual analysis or methodology.

250. Research. (1-8) F, W, Sp. Prerequisite: Admission to doctoral study and consent of the instructor. Staff

255A-B-C. Field Research in Social Psychology. (6-6-6) Yr. Prerequisite: Masters degree in psychiatric nursing and consent of the instructor. Lecture: 6 hours. Glaser Field research seminar and practicum. The logic and techniques of the field method of inquiry. Emphasis upon research design, participant observation, and data gathering. Guided experiences in a variety of research interests and locales.

255A-B-C. Field Research in Social Psychology. (6-6-6) Yr. Prerequisite: Masters degree in psychiatric nursing and consent of the instructor. Lecture: 6 hours. Glaser Field research seminar and practicum. Collaborative research with staff. Training in data organization and analysis.

257A-B-C. Field Research in Social Psychiatry. (6-6-6) Yr. Prerequisite: Sociology 256A-B-C and consent of the instructor. Lecture: 6 hours. Glaser Field research seminar and practicum. Concept development and research composition. All stages of advanced field research from design to publication.

258. Thesis or Comprehensive Examination. (0) F, W, Sp. Prerequisite: Advanced standing or permission of the graduate adviser.

Surgery

110. Required Core Clinical Clerkship in General Surgery. (11/2 per week) Su, W, Sp. Prerequisite: Core curriculum in basic sciences.

Core general clinical clerkship in surgery. Students assigned to wards and clinics at UC, SF, F, and C. The application of basic sciences to surgery is emphasized in ward rounds and seminars.


Dunphy, Blaisdell, Hall

140.04. Clinical Clerkship. (1/2 per week) Su, F, W, Sp. Prerequisite: Completion of basic sciences core curriculum and either Medicine 110 or Surgery 110.

Clinical clerkship in approved hospitals in other universities by special arrangement and approval of the Dean and the Chairman of the Department of Surgery.

140.05. Operable Heart Disease. (1/2 per week) Su, F, W, Sp. Prerequisite: Completion of basic sciences core curriculum and Medicine 110 or Surgery 110 and 111.

Gerber, Ward rounds and conferences on patients with operable, congenital, and acquired heart disease. Details of selection, differential diagnosis, and results of surgery are discussed. Participation at UC, PMC, F, D.

140.06. Mission Emergency Clerkship. (1/2 per week) Su, F, W, Sp. Prerequisite: Completion of basic sciences core curriculum and Medicine 110 or Surgery 110 and 111.

Lim Two-week participation on the SF Emergency Ward. 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. (1/2 per week) Su, F, W, Sp. Prerequisite: Completion of basic sciences core curriculum and Medicine 110 or Surgery 110 and 111.

Sheldon This will involve clinical and laboratory investigation and a detailed study of specific patterns with trauma and shock.

140.09. Clinical Clerkship in Trauma Surgery. (1/2 per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111 and consent of the instructor.

Sheldon A clinical clerkship in the trauma service of the Department of Surgery at SF. The student will work at intern-clerk level as an integral part of the service.


Sanderson As an integral member of the cardio-thoracic team, the student will directly and actively share in preoperative, operative, and postoperative care. Weekly rounds provide the didactic teaching.

160.03. Clinical Cardiopulmonary Surgery. (2) F, Su. Prerequisite: Third or fourth year.

Roe Seminars are conducted on a series of subjects relating to cardiopulmonary surgery, which may be attended separately or in conjunction with weekly (Wednesday at 5:00 p.m.) rounds on the cardiological patients.

160.04. Fundamentals of Surgical Management of Malignant Diseases. (3) Su, W.Sp. Prerequisite: Medicine 110 or Surgery 110 and 111 and consent of the instructor.

Dunphy, Galante Correlation of pathologic physiology of certain malignant diseases with surgical principles utilized in management of the disease to elucidate causes of success or failure and limitations imposed by peculiarities of the malignant process on surgical techniques presently available.

160.05. Advanced Surgery Reading Course. (2) F, Sp.

Lim, Tester A weekly seminar for three hours where previously assigned papers will be discussed and critiqued. Over a period of eight weeks, approximately 200 pages representing the classical and current concepts in general surgery will be covered.

170.01. Basic Surgical Techniques. (1) F. W. Laboratory. 4 hours.

Schrock Students will learn the principles of operative technique including surgical asepsis by performing specific operations on anesthetized dogs. The students will function as surgeon, assistant surgeon, and anesthetist, and will be responsible for examination of the animals during convalescence.

170.02. Emergency Medical Care at SF. (3) F.

Subjects will include first aid care with an introduction to suturing, splinting, resuscitation, psychiatric emergency, and civil disaster. Format will include lectures, discussions, films, practice, and tour of Mission Emergency. Course is offered primarily for first- and second-year medical students.


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

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

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

400. General Surgical Staff Conferences. (1-5) F, W, Sp. Interns and residents.

SF Blaisdell, UC Dunphy, F, Hall
Conferences include presentation of case studies with reference to the literature, case records, laboratory tests, and special studies. Faculty, and occasionally visitors, discuss surgical problems. Death and complications are reviewed weekly.

402. General Surgical Pathology Seminar. (1) F, W, Sp. Interns and residents. UC Rambo
Seminar includes case reports and demonstrations of the currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories.

Seminar is held in the surgical wards with discussion of current problems concerning the diagnosis and management of general surgical patients.

Seminar includes discussion of current experimental surgical problems with reports on literature and work currently in progress in the surgical laboratories.

Residents, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postoperative care, and attendance at follow-up clinic. Senior residents have certain additional administrative, teaching, and clinical responsibilities.

452. Experimental Surgical Laboratory. (1½ per week) Su, F, W, Sp. Elective. Assistant residents. Surgery 450 and 452 cannot be taken concurrently. UC Dunphy, SF Blaisdell, F 14 Hall
Course includes experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in general surgery.

Assistant residents in off-campus hospitals approved by the department chairman and the Dean. Course includes clinical and experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in surgery.

Interns rotate through the general surgical service, including intensive care units. Under the direction of the attending staff, this rotation provides experience also in vascular, chest, hand and plastic surgery, and surgery of maxillofacial injuries.

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

Fischer, Pavone
Practical teaching experience in selected courses under the supervision of members of the staff.

180.02A-B-C. Teaching Methods. (1-1-1) F, W, Sp. Prerequisite: Fourth year standing or consent of the instructor. Lecture: 1 hour.
Fischer, Pavone
Predominantly group discussion based on selected readings in educational methodology. Specialists in education are invited to participate. Practical experience in teaching includes study of the basic sciences and urologic roentgenology with members of the attending staff.

180.03. Urology Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110.
R. D. Smith
Clinical clerkship in off-campus hospitals approved by the Dean and the chairman of the department.

170.01. Fundamentals of Urology. (2) F, W, Sp. Prerequisite: Consent of the instructor. D. R. Smith
Seminar and library research.

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 Urology. (1-5) F, W, Sp. D. R. Smith and staff
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

Seminar includes study of the diagnosis and treatment of urologic patients in the urology wards with the attending staff.

Practical experience in teaching is included in the seminars and urologic roentgenology with members of the attending staff.

Seminar includes study of the basic sciences and urologic roentgenology with members of the attending staff.

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