COURSES

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

Course Description — Course information is arranged in two paragraphs with periods separating items. The first paragraph includes (1) course number; (2) course title; (3) units in parenthesis; (4) session offered; (5) prerequisite; (6) lecture, laboratory, clinic, etc.; and (7) instructor in charge. The second paragraph describes the course content.

Abbreviations — These abbreviations are used where applicable: Su = summer term, S = summer session, F = fall quarter, W = winter quarter, Sp = spring quarter. For courses where units are followed by a §, the courses so designated are open to graduate academic students for credit. Hospitals are included in each course has been arranged according to the following rules:

- CCP Children's Hospital and Adult Medical Center, San Francisco.
- CHMS Children's Hospital Medical Center of Northern California, Oakland.
- CHS Community Hospital of Sanoma County, Santa Rosa.
- CM Cowell Memorial Hospital, Berkeley.
- FR French Hospital, San Francisco.
- GS Good Samaritan Hospital, San Jose.
- H Highland General Hospital, Oakland.
- IMBB Irwin Memorial Blood Bank, San Francisco.
- K Kaiser Foundation Hospital, San Francisco.
- KP Kaiser Permanente Medical Center, Oakland.
- KSF Kaiser Foundation Hospital, South San Francisco.
- L Letterman Army Medical Center, San Francisco.
- LPI Langley Porter Institute, San Francisco.
- MC Maricopa County Hospital, Phoenix, Arizona.
- MG Marin General Hospital, Ross.
- MI Mills Memorial Hospital, San Mateo.
- MZ Mt. Zion Hospital and Medical Center, San Francisco.
- NAT Natividad Medical Center, Salinas.
- NRFMC Naval Regional Medical Center, Oakland.
- OC O'Connor Hospital, San Jose.
- P Peralta Hospital, Oakland.
- PH Peninsula Hospital and Medical Center, Burlingame.
- PHS United States Public Health Service Hospital, San Francisco.
- PMC Pacific Medical Center, San Francisco.
- Q Queen's Medical Center, Honolulu, Hawaii.
- RDMC Ralph K. Davies Medical Center, San Francisco.
- RLA Rancho Los Amigos Hospital, Downey.

Course Numbers — All courses are numbered according to the following system: 100 series = upper division professional course, 200 and 300 series = graduate academic course, and 400 series = postdoctoral professional course. The meanings of the second (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 or Sp. Prerequisite: Microbiology 100A-B, or equivalent. Lecture 3 hours, Seminar 1 hour. (Petakis)

Lectures and seminars dealing with distribution and determinants of diseases in population. Emphasis is placed on uses of epidemiologic concepts and techniques in clinical, investigative, and community medicine.

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

Integrated ambulatory clerkship experience of wide scope offered in a diversity of patient settings, including Adult Comprehensive, Family Care, Ped-
An interdepartmental course introducing concepts of medical practice including physician-patient roles, health care systems, medical economics, medical jurisprudence, and bioethics. In preceptorships, students observe physician-patient relationships and processes of care, practice basic maneuvers of examination, and talk with patients.

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

Students function as members of a treatment team caring for patients severely disabled by acute spinal cord injuries, acute head injuries, and neurolologic and orthopedic disabilities at the Santa Clara Valley Medical Center Acute Rehabilitation Unit. Stipends are available.

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

Clinical Clerkship in a model community hospital rehabilitation center.

Clinical Clerkship in Primary Care at a Fresno Community Hospital. Experience for students expecting to take more advanced training in family therapy. Students will not see families themselves, but will participate in their role playing exercises aimed at practicing basic techniques.

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

Environmental Medicine. The program is designed to train students to deal with environmental problems and living conditions that influence health. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare participate where needed.
170.05. Rehabilitation Medicine. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Sykes, Crede
According to the student's interest in areas such as chronic spinal disease in children, surgical specialties, or disorders of special senses, individualized programs will be arranged to investigate rehabilitation services and related facilities.

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

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

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

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

175.01. The Western Medical Attitude. (1) F, W, Sp. Prerequisite: Consent of instructor. Guttinger
An exploration of the philosophical premises on which medicine rests, of medicine's relationship to other disciplines, of the structure of the patient-physician relationship, and of medicine's operational consequences. Special attention is paid to optimal versus inadequate or superfluous exam.

175.02. Philosophical Problems of Clinical Medicine. (1) Su, W, Sp. Prerequisite: Consent of instructor. Guttinger
Seminar on selected writings and of topics discussed in Ambulatory and Community Medicine 175.01.

176. Introduction to the Allied Health Professions. (1) F, Lecture 1 hour, Lab 1 hour. Byl, Schunk
Allied health professionals will describe their training, roles, responsibilities and function on the health care team. Seminar will follow, by observation of the professional or health care team in action.

Lectures will be devoted to introducing entering students to social, political, economic, and environmental factors influencing community health and provision of care. Topics will include presentation of care, community health planning, and formulation of social health policy.

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

184. Contemporary Spanish-Speaking Subcultures. (3) § F. W. Prerequisite: Consent of instructor. Sanchez
Investigation of selected theories of migration, urbanization, assimilation, and conflict with emphasis on diverse Spanish-speaking populations in urban areas; relationships between this grouping and formal institutions of education, law enforcement, and medical services.

185. Health Care Systems. (3) § Sp. Lecture 1 hour, Seminar 2 hours. Barbaccia
Lecture-seminar format is used to cover aspects of the organization and function of the health care system and its subsystems, including manpower, hospitals, ambulatory care, planning regulation and control, economics, government programs, and health services research.

186. Work/Health Problems in a Clinical Setting. (1-2) F, Sp. Lecture 1 ½ hours. Student project or superfluous exam.

187.02. Practitioner-Patient Relationship II. (1) F, W. Sp. Seminar 1 ½ hours. Schroder, Dienst
Provides experience in various interviewing contexts with role playing and other simulation situations. Objective of the course is the development of self-awareness as well as recognition of basic skills in practitioner-patient interaction.

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

188.02. Health Policy Seminar. (2) W, P. Lee and Staff
An introductory series relating health care issues to health policy and ethical analysis, specifically, "Finance in Health Care."

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

189. Bioethics Workshop. (1) § F. Jonsen, P. Lee
Lecture and workshop discussion of several health care ethical and public policy dimensions. Confidentiality, genetic screening and counseling, therapeutic experimentation in hopelessly cases and testing of pharmaceutical products are discussed.

190.01. Workshop in Ethics and Medical Care. (1) § W. Jonsen, P. Lee
Lecture and workshop discussion of several medical situations and their ethical and public policy dimensions: care of endangered and defective newborns, experimentation using normal children, public funding of sterilization programs, and chronic disease and quality of life.

190.02. Workshop in Ethics and Biomedical Issues. (1) § Sp. Jonsen, P. Lee
Lecture and workshop discussions of ethical and policy dimensions of several current biomedical is-
are developed. The process is facilitated by the use of a one-way mirror, video-recording, and case conferences.

403. Family Practice: Staff Conferences at CHS. (3) Su, F, W, Sp.

Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in pediatrics, adolescent medicine, and family practice.

404. Family Centered Health Care at CHS. (4) Su, F, W, Sp. Lecture 3 hours, Lab 3 hours. Grace, Ransom

Theory and techniques of family-centered health care are presented through a series of cases observed directly through a one-way mirror and on video tape. Readings are discussed in seminars and role playing is occasionally used.

405. Family Practice: Visiting Professor Program at CHS and VMC. (2) Su, F, W, Sp.

Weekly lectures, rounds, informal seminars, and case presentations are conducted by visiting faculty members from the University of California San Francisco representing diverse clinical disciplines and basic sciences.

406. Family Practice: Conferences in Obstetrics and Gynecology at CHS. (2) Su, F, W, Sp. R. Adams

Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in obstetrics and gynecology.

406.01. Family Practice: Staff Conferences in Internal Medicine at CHS. (4) Su, F, W, Sp. Gude

Conferences on medical subjects relevant to ambulatory practice and related hospital care are presented by members of the faculty of the Family Practice Residency and appropriate representatives of various clinical specialties. Series of meetings about specific problems are scheduled.


Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in general surgery and its various subspecialties.

406.03. Family Practice: Conferences in Orthopaedics at CHS. (3) Su, F, W, Sp. Campbell, Gulish

Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in various aspects of orthopaedic surgery.

407. Family Practice Preceptorships at CHS. (1½ per week) Su, F, W, Sp. Dervin, Neal

Resident physicians spend blocks of time in clinical practice settings learning aspects of applied family medicine, office management, and how to function as a member of the health care team.

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

Resident physicians are exposed to problems in health care delivery with emphasis on Mexican-American and counter-culture issues in two rural settings.


Resident physicians meet weekly to discuss a broad range of issues and problems related to family practice and family practice training. Topics range from the management of specific cases to the role of the family physician in the health care system.


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


A series of conferences on family process and family change, utilizing speakers prominent in the field of family therapy. A forum type atmosphere is encouraged with interchange between speaker and audience.

432. Family Practice: Clinical Conferences at SFGH. (1½) Su, F, W, Sp. Massad

Conferences on medical subjects relevant to ambulatory practice and related hospital care are presented by members of the faculty of the Family Practice Residency and appropriate representatives of various clinical specialties. Series of meetings about specific problems are scheduled.


A series of seminars in which specific projects of students are presented. The course includes an introductory course for graduate students. Lecture 5 hours, Lab 4 hours.

460. Laboratory Medicine. (6) Lecture 6 hours, Lab 6 hours.

Lecture and laboratory instruction in the basic sciences. Individuals preparing for career in medicine or other health professions are provided with an understanding of the common disease processes and with special reference to the functional aspects of the structures examined.


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


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


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

465. Ambulatory and Community Medicine / Anatomy / Pathology. (3) F Lecture 2 hours, Lab 3 hours.

The gross structure of the human body is studied by means of dissection, demonstration, X ray, surface, demonstration and cross-sectional anatomy with special reference to the functional aspects of the structures examined.

102. History. (5) F Lecture 3 hours, Lab 4 hours.

The course deals with the microscopic structure of cells, tissues, and organs except for the endocrine and reproductive systems.

103. Nervous System: Form and Function. (4-6) Sp. Prerequisite: Consent of instructor required for graduate students. Lecture 5 hours, Lab 4 hours.

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

115. History. (3) Sp Lecture 2 hours. Lab 3 hours.

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.


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

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

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

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

The microscopic structure of tissues and organs of the body are studied with their histophysiological considerations.

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

Gross structures of the nervous system studied in lectures and laboratory.
150. Gross and Regional Anatomy. (1½ per week) § Su, W, Sp. Prerequisite: Program must be approved by the department and advisor during quarter prior to enrollment. Aasling

156. Survey of General and Head and Neck Anatomy. (6) Lecture 3 hours, Lab 9 hours. Coleman

The systems of the body are studied by lectures and laboratory demonstrations. The structures of the head and neck, including the central nervous system, receive major consideration. Emphasis is placed upon function and anatomic relationships.

170. Advanced Head and Neck Anatomy. (1-5) Sp. Prerequisite: General histology, gross anatomy of the head and neck, and oral histology. Lecture 1 hour, Lab 6-12 hours. Coleman

Designed for postgraduate specialty certificate students enrolled in the clinical specialty training programs in the School of Dentistry. Seminar presentation and demonstrations of head and neck anatomy are correlated in their relation to clinical dentistry.

170.01. Problem Areas in Clinical Anatomy. (1) Su, F, W, Sp. Prerequisite: Prior or concurrent enrollment in Anatomy 100. First year standing in School of Medicine. Lindner

Discussions of important areas in clinical anatomy such as hernia, thyroid, perineum and peripheral nerve. Course is correlated with Anatomy 100.

170.02. Survey of Congenital Defects. (2) W. Prerequisite: Gross anatomy of the head and neck. Monie, R. Armstrong, Gilbert

This elective course provides information on the more common human congenital defects. Environmental and genetic predispositions of congenital abnormalities are considered and possible mechanisms discussed. Course is intended primarily for physical therapy students.

170.04. Applied Gross Neuroanatomy. (2) Sp. Prerequisite: Consent of instructor. Monie, R. Armstrong, Gilbert

A laboratory-oriented consideration of the anatomy of the human brain and spinal cord. Discussion of case histories is correlated with basic neuroanatomy and neuropathology.

170.05. Congenital Abnormalities. (2) § W. Prerequisite: Consent of instructor. Monie

Weekly seminars on experimental teratogenesis as a tool to understanding the formation of congenital abnormalities in man.
Anesthesia

110. Clinical Clerkship in Anesthesia. (3) Su, F, W, Sp. Prerequisite: Consent of instructor. UC Hamilton

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

140.01. Clinical Anesthesia. (1 ½ per week) Su, F, W. Sp. Prerequisite: Anesthesia 110. UC Eger

Residents are responsible for anesthetic care and management of patients in the operating rooms and outpatient departments, under immediate supervision of the attending anesthesiologist. Preoperative and postoperative evaluation of patients, oxygen therapy, and resuscitation are covered.

450. Anesthesia Clinical Work. (1 ½ per week) Su, F, W. Sp. Required during first year of residency, also during either second or third year. UC Hamilton

Anesthesia Staff Conferences. (2) F, W, Sp. Stevens, Miller

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

140.02. Clinical Clerkship. (1 ½ per week) Su, F, W. Sp. Prerequisite: Anesthesia 110. UC Eger

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

140.03. Intensive Care Clerkship. (1 ½ per week) Su, F, W. Sp. Prerequisite: Anesthesia 110 and/or consent of instructor. Don, Schlobohm

Anesthesia

110. Clinical Clerkship in Anesthesia. (3) Su, F, W. Sp. Prerequisite: Ambulatory and Community Medicine 130, Psychiatry 130, Medicine 131 A-B-C, Physiology 100 and Pharmacology 100 A-B. Willenkln

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

140.01. Clinical Anesthesia. (1 ½ per week) Su, F, W, Sp. Prerequisite: Anesthesia 110. Willenkln

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

140.02. Clinical Clerkship. (1 ½ per week) Su, F, W. Sp. Prerequisite: Anesthesia 110. Willenkln

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

140.03. Intensive Care Clerkship. (1 ½ per week) Su, F, W. Sp. Prerequisite: Anesthesia 110 and/or consent of instructor. Don, Schlobohm

Course is designed to familiarize the student with techniques of intensive care, with emphasis on clinical, renal, respiratory and circulatory physiology applied to support of patients with cardiopulmonary insufficiency.
Course surveys principles and practice in the community mental health field. Emphasis is on the significance of sociocultural factors in the determination of community need and the delivery of mental health services.

243. Interfaces between Law and Medicine: An Anthropological Perspective. (2-3) § F, W. Prerequisite: Consent of instructor. Todd, Ruffini
Cross-cultural survey of problems at law-medicine interface, including medical determinants of legal status; complement/conflict approaches to alcoholism, drug use, sexual orientation, therapeutic functions of social control procedures (witchcraft, gossip); conflicts between religious beliefs and medical/legal practices.

244. Legal Gerontology. (2-3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study for 3 units. Todd, Ruffini
A cross-cultural examination of legal problems, needs, and behavior of the elderly, relating data from other societies to problems in the contemporary United States. Concepts, theories, and methods drawn from anthropological, legal, medical, and gerontological literature.

245. Health and Human Migration. (2-3) § Sp. Prerequisite: Consent of instructor. Zarough
Examination of a variety of types of migration, including cross-cultural comparisons, research, methodology, and psychological, social and health implications of diverse population movements. Special emphasis is placed on migration on the North American continent.

246. Comparative Medical Systems. (2-3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study for 3 units. M. Clark, Dunn, Koss
A comparative examination of traditional and contemporary systems of health care delivery with special attention to theories of disease including notions regarding etiology, prophylaxis, treatment and treatment settings, and the therapeutic encounter.

247. Seminar in Contemporary American Society. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 2 hours. Lab 3 hours. Pawson
Overview of evolutionary mechanisms: revolution and the cell — DNA; the genetic code; evolution and change in the evolution of the species; the influence of the environment on the population — genetics populations, natural selection; evolution and the species — evolution of the primates, origin of man.

248. Group Study. (1-5) § F, W, Sp. Prerequisite: Consent of instructor. Staff
Group study of more collaborative on 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, Sp. Prerequisite: Consent of instructor. Staff
Independent study.

250. Research. (1-9) § F, W, Sp. Prerequisite: Consent of instructor. Staff
Independent study.

255 A-B. Seminar in Medical Anthropology. (2-4, 2-4, 2-4) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Independent study 3 or 6 hours for additional units. M. Clark, Dunn
Core seminar in medical anthropology offered in Berkeley in fall and spring, and San Francisco in winter. A review of the principal fields of medical anthropology with emphasis on current research and methods.

260. Epidemiology and Medical Anthropology. (2-3) § W. Prerequisite: Consent of instructor. Lecture: 2 hours, plus 2 hours independent study for 3 units. Dunn
A review of the interactions between epidemiology and medical anthropology. Emphasis is on the medical ecological perspective in epidemiology. Particular attention is given to behavioral epidemiology and trans-disciplinary collaboration in research.

261. Human Evolution: An Introduction to Physical Anthropology. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 2 hours, Lab 3 hours. Pawson
Overview of evolutionary mechanisms: revolution and the cell — DNA, the genetic code; evolution and change in the evolution of the species; the influence of the environment on the population — genetics populations, natural selection; evolution and the species — evolution of the primates, origin of man.

262. Statistical Methods in Medical Anthropology. (2) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 2 hours, Lab 3 hours. Pawson
Experimental design and statistical methods of data analysis applicable to medical anthropology. Discussion is based on proposed research projects of students in the course.

263. Biological Perspectives on Growth and Development. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Pawson
Examination of the human growth processes with emphasis on cellular growth and differentiation; biochemical basis of the growth process; critical periods of growth — fertilization, implantation, prenatal development, birth, postnatal development, adolescence, senescence; and developmental adaptation and racial differences in growth.

265. Principles of Human Variation. (2) W. Prerequisite: Consent of instructor. Petrakis
Exploration of the extent, origins, and significance of biological variation among human populations. Emphasis is placed on genetic, morphological, and functional aspects of this variation, and how these are maintained by evolutionary mechanisms.

270. Research in Population. (2) § W. Prerequisite: Consent of instructor. Population research issues and methods, covering sources of demographic data and studies on family planning, evaluation of the impact of birth control programs on population and health, and considerations regarding their use and acceptability of contraceptive methods.

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

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

Biochemistry

100A-B. Cell Structure and Function. (5-5) § F, W. Prerequisite: Consent of instructor. Rutter
Lectures and conferences in biochemistry and molecular biology presenting fundamental knowledge, and illuminating its applicability to medicine. Primarily for medical students.

110A-B. Cellular Structure and Function. (3-3) § F, W. Prerequisite: Consent of instructor. Finberg and Staff
Lectures in biochemistry include aspects of cell physiology and cellular ultrastructure, with some emphasis in the area of connective and mineralizing tissues. Fundamental knowledge is presented in the context of its applicability to clinical health sciences. Primarily for dental students.

111. Special Study for First Year Students. (2) F. Prerequisite: A general course in biochemistry. Lectures and Seminar 2 hours. Newburn and Staff
Discussion of biochemical problems of interest in dentistry including enamel, saliva, mineralization, connective tissue, plaque, and oral bacterial metabolism.

120A-B. Cellular Structure and Function. (4-4) § F, W. Prerequisite: Consent of instructor. Lecture 4 hours. Rutter
Lectures and conferences in biochemistry include aspects of cell physiology and cellular ultrastructure, with some emphasis in the area of drug metabolism. Fundamental knowledge is presented in the context of its applicability to clinical medicine. Primarily for pharmacy students.

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

170.01. Issues in Human Nutrition. (2) Sp. Prerequisite: Biochemistry 100A-B. Lecture 2 hours. Offered in alternate years. Nolese
Course emphasizes the critical examination and analysis of the experimental evidence that relates dietary intake of specific nutrients such as fats, cholesterol, sugar, salt, vitamins, and fiber to specific human diseases such as heart disease, atherosclerosis, hypertension, cancer, and colitis.

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

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

H. M. Goodman, McCarthy, Boyer
A comprehensive, year-long course of lectures, problems, and group discussions concerning general biochemistry. This course alternate biennially with Biochemistry 200D-E-F.

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

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

201A. Physical Biochemistry I. (3) § F, S. Prerequisite: A year's course in physical and chemical physics, consent of instructor.
Yang
Application of physical concepts and experimental methods to the study of the structure and function of biological systems.

201B. Physical Biochemistry II. (3) § F. Cooke
Interaction of electromagnetic radiation with matter. Spectroscopic methods useful in studying biological system — applications of nuclear magnetic resonance, electron spin resonance, X ray diffraction, fluorescence and quasi-elastic light scattering.
departmental graduate students with various approaches to biochemical and biophysical research.

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

Spudich
Presentations of selected topics in biophysics by graduate students in the Department of Biophysics.

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

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

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

Biomaterials
110B-C. Biomaterials Science. (1-1) W. Lecture 1 hour.
Jendresen
Students are introduced to the physics, chemistry, and metallurgy of materials used in dentistry and orthopaedic and oral surgery. The role of specific proteins and enzymes in these processes, and biochemical pathways involved in the regulation of rates of transport.

Biochemically important chemical transformations from the physical organic point of view, emphasizing catalytic mechanisms pertinent to enzymic reactions, and to the development of enzyme model systems. Intramolecular forces and enzyme-substrate interactions. Techniques of investigating enzyme mechanisms.

C. Guthrie
A laboratory rotation course to familiarize new students in the Physical Organic and Biophysical Sciences with the techniques of research.
An introductory study of the structure, stereochemistry, reactivity, and functionality of compounds of carbon.

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

16. Organic Chemistry — Laboratory. (2) W. Prerequisite: Chemistry 11. Lecture 1 hour, Lab 3 hours.

Chemistry 116 or equivalent.

Oppenheimer
Laboratory techniques inorganic chemistry. The preparation and study of organic compounds, with an introduction to quantitative organic analysis.

113. Organic Chemistry. (3) Sp. Prerequisite: Chemistry 12. Castagnoli
A continuation of the study of compounds of carbon including some aromatic, hydrocarbon, and heterocyclic compounds.

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

Crippen, Shaffer
Elementary physical chemistry with particular emphasis on thermodynamics.

116. Physical Chemistry. (2) W. Prerequisite: Chemistry 115 or equivalent. Lecture 1½ hours, Conference and Demonstration 1½ hours.

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

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

Ketcham
Laboratory experiments in identification and quantification of organic substances.

150. Survey of Physical Chemistry. (2) F. Prerequisite: Differential and integral calculus and college physics. Lecture 2 hours.

Shelat, Kuntz
Intent of course is to serve as background for Chemistry 160, 161, and 162 for advanced students who lack proficiency in basic physical chemistry.

151. Physical Chemistry. (3) Sp. Prerequisite: Chemistry 116 or equivalent. Lecture 3 hours.

Shelat, Kuntz
An elective continuation of Chemistry 115 and 116. Elementary physical chemistry emphasizing aspects of spectroscopy and quantum mechanics.

155. Chemical Toxicology. (2) F. Lecture 1 hour, Lab 3 hours.

K. H. Lee
The methods of chemical detection and analysis of the common poisons. Normally open to third and fourth year students.


Craig and Staff
A course with some flexibility depending on the student's interest in the area of qualitative organic analysis and synthetic methods, dealing in part with compounds of pharmacological interest.

158. Physical Chemistry — Laboratory. (1) Sp. Prerequisite: Concurrent enrollment in Chemistry 151. Lab 3 hours.

Kollman, Kuntz
Laboratory exercises in conjunction with Chemistry 151.

159. Organic Chemistry — Laboratory. (3) Sp. Prerequisite: Chemistry 16. Lecture 1 hour, Lab 6 hours.

Castagnoli, Wolf
Advanced experiments in organic chemistry intended to broaden students' knowledge of experimental procedures.

160. Advanced Physical Chemistry. (3) W. Prerequisite: Two quarters of physical chemistry or consent of instructor. Lecture 3 hours.

Tuck, Crippen
Chemical thermodynamics.

161. Advanced Physical Chemistry. (3) § Sp. Prerequisite: Chemistry 116 or equivalent. Lecture 3 hours.

Shelat
Theory and applications of chemical kinetics.

162. Advanced Physical Chemistry. (4) F. Prerequisite: Chemistry 151 or equivalent. Knowledge of differential equations recommended. Lecture 4 hours.

Kollman
Quantum mechanics and applications to molecular problems.

165. Organic Chemistry — Analytical Methods. (4) § W. Prerequisite: Chemistry 113. Lecture, 1 hour. Lab 2 hours.

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

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

Staff
Group studies of selected topics in chemistry.

198. Supervised Study in 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.

200. Laboratory Project in 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.


Craig and Staff
A study of the detailed processes associated with organic reactions.

203. Advanced Organic Chemistry. (4) § W. Prerequisite: Chemistry 113, 115, and 165 recommended. Lecture 4 hours.

Ortiz de Montellano
Physical organic chemistry; the structure of molecules and its relationship to mechanisms of reactions.


Craig
Recent advances in synthetic methods, comprising specific activating agents, specific reducing agents, and other specific reagents.

205. Recent Advances in Synthetic Methods. (2) § F. Prerequisite: Chemistry 113 and 157, or equivalent. Chemistry 165 recommended. Lecture 2 hours.

Kroll
Recent advances in synthetic methods, comprising specific activating agents, specific reducing agents, and other specific reagents.

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

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


Farina
The fundamental concepts of enzyme kinetics are reviewed; enzyme measurement and automation; enzyme profiles in various diseases and specific enzyme methodology are presented.

201. Enzymology. (2) § Sp. Prerequisite: Consent of instructor.

Staff
Enzymology is presented.

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

Clinical Laboratory Science

Clinical Laboratory Science

103A-B. Immunohematology. (1-4) § W. Sp. Prerequisite: Clinical Laboratory Science 103A is prerequisite to 103B. Lecture 1 hour, Lab 1 hour.

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

105. Clinical Laboratory Computer Science. (2) W. Prerequisite: A.B. in physical or biological science.

Baren
A review of the fundamentals of computer science as they relate to clinical laboratory information systems and a detailed examination of the current clinical laboratory computer.

109. Laboratory Project in Clinical Laboratory Science. (1-5) F. W. Sp. Prerequisite: Enrollment in Clinical Laboratory Science master's program.

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

201A-B. Clinical Chemistry. (2-4) § F. W. Sp. Prerequisite: Degree in Chemistry or Medical Technology license.

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

207. Enzymology. (2) § Sp. Prerequisite: Consent of instructor.

Farina
The fundamental concepts of enzyme kinetics are reviewed; enzyme measurement and automation; enzyme profiles in various diseases and specific enzyme methodology are presented.

209. Chemistry of Heterocyclics. (3) § Sp. Prerequisite: Chemistry 113 and 157, or equivalent. Lecture 3 hours.

Kroll
A survey of the main nitrogen, oxygen, and sulfur-containing heterocycles.

Clinical Dentistry

Clinical Dentistry


Staff
Responsibility for patient dental care in the wards and comprehensive clinic under the direction of the attending staff. Dental consultations and treatment are coordinated with medical care. Residents take histories and perform physical examinations, laboratory tests, and dental treatment.
An introduction to the scope of pharmaceutical practice including field trips to and participation in various settings where the pharmacist and patient interact.

**130. Clinical Pharmacy.** (F) Prerequisite: Pharmacology 125 and Pharmacy 129. Lecture 5 hours. Conference 2 hours. Staff

**131. Clinical Pharmacy.** (F) Prerequisite: Clinical Pharmacy 130. Lecture 5 hours, Conference 2 hours. Winter, Riegelman and Staff

Continuation of Clinical Pharmacy 130.

**132. Clinical Pharmacy.** (Sp) Prerequisite: Clinical Pharmacy 131. Lecture 6 hours, Conference 2 hours. Ignoto, Benet and Staff

Continuation of Clinical Pharmacy 131.

**135. Preclinical Clerkship and Drug Information Analysis Service (DIAS) Rotation.** (F) W, Sp. Prerequisite: Third year standing.

Shimomura, Cupit, McSweeney

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

**148A. Inpatient Clinical Clerkship.** (F, Sp) Prerequisite: Clinical Pharmacy 132 and 135, and Pharmacology 136. Clinic 40 hours for six weeks. Staff

Continuation of Clinical Pharmacy 131.

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

**148B. Inpatient Clinical Clerkship.** (F, W) Prerequisite: Clinical Pharmacy 148A. Clinic 40 hours for six weeks. Staff

Continuation of Clinical Pharmacy 148A.

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

Continuation of Clinical Pharmacy 149A.


Students participate in the activities of the Renal Medicine Service. Include patient monitoring, attending conferences, seminars and rounds, and participation in selected therapeutic consultations.

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

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

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

**Clinical Pharmacy** / 95
tient Pediatric Service. Activities include routine reviewing of patient charts, providing therapeutic consultations where appropriate, monitoring patient response to drug therapy, attending conferences, seminars and rounds. Special projects are assigned.

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

Kimble, Barriere

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

156.40. Clinical Pharmacy Clerkship at Sunset Men- tial Health Unit. (1-4) F, W, Sp. Prerequisite: Clinical Pharmacy 149A and 149B or concurrent enrollment. Consent of instructor.

Kimble, Wong, Cohen

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

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

Students work with a pharmacist under the supervision of a clinical pharmacist and physicians to develop individual therapy plans for drug detoxification. Where needed, students will develop detailed drug information reports appropriate to specific patient care.

156.50. Clinical Pharmacy Clerkship in Inpatient Medical Service at V.A. (1-8) F, W, Sp. Prerequisite: Consent of instructor. Kimble, Nagata and Staff

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


Kimble, Furtado

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


Kimble, Chan

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

156.03. Clerkship in L.V. Additive Services at Mary's Help Hospital. (1-4) F, W, Sp. Prerequisite: Fourth year standing.

Kimble, Kotabe, Rupp

Students participate in the preparation and evaluation of intravenous fluid therapy in various disease states.

156.04. Clerkship in Unit Dose Systems at Mary's Help Hospital. (1-4) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131, 132 and 135. Consent of instructor.

Cupit and Staff

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


Kimble, Fleckenstein

Experience in collection, evaluation and dissemination of drug information in the University based drug information service. Activities include answering drug information requests from community prac- titioners.


Students, under the supervision of a clinical pharmacist and clinicians to develop individual therapy plans for drug detoxification. Where needed, students will develop detailed drug information reports appropriate to specific patient care.

160.50. Hospital Pharmacy. (1-8) F, W, Sp. Conference and special projects with the Hospital Pharmacy Course is intended and recommended for students who plan to apply for the resident program in hospital pharmacy. Other students may enroll with consent of instructor.

170. Group Studies. (1-4) Su, F, W, Sp. Prerequisite: Consent of instructor. Staff

Group studies of selected topics in clinical pharmacology.

196.03. Clinical Pharmacy Clerkship at UCSF. (1-4) F, W, Sp. Prerequisite: Fourth year standing.

Kimble, Kotabe, Rupp

Students participate in the preparation and evaluation of intravenous fluid therapy in various disease states and are exposed to various types of L.V. equipment. Conferences will be held on topics relating to the clinical use of parenteral therapy and drug distribution systems.

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

Kimble, Scarpace, Kahl

Clinical Pharmacy 148A, 148B or 149A, 149B. Consent of instructor.

Cupit and Staff

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

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

R.H. Levin

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


Ruggiero

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


Kimble, Rainey

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

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

Kimble, Miya, Katcher, Rockwood

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


Kimble, Chan

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


Enrollment limited.

Kimble, Conte

Exploration of current and future therapeutic and diagnostic tools, and drug information retrieval and analysis.


Staff

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

196.76 Clinical Clerkship in Clinical Pharmacology at UCS. (1-8) F, W, Sp. Prerequisite: Consent of instructor. Kimble, Tauro

Students participate in the activities of the Division of Clinical Pharmacology. Activities include utilization of computerized drug therapy profiles to monitor adverse drug reactions, and the preparation in conferences and seminars. Special projects are assigned.


Kimble, Bachor, Jinks, Spaulding

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

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

McCart

Students will design a prospective drug utilization review study. After receiving introductory material
Students practice in adult specialty clinics, including those of anticoagulation, cardiac, chest, hypertension and medical screening. They consult with physicians and patients about drug therapy, provide limited primary care under supervision of a physician, and conduct drug utilization and adverse drug reaction studies. Documentation of activities and findings to be presented in a written report.

196.93 Clerkship in Outpatient Clinics at Hampshire Convalescent Hospital and Central Gardens Convalescent Hospital. (5-6) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. "Kimble, R. Conte, W. W., Sp. Prerequisite: Resident standing and approval of program director.

Dental Auxiliary Utilization

190.01. Clinical Utilization of Dental Auxiliaries. (0-11) F, W, Sp. Prerequisite: Dental Auxiliary Utilization 130. Concurrent enrollment in General Dentistry 109.01. Clinic rotation 60 hours. "Ino, Franciscor. Prerequisite: Resident standing. This course is conducted in three week blocks of eight sessions.

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

189. Special Study. (0-4-4) F, W, Sp. Prerequisite: Dental Hygiene 150A-B-C. Introduction to Dental Hygiene with emphasis on improved proficiency in all areas.


169A-B. Advanced Clinical Dental Hygiene. (5-4-4) F, W. Prerequisite: Dental Hygiene 155A-B and 159. Lecture 1 hour Fall. Clinical 12 hours Fall. "Poupard, R. Conte, W. W., Sp. Prerequisite: Resident standing and approval of program director.

Dental Health Education

150B. Introduction to Patient Education. (2) W. Lecture 2 hours. "Francisco, R. Conte, W. W., Sp. Prerequisite: Student standing and approval of program director.

Dental Hygiene

109. Clinical Dental Hygiene. (2) Prerequisite: Dental Health Education 150B. Lecture 2 hours.

150C. Chairside Dental Hygiene. (2) Prerequisite: Dental Health Education 150B. "Francisco, R. Conte, W. W., Sp. Prerequisite: Dental Health Education 150B. Lecture 2 hours.

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

150E. Dental Hygiene in Private Practice. "Francisco, R. Conte, W. W., Sp. Prerequisite: Dental Health Education 150B. "Francisco, R. Conte, W. W., Sp. Prerequisite: Dental Health Education 150B.

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

161A-B. Office Management and Ethics. (2-2) F, W. "Poupard, R. Conte, W. W., Sp. Prerequisite: Dental Hygiene 150A-B-C. Introduction to Dental Hygiene with emphasis on improved proficiency in all areas.

169D. Special Study. (0-4-4) F, W. Prerequisite: Dental Hygiene 150A-B-C. Introduction to Dental Hygiene with emphasis on improved proficiency in all areas.

Dental Health Education / Dental Hygiene / 99
189.01 Clinical Experience in Mobile Dental Clinics. (0-3) SS. Clinic variable. R. Miller
Clinical experience in mobile dental clinics.

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

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

Dental Jurisprudence
190. Dental Jurisprudence. (½) W Lecture 1 hour, for five sessions. Bradley
The course broadens student insight into the legal problems and obligations of dental practice.

Dental Technics
115A-C. Basic Dental Technics. (1-1) F. Lab 3 hours. Stark
The first year student is oriented to the necessity for accuracy in manipulation of materials. Impressions, pouring of casts, waxing technique, investing, casting, and soldering are covered. Manipulation of core materials will be demonstrated and used in the laboratory.

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

Dermatology
First-Year Coordinated Instruction — Medicine 131A-B-C. Lecture-demonstrations and section work devoted to the supervised examination of patients. Core Clerkship — Ambulatory and Community Medicine 110 includes lectures and case demonstrations on the examination and diagnosis of dermatological diseases. This includes instruction in history-taking, physical diagnosis, and diagnostic and therapeutic procedures.

140.01. Clinical and Research Dermatology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Cram
Activities of enrollees are determined after an initial interview with the instructor. Emphasis is placed on routine outpatient and inpatient care and research methods, according to individual interest. 140.02. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. W. L. Epstein
Clinical clerkship in approved hospitals by special arrangement and approval of the Dean and chairman of the department.

150.01. Research in Dermatology. (½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Fukaya
A research project under the direction of a member of the faculty.

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

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

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

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

400. Dermatology Staff Conferences. (2) F, W, Sp. W. L. Epstein and Staff
Residents prepare and present case histories of patients at conferences making reference to appropriate literature, special studies, and laboratory work. Conferences include discussions of new developments and research investigation by staff members and professionals from other UC departments and other universities.

405. Research in Dermatology. (½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. W. L. Epstein
In-depth discussion of the sciences basic to an understanding of the function and dysfunction of the skin, including anatomy, physiology, microbiology, pharmacology, biochemistry, genetics and pathology. Over a three-year period, course covers all aspects of basic sciences relevant to dermatology.

407. Medical Clinical Microbiology. (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Aly
Course is designed to familiarize dermatology residents with the techniques of isolation and identification of dermatophytes, skin bacteria and viruses. Occasional lectures on specialized topics are given.

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

Residents, under supervision, are responsible for microscopic sections and discussions of material presented.

462. Seminar in Dermatological Literature. (1) F, W, Sp. Malbach and Staff
Seminar covers recent developments in dermatology. In-depth discussion of literature and selected cases of special interest. Cases are presented by the faculty and resident staff.

505. Research in Dermatology. (3) Su, W, Sp. Lab 9 hours. Fukaya
In-depth discussion of research projects dealing with electron microscopy, biology, biochemistry, and immunology of the skin under normal and pathological conditions.

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

510. Medical Clinical Microbiology. (2) Su, F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Aly
Course is designed to familiarize dermatology residents with the techniques of isolation and identification of dermatophytes, skin bacteria and viruses. Occasional lectures on specialized topics are given.

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

Residents, under supervision, are responsible for Dermatology / Economics / Endocrinology / 101 patient care in the wards and outpatient clinic. Duties include history-taking, physical examinations, and consultation. In addition, the senior resident has certain administrative, teaching, and clinical responsibilities.

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

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

151. Principles of Economics. (3) Sp. 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 1A or 1B.

180A-B. Economics. (1-2) W Lecture 1 hour. Winter
Lectures and group discussions related to economic practice. Subject areas covered include equipment selection, auxiliary personnel, consultation and financial management, and the level of income and employment in the American economy. Not recommended for students who have received credit for either Economics 1A or 1B.

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

191. Topics in Endocrinology. (1) § Prerequisite: Endocrinology 190 or consent of instructor. Offered in alternate years. Papkoff, Losotho
Selected topics of current interest.
192. Structure and Function of the Hormones. (2) W. Prerequisite: Course in biochemistry recommended. Papkoff, Ramachandran. Course will examine the chemical nature of the endocrinology; the methods employed for purification, characterization, structural determination, and synthesis; the relationship of molecular structure to biological activity will be studied, as well as comparative and evolutionary aspects.

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

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

200A and 200B, or Biochemistry 100A-B or consent of instructor. Lecture 2 hours plus independent study.

Goldfine, J. A. Williams.

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

Reading and discussion of classical and current literature on known and speculative mechanisms of hormone action. Major hormones covered are insulin, glucagon, thyroid and steroid.


Noble or fixed prosthodontics.

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

401A-B-C-D. Exfoliative Cytology. (14-14-14-14) Su, F, W, Sp. E. King. Lectures in cytology include normal, malignant, and abnormal nonmalignant cells. Instruction covers methods 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.


Clinical instruction to be taken concurrently with third and fourth year lecture courses.


115. Techniques in Fixed Prosthodontics. (2) Sp. Prerequisite: Consent of instructor. Fixed Prosthodontics 110. Lab 6 hours. Hamaguchi and Staff. Course covers the basic techniques of fixed prosthodontics.

110. Principles of Fixed Prosthodontics. (1) F, W. Prerequisite: Consent of instructor. Fixed Prosthodontics 115. Lecture 1 hour. Allied. Course provides a continuation of experience received in Fixed Prosthodontics 171.01 A-B-C. Clinical experience at the level of Fixed Prosthodontics 172.01A-B-C. Approved of the division chairman. Clinic 6 hours.

130A-B-C. Fixed Prosthodontics Theory. (1-1-1) F, W. Lectures in cytology include normal, malignant, and abnormal nonmalignant cells. Instruction covers methods 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.

Clinical procedures in fixed prosthodontics. This course provides a continuation of clinical experience received in Fixed Prosthodontics 171.01 A-B-C. Effective clinical procedures in fixed prosthodontics. This course requires for this course each quarter and summer session.

Marketin.

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

171.01A-B-C. Clinical Procedures in Fixed Prosthodontics. (3-3-3) F, W, Sp. Prerequisite: Admission to postdoctoral and consent of instructor. Lecture 1 hour, Clinic 6 hours. Noble. Clinical procedures in the diagnosis, treatment planning, and treatment of clinical patients.

171.02. Clinical Procedures in Fixed Prosthodontics. (2) SS. Prerequisite: Fixed Prosthodontics 171.01 A-B-C. Clinical procedures in fixed prosthodontics. This course requires for this course each quarter and summer session.

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

172.01A-B-C. Advanced Clinical Procedures in Fixed Prosthodontics. (3-3-3) F, W, Sp. Prerequisite: Completion of first year and summer session of Fixed Prosthodontics Certificate Program. Lecture 1 hour, Clinic 6 hours. Advance instruction and practice in the diagnosis, treatment planning, and treatment in fixed prosthodontics.

172.02. Advanced Clinical Procedure in Fixed Prosthodontics (2) SS. Prerequisite: Fixed Prosthodontics 171.01 A-B-C. Clinical procedures in fixed prosthodontics. This course provides a continuation of experience received in Fixed Prosthodontics 171.01 A-B-C.

176A-B-C. Clinical Study for Postdoctoral Students. (1, 1.5, 1, 1.5) F, W. Prerequisite: Consent of instructor. Lecture 3-15 hours. Lorenczi. Original investigation in the field of fixed prosthodontics.

180. Oral Rehabilitation. (1) W. Seminar 1 hour. Lorenczi. The field of fixed prosthodontics and its relationship to other dental disciplines will be explored by means of case presentations and provide the student with a broad base of experience in oral rehabilitation techniques.

180.01. Special Study Seminar. (1) Sp. Seminar 1 hour. Enrollment limited.

Individual staff members will offer seminar type instruction on selected topics related to fixed prosthodontics.

180.02. Senior Restorative Elective. (1) F. Lecture 1 hour. Mell. Advanced clinical restorative elective. Lectures describe the restorative general practice. Topics include such as office layout; laboratory relations, treatment limitations, scheduling, financial arrangements, and treatment failures.

189.01. Fixed Prosthodontics Clinical Practice. (0-25) F, W. Prerequisite: Fixed Prosthodontics 115. Lecture 1 hour, Clinic 6 hours. Fixed Prosthodontics 110. Approval of the division chairman. Clinic 6 hours. Fixed Prosthodontics 171.01 A-B-C. Lecture 1 hour, Clinic 6 hours. Fixed Prosthodontics 172.01A-B-C. Lecture 1 hour, Clinic 6 hours. Fixed Prosthodontics 176A-B-C. Lecture 1 hour, Clinic 6 hours. Fixed Prosthodontics 177A-B-C. Lecture 1 hour, Clinic 6 hours.

190.01. Oral Rehabilitation. (1) W. Seminar 1 hour. Lorenczi. The field of fixed prosthodontics and its relationship to other dental disciplines will be explored by means of case presentations and provide the student with a broad base of experience in oral rehabilitation techniques.

190.02. Advanced Restorative Elective. (0-9) F, W. Prerequisite: Consent of instructor and approval of Clinic Review Committee. Clinic Variable. Mell. Advanced clinical restorative elective. Instruction in treatment of multiple restorative cases by quadrant or full arch approach. Students are selected to participate by the course director.

Forensic Pathology and Medicine

170.01. Forensic Pathology and Medicine. (1) Sp. Seminar 1 hour. R. Wright. The course covers basic legal principles; torts and contracts; medical records and documents; medical licensing and credentialing; forensic pathology; the expert witness; malpractice and professional liability.
General Dentistry


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

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

Darke, Khosla

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

109.02 Critical Care in General Dentistry. (0-2) F, W. Sp. Prerequisite: Consent of instructor. Brieger

This course will focus on critical care in general dentistry, including the management of complex medical conditions before, during, and after dental procedures. Topics will include airway management, resuscitation, and the treatment of medical emergencies.

Health Sciences Education

200. Introduction to Health Sciences Training. (2) § F. Prerequisite: Consent of instructor. J. Jacoby

This course will introduce students to the health sciences curriculum, including the roles of health professionals and the importance of evidence-based practice.

201. Introduction to History of Health Sciences. (1-2) F, W. Prerequisite: Consent of instructor. Hartman

This course will provide an overview of the history of health sciences, including the development of medical practice and the evolution of healthcare systems.

202. Introduction to History of Medical Thought. (1-3) § F, W. Prerequisite: Consent of instructor. Roberts

This course will explore the development of medical thought and the philosophical foundations of modern medicine.

203. Introduction to History of Pharmacy. (1-2) § F, W. Sp. Prerequisite: Consent of instructor. Holscher

This course will introduce students to the history of pharmacy, including the development of pharmacology and the evolution of pharmacy practice.

204. History of Non-Western Medical Systems. (1-3) F, W. Sp. Prerequisite: Consent of instructor. Brieger

This course will explore the history of non-Western medical systems, including traditional Chinese medicine, Ayurveda, and other non-Western traditions.

205. A Philosophical Foundations of Clinical Practice. (1) § F, W. Sp. Prerequisite: Consent of instructor. Schlesser

This course will explore the philosophical foundations of clinical practice, including the ethical principles that guide medical decision-making.

206. Introduction to History of the Literature of the Health Sciences. (1-2) § F, W. Sp. Prerequisite: Consent of instructor. Blanc

This course will introduce students to the history of medical literature and the development of medical writing.

207. History of Medical Education. (1-3) § F, W. Sp. Prerequisite: Consent of instructor. Staff

This course will explore the history of medical education, including the evolution of medical schools and the development of medical curricula.

208. History of Historical Method and Methodology of Medical History. (2-4) § F, W. Sp. Prerequisite: Consent of instructor. Blanc

This course will provide an introduction to historiography and historical methodology, focusing on the development of medical history.

Hospitals

210. The History of Medical Education. (1-3) § W. Sp. Lecture 1-2 hours, plus paper or research for 3 units. Staff

Lectures, discussions, and readings on the development of medical education and the history of medical education in the United States and other countries.

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

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

212. Seminar. (1-3) § F, W. Sp. Staff

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

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

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

214. Thesis. (0) § F, W. Sp. Prerequisite: Advance­ment to candidacy and permission of graduate adviser. Staff

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

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

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

Hospital Dentistry

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

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

217. Physical Diagnosis. (2) Su, F, W, Sp. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lecture 2 hours. S. Parks

Designed to prepare the oral surgeon to conduct a physical examination and as a preliminary evaluation before performing oral surgical procedures. Techniques of examination are demonstrated and practiced in the classroom; examination of pathologic conditions conducted at bedside.
Human Biology

200A. Cell Biology. (3) § F. Prerequisite: Biochemistry 100A or equivalent, or consent of instructor. An introductory course in the structure, biochemistry, and function of the eukaryotic cell.

200B. Cell Biology. (3) § W. Prerequisite: Biochemistry 100A or equivalent, or consent of instructor. An introductory course in the structure, biochemistry, and function of the eukaryotic cell.

201. Seminar in Neurobiology. (1) § F, W, Sp. Prerequisite: Consent of instructor. A seminar in neurobiology to cover selected subfields. Conferences include case presentations by interns and residents, and seminars covering selected subjects in oral biology relevant to clinical and preventive dentistry.

202A-B-C. Basic Concepts of Neuroscience. (3-3-3) § F, W, Sp. Prerequisite: Admission to neuroscience program. Corequisites: Consent of instructor. Lectures 3 hours.

203. Seminar in Problem Formulation and Research Design. (3) § F, W, Sp. Prerequisite: Consent of instructor. Students work on their own research interests in terms of problem formulation, research design, and/or operationalization. Emphasis dependent upon individual student needs.

204. Scientific and Literary Approaches to Personal Development. (2) § Sp. Prerequisite: Consent of instructor. Representative works from behavior science literature and world poetry and prose are brought together in the study of personality development in adult life. Emphasizes development of language and concepts for understanding the development of personality. Reading and paper required. Students enroll for one seminar per quarter.

205. Seminar in Data Analysis. (3) § W. Prerequisite: Consent of instructor. Focus is in training in data organization, analysis, and research report writing.

214. Developments in Social Science Philosophy. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 6 hours.

215. Family, Culture, and Crisis. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours. Emphasis on the aging literature; one quarter each to socialization, roles and intergenerational relationships; problems and resources of the minority elderly in the United States.

221A-B-C. Life Stress and Adaptation. (2-2-2) § F, W, Sp. Prerequisite: Consent of instructor. Students, staff, or guest lecturers present selected topics based on their current research.

222A-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor.

232. Developmental Study of Kinship Structure. (3) § Fall, Winter, Spring. Prerequisite: Consent of instructor. Lecture 3 hours.

235. Social Aspects of Death and Bereavement. (3) § Sp. Prerequisite: Consent of instructor. An analysis of the societal milieu in which dying and death occur, with implications for the dying person himself, his survivors, and those professionals who attend him.

240. Special Studies. (2-8) § F, W, Sp. Prerequisite: Consent of instructor. Staff

246. Physical Aspects of Aging and Old Age. (2-3-3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Independent study 3 hours. Emphasis on the aging literature; one quarter each focusing on: the individual and policy issues surrounding mental health and illness in later life; socialization, roles and intergenerational relationships; and problems and resources of the minority elderly in the United States.

248. Seminar on adult socialization theory, with special emphasis on social age as a special concern. Major issues involve norms for older people, the structure of socialization situations, and the pressure of variables normally effecting socialization in earlier status transitions.

249. Biopsychosocial Model of Mortality. (3) § W. Prerequisite: Consent of instructor. Lecture 3 hours.

Human Development And Aging

202A-B-C. Seminar in Analytic Methods. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Chihrboga, Pierce (F). Kiefer, (W). Suzman (Sp). One quarter on quantitative methods, including longitudinal; one quarter on the quantitative and qualitative manipulation of open-ended data; and one quarter on methods of survey research. Student research materials will be used where appropriate.

203. Seminar in Problem Formulation and Research Design. (3) § F, W, Sp. Prerequisite: Consent of instructor. Students work on their own research interests in terms of problem formulation, research design, and/or operationalization. Emphasis dependent upon individual student needs.

204. Scientific and Literary Approaches to Personal Development. (2) § Sp. Prerequisite: Consent of instructor. Representative works from behavior science literature and world poetry and prose are brought together in the study of personality development in adult life. Emphasizes development of language and concepts for understanding the development of personality. Reading and paper required. Students enroll for one seminar per quarter.

205. Seminar in Data Analysis. (3) § W. Prerequisite: Consent of instructor. Focus is in training in data organization, analysis, and research report writing.

214. Developments in Social Science Philosophy. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Emphasis on the aging literature; one quarter each to socialization, roles and intergenerational relationships; problems and resources of the minority elderly in the United States.

221A-B-C. Life Stress and Adaptation. (2-2-2) § F, W, Sp. Prerequisite: Consent of instructor. Students, staff, or guest lecturers present selected topics based on their current research.

222A-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor.

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246. Physical Aspects of Aging and Old Age. (2-3-3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Independent study 3 hours. Emphasis on the aging literature; one quarter each focusing on: the individual and policy issues surrounding mental health and illness in later life; socialization, roles and intergenerational relationships; and problems and resources of the minority elderly in the United States.

248. Seminar on adult socialization theory, with special emphasis on social age as a special concern. Major issues involve norms for older people, the structure of socialization situations, and the pressure of variables normally effecting socialization in earlier status transitions.

249. Biopsychosocial Model of Mortality. (3) § W. Prerequisite: Consent of instructor. Lecture 3 hours.

Course covers principles of medical geography and landscape epidemiology including changes patterns of human diseases due to different environmental, cultural, and social environments. Emphasis on the role of human geography in understanding the distribution and control of human diseases.

140.01. Clinical Clerkships Abroad. (1½ per week) § Su, F, W, Sp. Prerequisite: Six months of clinical experience in hospitals.

Clinical clerkships in developing countries, generally in a hospital or rural health clinic, under the guidance of the Dean and the chairman of the department.

140.03. Leprosy and Other Communicable Diseases. (1½ per week) § Su, F, W, Sp. Prerequisite: Consent of instructor.

Course covers major helminth and protozoan parasites, emphasizing identification, life histories, epidemiology, pathogenesis and pathology of parasitic diseases, chemotherapy, and control of human infections.

140.04. Nutrition Clerkship. (1½ per week) § Su, F, W, Sp. Prerequisite: Consent of instructor.

Course covers nutrition in developing countries, examining the role of nutrition in human development and disease, and the impact of dietary deficiencies on public health.

150.01. Medicine in Developing Countries. (1½ per week) § Su, W, Sp. Prerequisite: International Health 100 or consent of instructor.

Course focuses on the challenges and opportunities of practicing medicine in developing countries, including the role of healthcare professionals in these settings.

150.02. Field and Laboratory Research in Tropical Medicine. (1½ per week) § Su, F, W, Sp. Prerequisite: Consent of instructor.

Research under faculty supervision utilizing UCICMR facilities in Malaysia and elsewhere. Research may be conducted in basic medical sciences, preventive medicine, and public health. May immediately follow a student research fellowship abroad.

160.01. Tropical Medicine Staff Conferences. (1 F, Sp.)

Conferences include presentation of recent clinical cases of special interest, and discussions by staff members, consultants from other departments, or visiting experts, of new developments in tropical medicine.

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

Lectures and discussions to review the patterns of host-parasite interactions and the role of helminth and helminth infective agents of man. Topics selected will explore current views of immune and other types of responses and disorders that may result in human disease.

170.05. Introduction to International Health. (2-3) W, Lecture 2 hours, plus 3 hours independent study for 3 units.

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

170.06. Geography of Human Health and Disease. (3) Sp.

Course covers principles of medical geography and landscape epidemiology including changes patterns of human diseases due to different environmental, cultural, and social environments, and in relation to human settlements. Analysis of selected specific diseases of global importance.

170.07 Laboratory Project in Leprosy. (1-5) Su, F, W, Sp. Prerequisite: Consent of instructor.

A laboratory research project on leprosy under the guidance of a member of the staff of the Leprosy Research Unit at PHS. The Unit's major research areas are the pharmacology, immunology, and chemotherapy of leprosy in animals and man.

180. World Perspectives and Family Planning Perspectives. (1-2) § W. Lecture 1 hour, plus project required for 2 units.

Jerster Implications of population growth and family planning programs in developing countries. Contraceptive and abortion methods and their socio-cultural acceptability are emphasized as well as demographic and nutritional issues, and the role of health professionals in population control.

180.01. Tropical Medicine Clinic. (1-2) § Su, F, W, Sp. Prerequisite: International Health 100 and six months of clinical experience in a clinic.

R. Goldsmith, Develling, Frierson Examination and treatment of patients in the Tropical Medicine Clinic under staff supervision. Students also assist with consultations on hospitalized patients. Most of the patients seen in this clinic have parasitic infections.

180.02. Pharmacology of Antiparasitic Drugs. (2) § W, Prerequisite: International Health 100 or equivalent.

R. Goldsmith Lecture is followed by seminar on pharmacology and use of antiparasitic drugs.


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

180.04. Medical Controversies in Epidemiologic Perspectives. (2) § W. Prerequisite: Consent of instructor.

Lecture 2 hours. Hulley Lecture course in current and controversial issues in epidemiology.


An elementary course in basic concepts of human nutrition. Topics include nutrient requirements, dietary deficiency symptoms, and nutritional problems and food needs of vulnerable groups, with emphasis on the developing world.


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

186. Tropical Medicine Lectures. (1) § F, Lecture 1 hour per week.

Lectures, case histories, and films emphasizing diagnosis and treatment of tropical diseases including malaria, leprosy, dengue fever, schistosomiasis, leishmaniasis, and parasitic infections, plus a review of opportunities for clinical clerkships abroad in developing countries.

188. Supervised Study in International Health. (1-5) § F, W, Sp. Prerequisite: Consent of instructor.

R. Goldsmith, Frierson, Petrakis, Schaechter A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

190. Laboratory Project in International Health. (1-5) § F, W, Sp. Prerequisite: Consent of instructor.

R. Goldsmith, Frierson, Petrakis, Schaechter A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.
140.04. Clinical Immunohematology in Transfusion and Transplantation. (3) W. Prerequisite: Completion of two core clerkships.

A two week clerkship in transfusion service. "Vyas

An intensive four week seminar series, using patient data, designed to increase the student's ability to choose and interpret laboratory tests in a variety of clinical settings. The scope of tests discussed includes hematology, blood banking, clinical chemistry, and microbiology.

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

Polycove

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

170.01. Clinical Pathology. (2) Su, F, W, Sp. Prerequisite: 170.02 A, B, C. Lec­ture 2 hours, Lab 6 hours.

Polycove

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

170.02A-B. Immunohematology. (1-1) W. Prere­quisite: Laboratory Medicine 170.02A is prere­quisite to 170.02B. Two one-hour courses.

Vyas

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

170.02A. Clinical Pathology Staff Seminars. (2) Su, F, W. Lecture 1 hour.

SFGH Polycove, UC Brecher, VA Parekh

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

170.02B. Principles of Medical and Anatomic Illustration. I. (4) § Su, F, W, Sp. Lecture 1 hour, Lab 9 hours.

Polycove, Wakerlin, Koelling

Anatomic illustration; sketching from dissection; form and detail; rendering; color theory; individual­ized techniques development; perspective; theory of information selection and simplification; representa­tion of structure and form in living tissue.
112 / Medical and Biological Illustration / Medical Information Science

1. Introduction to Operations Research. (3) F. Prerequisite: Elementary statistics or probability, and one semester of calculus. Lecture 3 hours.

2. Operations Research Models. (3) F. Prerequisite: Consent of instructor. Laboratory 1 hour.


4. Probabilistic Models. (3) F or W. Prerequisite: Consent of instructor. Laboratory 1 hour.

5. Statistical Decision Analysis. (3) F or W. Prerequisite: Elementary statistics. Lecture 3 hours.

6. Simulation. (3) F or W. Prerequisite: Consent of instructor. Laboratory 1 hour.

7. Linear Programming. (3) F or W. Prerequisite: Elementary statistics or one year of calculus. Lecture 3 hours.

8. Non-Linear Programming. (3) F or W. Prerequisite: Elementary statistics or one year of calculus. Lecture 3 hours.

9. Multivariate Analysis. (3) F or W. Prerequisite: Elementary statistics or one year of calculus. Lecture 3 hours.

10. Time Series Analysis. (3) F or W. Prerequisite: Elementary statistics or one year of calculus. Lecture 3 hours.

11. Introduction to Mathematical Programming. (3) F. Prerequisite: Consent of instructor. Laboratory 1 hour.
quantitative methods relevant to computer-assisted diagnosis and treatment planning.

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

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

245. Seminar: Software Engineering. (3) § F. Prerequisite: Advanced study in field.

101A-B. Medical Technology
Course covers techniques for program design and development: methods for requirements definition and system specification; programming discipline: management of programming projects; verification and testing of programs; software tools. Emphasis on group participation in small software development projects.


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

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

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

Medical Technology

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

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

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

Hadley, Senen, Senyk, L. Cohen

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


Hadley, Seman, S. N. Cohen, Senyk

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


Heyneman, Horen

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

112A-B. Clinical Mycology. (2-4) F, W. Lecture A: 2 hours. Lab B: 12 hours.

Heyneman, Londermilch

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


Semen, Drew, Hadley

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

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

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

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

Senyk, Sagai

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


Hadley, S. N. Cohen

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


Hadley, Senyk

Instruction and practice in microscopy, including fluorescent and electron microscopy, spectrophotometry, Coulter counters, immune electrophoresis. Practical experience with data processing equipment and computers utilized in a clinical microbiology laboratory.


Hadley, Seman

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


Heyneman, Horen

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

112A-B. Clinical Mycology. (2-4) F, W. Lecture A: 2 hours. Lab B: 12 hours.

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

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

Senyk, Sagai

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


Hadley, S. N. Cohen

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

SFGH. They participate fully in teaching activities of the service including daily radiology conferences, teaching rounds, pulmonary function testing, and service conferences.

140.08. Gastroenterology at UC. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Schmidt

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

140.09. Clinical Cardiology Service at MZ. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and 140.01 or equivalent senior ward medicine experience. Consent of instructor.

Malhotra

Students work-up patients, follow through diagnostic procedures, perform electrocardiograms, stress electrocardiograms, cardiac catheterization, and angiographic studies. Instructors in cardiovascular medicine will be present. Physiological basis of heart disease, heart sounds. Attendance at departmental conferences and seminars. Reading assigned.

140.11. Renal-Electrolyte Service at PHS. (1 per week) F, W, Sp. Prerequisite: Medicine 110 and 131A-B-C. Huller

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

140.12. Clinical Cardiology at PHS. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. R. Sullivan, Blumberg

Students are assigned cardiac patients for work-up and management under resident, fellow, and instructors. They attend daily rounds, present patients in Cardiology Clinic, and observe cardiac catheterization and cardiovascular. Instruction in electrocardiography is included.

140.13. Clinical Clerkship at PHS. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

R. Sullivan, Blumberg

Students are assigned cardiac patients for work-up and management under resident, fellow, and instructors. They attend daily rounds, present patients in Cardiology Clinic, and observe cardiac catheterization and cardiovascular. Instruction in electrocardiography is included.

140.14. Endocrine-Metabolic Medicine at PHS. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 or consent of instructor.

Donaldson, Schneider

Students work up patients and participate in activities of the Metabolic Service under supervision; attend Metabolic Clinic; present patients there and on endocrine rounds; attend seminars and conferences. Program tailored for research in endocrine physiology if student desires and qualifies.

140.15. Inpatient Medicine at K. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students.

Hutin

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

J.16. Hematology at SFGH. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. R. O. Wallerstein, Kan

Students work up hematology patients; review pertinent clinical laboratory data of problems presented; attend slide rounds; help prepare material for sessions; attend hematologic rounds.

140.17. Clinical Pharmacology at UC. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicines 110 and 131A-B-C. Morell, Melmon, Bourne, Shelner, Brater

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.

140.18. Gastroenterology at VA. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Brandborg

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

140.19. Clinical Cardiology at VA. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor.

Bristow

Students share consultations and on-call with cardiology residents; work up patients on wards in CCU; attend open heart surgery once a week; assist at D.C. electrical reversion; interpret EKG's and vectorcardiograms; attend rounds of the health service.

140.20. Infectious Disease Clerkship at VA. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Conte

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

140.21. Private Practice. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110, L. H. Smith, Carbone

Working with an intern on the clinical faculty as he makes rounds in various private hospitals and CCU sees patients in private offices and on house calls, does follow-up studies, and reads electrocardiograms.

140.22A. Pathophysiology of Disease—Cardiovascular. (6) F, W, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110. Siperstein, Sleisenger, Schelman

Overall emphasis on prototypes of disease in organs systems demonstrating fundamental biochemical or physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading lists.

140.22B. Pathophysiology of Disease—Hematology. (6) F, W, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110. Siperstein, Sleisenger, Dunn, Davis, Ries

Overall emphasis on prototypes of disease in organs systems demonstrating fundamental biochemical or physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading lists.


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140.22E. Pathophysiology of Disease—Immunology. (6) F, W, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110. Siperstein, Sleisenger, Talal, Fye

Overall emphasis on prototypes of disease in organs systems demonstrating fundamental biochemical or physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading lists.

140.22F. Pathophysiology of Disease—Endocrine. (6) F, W, Sp. Prerequisite: Medicine 110, Pediatrics 110 or Surgery 110. Siperstein, Sleisenger, Kaplan

Overall emphasis on prototypes of disease in organs systems demonstrating fundamental biochemical or physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading lists.


Overall emphasis on prototypes of disease in organs systems demonstrating fundamental biochemical or physiological defects. Lectures cover background material and general concepts. Students participate in discussions, are assigned topics for presentation, and are encouraged to develop ability to evaluate literature critically. Reading lists.
140.24. Rheumatology—Clinical Immunology at UCSF (1 ½ per week) F, W, Sp. Prerequisite: Medicine 110. Forsham

Students based at the Metabolic Research Unit and eleven floor Moffit Hospital act as assistants to internists, residents, and fellows in the evaluation and treatment of immunologic dysfunction. Assignment of pertinent literature, lectures, and introduction to principles and practice of various immunologic testing.

140.25. Renal and Electrolyte Service at SF (1 ½ per week) F, W, Sp. Prerequisite: Medicine 110.

Humphreys

Students work up and present patients in the wards, ICU, and present them at rounds: kidney, renal, electrolyte, acid-base, or renal disease. They practice in hemodialysis clinics at UCSF and at SFGH, weekly mini- rounds and Infectious Diseases intercity conferences. Students participate in daily ward conferences, biweekly case conferences, and ECG reading as time permits.

140.26. Acute Care Units at MZ (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Primary emphasis is on the treatment of acutely ill patients in the Coronary Care Unit and Intensive Care Unit. Includes teaching in the use of monitoring and related electrocardiography, and related aspects of electrocardiography.

140.27. Clinical Clerkship Stressing Cardiopulmonary Problems at C (1 ½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Students attend rounds in the Coronary Care Unit, receive instruction in cardiopulmonary resuscitation, and attend all regular teaching conferences and seminars.

140.28. Infectious Diseases at SFGH (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. J. Mills

Course includes active consultation service averaging three new patients per week. Students follow patients on a weekly basis, and participate in weekly combined Infectious Diseases/Pediatrics mini-rounds and Infectious Diseases intercity conferences. Introduction to two Infectious Diseases clinics per week. Reading and library research.

140.29. Hematology at UCSF (1 ½ per week) F, W, Sp. Prerequisite: Medicine 110.

Shohet

Students work up and present patients in the wards and outpatient clinics. They attend all regular teaching conferences and seminars, learn the laboratory procedures pertinent to their patients.

140.30. Clerkship in Endocrinology-Metabolism at UCSF (1 ½ per week) F, W, Sp. Prerequisite: Medicine 110.

The Clinical Study Center (CSC) based Endocrine-Metabolic Service provides daily house staff and fellow supervised consultations. Weekly Endocrine Clinic, biweekly consultative rounds with senior staff, and conferences in the CSC on current clinical investigations.

140.31. Gastrointestinal Clinical Clerkship at UCSF (1 ½ per week) F, W, Sp. Prerequisite: Medicine 110.

M. Butler

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

140.32. Coronary Care Unit at SFGH (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and four weeks clinical cardiology elective. Schelbach, Peters

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

140.33. Infectious Diseases at PMC (1 ½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Valentine

Students may elect clinical clerkship in infectious diseases. Activities include working up patients, related laboratory testing, making ward rounds, and attending seminars.

140.34. Clerkship in Renal Disease (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Rector

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

140.35. Cardiology at SFGH (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

J. Abbott, Chelthin, Rapaport, Scheiman

Students see patients in consultation and wards, clinics, and teach residents. They review cases with cardiac consultant, and attend all seminars and conferences.

140.36. Emergency Service Clerkship at Moffit Emergency (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Limited to fourth year students. Open to UCSF students only.

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

140.37. Coronary Care Unit at PMC (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Goldschlager

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

140.38. Office Practice of Clinical Rheumatology at K (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor. Medicine 110.

Fessel

Primary office practice of clinical rheumatology dealing with rheumatological problems encountered in daily clinical practice. Opportunity to attend regular staff rounds and formal teaching rounds in rheumatology at K.

140.39. Clinical and Physiological Aspects of Pulmonary Disease at UCSF (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

W. Gold

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

140.40. Clinical and Physiological Aspects of Pulmonary Disease at C (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Lifshay

Students examine patients in the outpatient office, on wards, and in ICU, and present them at rounds. Opportunity to participate in pulmonary function testing, and introduction to respiratory therapy and chest physical therapy techniques. Acute and chronic care will be emphasized.

140.41. Gastroenterology Clerkship at SFGH (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Becker

Students participate in daily gastroenterology seminars reviewing basic pharmacology and therapeutic principles of commonly used drugs. Students observe GI techniques including sigmoidoscopy, colonoscopy, endoscopy, liver biopsy. Daily clinical conferences are held at three agencies.

140.42. Clinical Pharmacology at SFGH (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Eskin

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

140.43. Clinical and Physiological Aspects of Pulmonary Disease at UCSF (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Kaltwieder

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

140.44. Clinical and Physiological Aspects of Pulmonary Disease at UCSF (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

W. Gold, D. Watts, Greenspan

An introduction to the diagnosis and treatment of endocrine-metabolic diseases. Areas covered include those endocrinopathies involving the major endocrine glands, e.g., Addison’s disease, or pseudo-Cushing’s syndrome; hypothyroidism; hyperparathyroidism; Addison’s disease; Cushing’s syndrome; and hyperparathyroidism. Patients will be examined and treated in both the inpatient and outpatient setting.

140.46. Chest, Thyroid, and Gastrointestinal Subspecialty Clerkship at UCSF (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

W. Gold

Students follow outpatients in Chest, Thyroid, and Gastrointestinal subspecialty clinics; may be responsible for new patient workup. Clinic work will be combined with directed library reading.
140.47. Arthritis, Cardiology, Diabetes, Hematology, Metabolic, and Oncology Subspecialty Clinics at UC (1 ½ per week) Su, F, W. Prerequisite: Medicine 110.

Engleman, Gershengorn, Candy, Ries, M. Friedman

Students follow outpatients in Arthritis, Cardiology, Diabetes, Hematology, and Oncology subspecialties; may be responsible for new patient work ups. Clinic work will be combined with directed literature reading.

140.48, Cardiology, Chest, Gastrointestinal, Renal, and Tropical Medicine Subspecialty Clinics at UC (1 ½ per week) Su, F, W. Prerequisite: Medicine 110.

Gershengorn, W. Gold, D, Ratts, Hopper, R. Goldsmith

Students follow outpatients in Cardiology, Chest, Gastrointestinal, Renal, and Tropical Medicine subspecialties; may be responsible for new patient work ups. Clinic work will be combined with directed literature reading.

140.50. Hematology Oncology at MZ (1 ½ per week) Su, F, W. Prerequisite: Medicine 110. R. Cohen

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

140.51. Gastroenterology at MZ (1 ½ per week) Su, F, W. Prerequisite: Medicine 110.

Aron

Clinical approach to the diagnosis and treatment of patients with gastrointestinal problems, biopsy and endoscopic procedures, and use of medical literature in solving problems. Weekly seminars in pathophysiology, journal club, and tissue review supplement a full conference schedule.

140.52. Clinical Renal Elective at VA (1 ½ per week) Su, F, W. Prerequisite: Medicine 110.

Ariefl

Clinical nephrology. Lectures, rounds, conferences, renal biopsy review. Patients with acute and chronic renal disease, acute and chronic dialysis patients, patients with fluid and electrolyte problems. Renal pathology, journal club, nephrology research, and renal radiology conferences weekly.

140.53, Infectious Disease at MZ (1 ½ per week) F, W. Prerequisite: Medicine 110.

Drew

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

140.54. Nephrology at A (1 ½ per week) F, W. Sp. Prerequisite: Medicine 110.

Gewe, L. Gold

Reviews with directors on Renal Service on patients with a variety of renal diseases, fluid, electrolyte, acid and base disorders; outpatients on chronic hemodialysis and exposure to acute hemodialysis, and acute renal problems. Didactic sessions in clinical renal physiology.

140.55. Acting Internship at C (1 ½ per week) Su, F, W. Prerequisite: Medicine 110. Limited to fourth year students.

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

140.56. Geriatric Medicine Clerkship at MZ (1 ½ per week) Su, F, W. Prerequisite: Medicine 110.

Felgenbaum, Blumberg, Boitin, H. Weinstein

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

150.01. Research in Cardiovascular Physiology at VA (1 ½ per week) Su, F, W. Prerequisite: Physiology 100 and 101. Biochemistry 100A-B and consent of instructor.

Hollenberg

The elective is designed to provide experience with routine phases of experimental cardiac catheterization and monitoring of radioisotopes, techniques of tissue culture and various biochemical techniques. Presently, the laboratory is engaged in problems of myocar­ dial hypertrophy, cell growth, and mineral synthesis.

150.02. Research in Medicine (1 ½ per week) Su, F, W. Sp. L. H. Smith, Carbone

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

150.03, Cancer Viruses (1 ½ per week) Su, F, W. Prerequisite: Basic course in microbiology.

L. H. Smith, Carbone

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

160.01. Clinical Correlations Seminar (1) Su, F, W. Sp. Fitzgerald

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

160.02. Clinical Allergy (1) W. Prerequisite: Microbiology 100A-B and Pharmacology 100A-B.

Moore, O. M. S., Mestechi

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

170.04. Fundamentals of Electrocardiography at VA (1) Su, F, W. Prerequisite: Medicine 131A-B-C.

Goldman

Instruction in basic electrophysiological principles and interpretation of electrocardiograms.

170.05. Fundamentals of Electrocardiography Interpretation at SFGH (1) W. Prerequisite: Medicine 131A-B-C.

Rapaport

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

170.07. Non-Invasive Laboratory Cardiology (1) W. Prerequisite: Medicine 131A-B-C.

Rapaport

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

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

White

Course provides a humanitarian orientation to cancer that will form a framework for better understanding and an appreciation of the information on cancer presented in other health science courses. Biomedical, clinical, and psychosocial aspects will be explored.

179. Research in Medicine. (1 ½ per week) Su, F, W. Sp. L. H. Smith, Carbone

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

195. Supervised Study in Medicine. (1-5) Su, W. Prerequisite: Instructor consent.

L. H. Smith, Carbone

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

199. Laboratory Project in Medicine. (1) Su, W. Prerequisite: Consent of instructor preceptor and approval of third and fourth year coordinator.

L. H. Smith, Carbone

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

400. Medical Staff Conferences (2) W. UC L. H. Smith, Sp Rapaport, V A Sieleseiger

Interns and residents prepare and present case histories of patients at medical staff conferences including references to the laboratory, work shop, and special studies. Faculty members and visiting professors discuss the cases and present new developments in their respective fields.

401. Integrative Medical Clinical Correlation Course (4) F, W. Sp.

A series of discussions are conducted in the various subspecialties of internal medicine. Students take an active part in the discussion and discussion of the problems involved, including reference to the literature, clinical situations, and directed student participation.

402. Seminars in Medical Literature. (1 ½) F, W. Sp. V A Sieleseiger

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

403. Specialty Seminars. (2) F, W. Sp. UC L. H. Smith, Staff

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

404. Specialty Seminars. (4) F, W. Sp. UC L. H. Smith, Williams and Staff

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


Seminars are conducted in cardiology, electrocardiology, hematology, radiology, fluid and electrolyte balance, endocrinology and pathology, involving discussions, required reading, and reports. Electives are offered in: chest disease conference, joint medical and surgical conference, tumor board, dermatology conference, and neuro­ psychiatry conference.


Research programs are arranged with appropriate faculty members on an individual basis.
Residents take an active part in the presentation and discussion of problems connected with the correlation of clinical manifestations of disease with postmortem studies. Conferences include reference to the literature, clinical demonstrations, and laboratory work.

408. Electrocardiographic Interpretation. (2) Su, F, W, Sp. Sokolow

Seminars (individual instruction) for residents in medicine and trainees in cardiology by cardiology consultants in the interpretation of all electrocardiograms and phonocardiograms taken at UC.


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


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

452. Clinical Medicine. (1 1/2 per week) Su, F, W, Sp. SFGH H. Williams

Residents are responsible for patient care, under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, and consultation. They are expected, in addition, to have certain responsibilities involving the resident, and consultations for all other hospital services.

460. Clinical Primary Care. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Refer to Ambulatory and Community Medicine 460. Crede and Staff

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

461. Clinical Primary Care. (1 1/2 per week) Su, F, W, Sp. Prerequisite: Refer to Ambulatory and Community Medicine 460. Crede and Staff

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

490. Clinical Medicine. (1 1/2 per week) Su, F, W, Sp. SFGH H. Williams

Interns rotate through medical wards and emergency hospital. Under the supervision of the attending staff, they are responsible for the care of patients, history-taking, medical work-ups, laboratory test and consultation.

491. Clinical Medicine. (1 1/2 per week) Su, F, W, Sp. SFGH H. Williams

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

495. Clinical Medicine. (1 1/2 per week) Su, F, W, Sp. SFGH H. Williams

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

Microbiology

100A-B. Biologic Agents of Disease. (3-5) Sp. F. Prerequisite: Biochemistry 100A-B. Lecture 3 hours Sp. 4 hours F. Lab 3 hours F.

Jawetz, Levinson

Pathogenesis of infection and resistance to microorganisms, particularly bacteria, fungi, and viruses. Natural history, essentials of diagnosis, treatment and epidemiology of infectious diseases. Laboratory demonstrations and exercises of essential medical skills.

125. Microbiology. (6) Sp. Lecture 4 hours. Lab and Conference 6 hours. Halde and Staff

Morphology and physiology of microorganisms including bacteria, fungi, yeasts, and viruses and techniques to study them. Fundamentals of infection and resistance, immunology, microbial genetics, infectious disease, biological properties, and epidemiology. Problems in laboratory diagnosis, treatment and prevention of infectious diseases.

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

Jawetz, Spec

An introduction to general immunology and a comprehensive presentation of microorganisms including bacteria, fungi, viruses, fundamentals of infection and resistance, immunology, disinfection, sterilization, and antimicrobial agents. Laboratory studies and demonstrations on indigenous oral flora and applications of microbiology to Dentistry.

150.01. Research in Microbiology. (1/2) Su, F, W. Sp. Prerequisite: Microbiology 100A-B and consent of instructor.

Research in microbiology; block elective for fourth year students.

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

Jawetz and Staff

Methods in Microbiology 100A. Lecture and laboratory studies and demonstrations on indigenous oral flora and applications of microbiology to Dentistry, chemotherapy, and the use of microorganisms in industry.

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

Jawetz and Staff

Processes of infection and resistance. Microbial and fungal infections, epidemiology, treatment and control. Principles of chemotherapy.

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

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

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

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

203. Molecular and Cellular Immunology. (3) § F. Prerequisite: Biochemistry 100A-B and Microbiology 100A-B or equivalents. Offered in alternate years. Offered 1977-1978. Goodman

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

204. Immunology. (3) § F. Prerequisite: Microbiology 100A-B and equivalent course in basic immunology. Offered in alternate years. Offered 1977-1978. Linscott

An advanced course covering antigen-antibody interactions, with special emphasis on their biological importance: experimental hypersensitivity, tumor immunology, transplantation immunology, immunologic and nonimmunologic defenses, spent reactions, and the role of the complement system.

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

A systematic review of the fungi responsible for human disease, emphasizing pathogens, epidemiology, and diagnostic laboratory procedures.


The nature of viruses: dynamics of virus-cell interaction. Viral replication in virus systems, control of expression of virus-specific information in lytic and temperate infection, and role of viruses in malignant transformation of cells.


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

220. Seminar (0) § F, W, Sp. Lecture 1 hour.

SFGH H. Williams

General microbiology: individual research of advanced graduate students, invited speakers and staff members. Reviews of special topics and journal articles by advanced students.

221. Oral Microbiology. (1) § F. Prerequisite: Consent of instructor.

Hurst

A seminar course concerned with the role of microorganisms in oral health and disease, with emphasis on the ecology of the oral flora.


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

254. Thesis. (0) § F, W, Sp. Prerequisite: Advance to candidacy and permission of the graduate adviser.

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

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

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

Morphology

110A. Morphology — Occlusion. (1) F. Prerequisite: Concurrent enrollment in Morphology 115A. Lecture 1 hour.

Tueller

Course introduces the student to tooth morphology and includes discussion of the development and form of the primary and permanent dentitions.
Core Clerkship — Neurology 110. Students serve as clinical clerks in the inpatient and outpatient clinics.

140.01. Clinical Neurological Surgery Clerkship at UC. (1-½ per week) Su, F, W, Sp. Prerequisite: Neurology 110 and consent of instructor. C. B. 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 Clerkship at SFGH and V.A. (1-½ per week) Su, F, W, Sp. Prerequisite: Neurology 110. G. Clark

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

402. Neurological and Neurosurgical Pathology.

Residents are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, and surgical procedures. In addition, the senior resident has the responsibility for teaching duties required by the attending staff.

403. Seminar in Literature of Neurology and Neurosurgical Pathology at UC. (1 Su, F, W, Sp.) Aminoff, Fishman, Staff

The literature relevant to neurology and neurological surgery is discussed. Discussion by members of the faculty in attendance and by visitors from other schools interested in this and related fields.

150.01. Research in Neurology.

Research in one of the departments of neurology, under supervision of the chairman of the department.

404. Research in Neuropathology.

Residents are responsible for the care of patients, under the supervision of the attending staff, including history-taking, physical examinations, laboratory tests, and surgical procedures. In addition, the senior resident has the responsibility for teaching duties required by the attending staff.


Students will become a member of the house staff, assisting at operations, and taking night call on rotation with a resident.

405. Research in Neuropathology.

Residents are responsible for the care of patients, under the direction of the attending staff, including history-taking, physical examinations, laboratory tests, and surgical procedures. In addition, the senior resident has the responsibility for teaching duties required by the attending staff.

501.01. Clinical Neurology at SFGH.

The student will become a member of the house staff, assisting at operations, and taking night call on rotation with a resident.

406. Laboratory Project in Neurosurgery.

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


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


Specific projects in experimental pathology of the nervous system may be undertaken by direct arrange ment of the director of the laboratory.
102. Analysis and Presentation of Clinical Data. (2) W. Prerequisite: Nursing 101A and/or 101B, or consent of instructor. Development of a systematic approach to the analysis and presentation of clinical data. Course emphasizes current nursing and medical knowledge, concepts and terminology, while utilizing material from parallel courses.

110. Physiological Basis of Nursing Assessment. (3) F. Prerequisite: Consent of instructor. Allocation of normal structure and function in selected major organ systems that occur in common illnesses are examined. Emphasis is placed on physiological involvement with a family unit in a primary health care setting. Theories, concepts, and issues related to family development from conception to death will be explored.

114A. Introduction to Family Health Care Nursing. (2) F, W. Prerequisite: Psychology 113A. Concurrent enrollment in Nursing 111B. Lecture 1 hour, Seminar 1 hour. Introduction to the nursing process through an in-depth involvement with a family unit in a primary health care setting. Theories, concepts, and issues related to family development from conception to death will be explored.

114B. Introduction to Family Health Care Nursing. (2) W, Sp. Prerequisite: Nursing 114A. Lecture 1 hour, Seminar 1 hour. Introduction to the nursing process through an in-depth involvement with a family unit in a primary health care setting. Theories, concepts, and issues related to family development from conception to death will be explored.

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

117. Psychological Adaptations in Health and Illness. (5) F. W. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, 144A and Psychology 113A-B. Lecture 2 hours, Lab 9 hours.

Furuta Course deals with theory and practice essential to the assessment of family and community patterns in health and illness. Emphasis is on further development of clinical competence, utilization of a systematic method of inquiry, and development of the leadership role.

130A. Clinical Practice in Circumscribed Areas of Nursing. (8) F, W. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, 144A and 144B, 117, 118, 119, 121 and Sociology 123. Lecture 2 hours, Lab 18 hours.

Furuta Course provides theory and clinical experience in a focused area of nursing practice over two quarters. Emphasis is on further development of clinical competence, utilization of a systematic method of inquiry, and development of the leadership role.
154A. Nursing in School Health Programs. (4) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Staff

Concepts essential for understanding the roles of nurses in school health programs and the role of the nurse therein. Correlated experience under supervision in public schools.

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

Staff

Concepts essential for understanding the roles of nurses in school health programs and the role of the nurse therein. Correlated experience under supervision in public schools.


Course deals with commonly used drugs, with emphasis on classification, use, rationale for choice, mode of action, and significant side effects.

156. Creative Uses of Play with Young Children. (3) F, W, Sp. Prerequisite: Consent of instructor. Lecture or Weekend workshops 2 hours, Lab 3 hours.

Hardgrove

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


Neeson

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


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, W, Sp. Prerequisite: Consent of instructor.

Neeson

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

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

Dunbar and Staff

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

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

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

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

Carriero

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


Carriero

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

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

Thurston

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

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

Rosenau and Staff

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

178. Clinical Management in Primary Care. (5) § Sp. Prerequisite: Nursing 176.

Rosenau

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

181. Law and the Practice of Nursing. (2) W. Prerequisite: Tenenhouse, Takanook, Survey of fundamental and current issues in law with respect to the theory and practice of nursing. Emphasis on legal contingencies encountered in the everyday practice of nursing in both hospital and community settings.

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

Terry

Provides a means of incorporating health education into professional practice: identification of audience, delineation of specific pertinent health concepts, modes of transmitting health information. Evaluation methods are explored.

183. The Teaching Learning Process. (2-3) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab optional 0-1 hours.

Francis

An exploration of teaching methodologies with emphasis on the changing characteristics of students and with particular reference to the changing roles of health professionals. Principles of evaluation will be examined. Laboratory optional.

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

Resnik

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

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

Resnik

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

188. Literature and Science: Word and the World. (2) E. Clark, Fink.

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

189. Survey of Human Sexuality. (3) W. Sp. Lecture 3 hours.

Zalar

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

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

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


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


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

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

Archer

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

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

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


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

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

Archer, Schatzman, Hill

Comparative analysis of nursing with emphasis on nursing administration in the United States and other selected countries, using perspectives from anthropological, educational, historical, organizational, philosophical, and sociological contexts applicable to each country. Particularly recommended for international students.
205. Processes of Supervision. (3) §. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Staff
A study of the supervisory process, the role of the supervisor, the development of staff, and the principles and practice of supervision in nursing. Observation and laboratory experience in supervision arranged for and guided by the faculty.

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

207. Research in Teaching. (2-4) § F. W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours.

M. Kramer
Critical inspection and analysis of research in student, patient, and staff teaching. Opportunity provided to incorporate the findings of research in supervised practical teaching sessions.

208. Emerging Roles in Professional Nursing. (3) § Sp. Lecture 2 hours, Lab 3 hours.

Staff
Examination of the sociological, economic, and nursing perspectives, concerning emerging professional roles. Selected examples from student contact with people practicing in emerging roles and published descriptions provide bases for exploration.

210A. Family Dynamics, Concepts and Assessment. (3) § F. W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 5 hours.

J. Moore
Launch seminar that examines family dynamics and major concepts useful in assessment of families. The family as a system wherein roles, cultural values, and interpersonal communication is emphasized is considered. Selected research included.

210B. Family Dynamics, Pathology and Therapy. (3) § Sp. Prerequisite: Nursing 210A or equivalent and consent of instructor. Lecture 2 hours, Lab 3 hours.

M. Kramer
Seminar examining family concepts which aid in the understanding of functional families. Marriage and family therapy as treatment modalities are studied. Simulation laboratory experiences are used to test theory. Concurrent enrollment in Nursing 405 with consent of instructor.

211A. Introduction to Research: Perspectives and Styles of Research and Researchers. (3) § F. W. Prerequisite: Elementary statistics or equivalent. Lecture 2 hours, Lab 3 hours.

M. Kramer
Lectures and small group sections present an overview of the research process including the styles of researchers, the research attitude, logic, ethics, philosophy, and tools of science.

211B. The Research Critique. (3) § W. Prerequisite: Staff Sections with different substantive foci are devoted to the development of the individual nurse as a consumer of research endeavors emphasizing attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

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

211D. Experimental Research Design. (3) § W. Prerequisite: Nursing 211A or consent of instructor.

Hornof
Intensive study and critique of experimental and quasi-experimental research designs.

211.01B. Critique of Studies in Patient-Family Teaching. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Wolfgang
Critique of studies in patient-family teaching with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.02B. Critique of Studies in Maternal-Child Nursing. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Highley, Savenin
Critique of studies in maternal-child nursing with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.03B. Critique of Research in Loss and Grief. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Mercer
Critique of studies in loss and grief with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.05B. Critique of Studies in the Field of Aging. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Nichols, L. Reynolds
Critique of studies in field of aging with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.11B. Critical Analysis of Clinical Interventions with Young Retarded Children. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

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Critical analysis of clinical interventions with young retarded children with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.12B. Critique of Research Studies in Nonverbal Behavior. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Gorman
Critique of studies in nonverbal behavior with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.21B. Critique of Cardiopulmonary Research. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Wardlaw
Critique of cardiopulmonary research with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211.22B. Critique of Research Studies in Quality of Patient Care. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Carrell
Critique of research studies on quality of patient care in acute care settings with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

212A. Physiological Concepts in Nursing. (2-4) § Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Waesche
Promotion of the understanding and application of physiological principles to cross-clinical nursing. Emphasis is on basic science considerations, integrative aspects, and selected functional modifications.

212C. Physiological Concepts in Nursing. (2-4) § Sp. Prerequisite: Consent of instructor.

Abby
Promotion of the understanding and application of physiological principles to cross-clinical nursing. Emphasis is on basic science considerations, integrative aspects, and selected functional modifications.

213A. Nursing Measurements and Patient Monitoring. (3) § W. Prerequisite: Nursing 212A and consent of instructor. Lecture 2 hours, Lab 0-3 hours.

213B. Nursing Measurements and Patient Monitoring. (2-4) § Sp. Prerequisite: Nursing 212A and consent of instructor. Lecture 2 hours, Lab 0-6 hours.

Beaumont
Fundamentals of electronics, transducers, and instrumentation directly applicable to the modes of obtaining physiological data from patients.

214. Early Postpartum: High Risk Parenting. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Mercer
Course focuses on the puerperium, early maternal/parental newborn relationships and the nurse’s role in facilitating mother-infant attachments and attachment disorders. Exploration of precocious infant or infant with defects on parenting process. Practicum available through Nursing 406.

215A. Health in the Community. (3) § F. W. Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours.

Staff
Exploration of theories, concepts, and principles pertaining to the practice of community health nursing with focus on positive health factors and interaction with families, groups, and communities. Study of selected topics.

215B. Health Care Planning in Communities. (3) § F. W. Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours.

Staff
Exploration of analytic planning models applicable to community health services. Utilization of the community as a basis for planning and delivery of health care. Emphasis is on the role of the community health nurse in health planning.

215C. Community Health Issues. (3) § Sp. Prerequisite: Nursing 215A or 215B and consent of instructor. Seminar 2 hours, Lab 3 hours.

Staff
Exploration of community health issues previously
215D. Strategies of Community Organization. (3) § W. Sp. Prerequisite: Consent of instructor. Staff Exploration of strategies of institutional analysis, community assessment, methods of community organization, and development, which enable nurses to facilitate others’ capacities to define, plan for, and meet their own physical, social, and mental health priorities.

215E. Research Methods in Community Health Nursing. (3) § W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Staff Employs survey and evaluative research methods including data identification, collection, analysis, interpretation, and reporting. Stresses these functions as essential for planning and evaluating community health programs.

216. Maternal Child Nursing. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Zalar, Savedra Survey of major phenomena utilizing concepts, theories, and laboratory experiences with child-rearing behaviors of nuclear, extended, mother-child, and nuclear family units. Focus is directed to minimizing trauma and promoting growth. Concurrent practicum recommended.

217. Psychosocial Care of Hospitalized Children and Their Families. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Tesler Exploration of the theory related to the psychosocial experiences of illness and hospitalization for the child and his family. Focus is directed to the overlapping areas in a number of disciplines. This course examines research studies, polemic essays, and theoretical writings which have made the concepts and problems of human communication central to their investigation.

220. Advanced Seminar in Nursing Research. (3) F. W. Sp. Prerequisite: Nursing 211A and 211B or equivalent and consent of instructor. Oda Lecture/seminar on the psychotherapeutic process in nursing. Material drawn from recent research in social science, psychiatry, and psychiatric nursing.

221. Role Development: Specialized Nursing Roles. (2-3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab optional 0-3 hours. Oda Lecture/seminar focusing on the critical analysis of specialized nursing role developments. Role research emphasized. Includes traditional, existing, expanded, and emerging roles relating to specialization. Optional laboratory for theory testing and systematic observations.

222A. A Survey of Modern Psychiatric Thought. (3) § W. Prerequisite: Consent of instructor. Underwood Theoretical models from selected schools of psychiatric thought are presented and applied to clinical material. Intrapsychic, interpersonal, and social frameworks are reviewed. Research related to select theoretical models is explored.

222B. Nursing Care of Acutely Ill Children. (3) § F. Prerequisite: Consent of instructor. Ward Focus is on exploration of immediate physiological and pathophysiological processes and their implications for planning nursing management of the acutely ill child. Students employ the problem-oriented framework to assess and manage theoretical patient problems. Practicum optional.
234. The Threat of Death in Clinical Practice. (3) § F, Sp. Staff Seminar providing opportunity for discussion about dilemmas arising when patient life comes into play when adult patients face death. Discussion focuses on meaning of dying from perspective of persons undergoing the experience and/or problems of health professionals when patients are dying.


Study of the physiological, psychological, and sociological aspects of aging. Focus is on selected theories and research relevant to nursing care of the aged. Laboratory utilizes a variety of settings serving the aged.

236. Expectant Parent Group Education. (2) § F, W. Sp. Prerequisite: Consent of instructor. F. Abbott Theoretical sessions related to methodology and techniques of conducting expectant parent discussion groups. Exploration of context relevant to concerns of expectant parents, encompassing child-bearing and early child-rearing experiences. Concurrent practicum required.

238A. Development of the Infant and Preschool Child. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab to be arranged. Enrollment limited.

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

238B. Development in Middle Childhood. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Exploration of the relevant theories, literature, and research findings dealing with normal cognitive, emotional, and social development during the elementary school years.

238C. Adolescent Development. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Enrollment limited.

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

239A. Care of Patients with Pulmonary Problems. (3) § F. Prerequisite: Consent of instructor. E. Clarke, Flood A comprehensive study of the nursing care of patients with pulmonary problems. Examination of the physiological concepts necessary to understanding the patient and nursing problems. Exploration of the theoretical bases for nursing decisions and nursing action.

239B. Care of Patients with Pulmonary Problems. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Clarke, Flood A comprehensive study of the nursing care of patients with pulmonary problems. Examination of selected theories and research from the behavioral sciences relevant to the care of these patients. Identification of legislative, ecological, and socio-economic issues influencing delivery.

239C. Care of Patients with Pulmonary Problems. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Clarke, Flood Investigation of nontherapeutic, unintended physiological effects of selected common nursing interventions with patients with cardiopulmonary dysfunctions. Clinical laboratory included.

239D. Clinical Decision Making. (3) § F. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Barstow The theoretical basis for decision making in the management and teaching of adults, with emphasis on obstructive lung disease in acute and chronic settings. Examination of coping mechanisms, teaching-learning theories, and related research as applied to individualized care.

241.01A. Theoretical Basis of Cardiovascular Nursing. (3) § Sp. Lecture 3 hours. Stotts A study of cardiovascular theories applicable to nursing practice. Focus will be on selected physiological and pathophysiological support that selected nursing interventions.

241.01B. Theoretical Basis of Cardiovascular Nursing. (3) § Sp. Prerequisite: Nursing 241.01A or consent of instructor. Lecture 3 hours. Stotts A study of cardiovascular theories applicable to nursing practice. Focus will be on selected pathophysiological and psychological aspects of selected nursing interventions.

241.02. Renal Nursing: A Physiological Basis. (3) § W. Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Markewitz, E. Clarke Exploration of physiological concepts and principles pertinent to selected renal problems. Application of these principles to nursing assessment and the care of patients with renal problems.

241.03. Pharmacology for the Cardiopulmonary Patient. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Clarke Study of cardiopulmonary nursing problems and their amelioration by drugs affecting the autonomic nervous system and cardio-respiratory-renal core systems. Review of relevant anatomy, physiology and drug action included.


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

244. Theories of Group Psychotherapy. (2) § W. Sp. Prerequisite: Consent of instructor. Lecture 11/2 hours, Lab 1 hour. Dye Theories of group psychotherapy based on psychoanalytic, interpersonal, and communication theories pertinent to practice of group psychotherapy by nurses. Exploration of differing models of therapy, basic principles and techniques of group therapy, and role of group as treatment.

246. Deterrents to Parenting. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Tesler Exploration of evolving mother-child relationships, adaptive tasks, and environmental and interpersonal situations interrupting healthy development of mothering. Implications for nurturing and nursing roles.

247.01. Issues and Trends in the Health Care of the Aged. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 2 hours. Franci An exploration of the interrelationships of various issues, trends and theories related to the aged. A discussion of the nurse's role in the planning and delivery of health care to the aged, both sick and well.

247.02. Legislative Issues and Political Aspects of Aging in Long-Term Health Care. (3) § W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Franci Investigation of legislative and political issues of long-term health care and the implications for nursing practice.

249. Independent Study. (1-6) § F, W, Sp. Prerequisite: Consent of instructor. Staff Groups of two or more collaborate in clinical investigation 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 programs.

250. Individual Study. (1-5) § F, W, Sp. Prerequisite: Consent of instructor. Staff Individual study with emphasis on special problems in nursing. Students may select areas for study which are related to their area of interest or future goals.

251. Professional Nurses in Bureaucracies. (3-4) § F. Prerequisite: Three months work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours. Explorations of and analysis of research and issues of professionalism and bureaucracy: evolution, process and relevance. Focus is on problems and conflicts encountered by professional nurses in bureaucracies and research related to identification and amelioration of these conflicts.

252. Reality Shock in Nurses. (3-4) § Sp. Prerequisite: Three months experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours. Explorations of normal physiological changes occurring during pregnancy and childbearing. Emphasis will be on reproductive systems, endocrine and neuroendocrine systems, and cardiological systems. Clinical experience to relate physiologic theory with clinical observation.

254.01. Maternal Physiology and Clinical Assessment. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Explorations of normal physiological changes occurring during pregnancy and childbearing. Emphasis will be on reproductive systems, endocrine and neuroendocrine systems, and cardiological systems. Clinical experience to relate physiologic theory with clinical observation.

254.02. Fetal-Newborn Development. (2-4) § Sp. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Exploration of normal physiological changes occurring during pregnancy and childbearing. Emphasis will be on reproductive systems, endocrine and neuroendocrine systems, and cardiological systems. Clinical experience to relate physiologic theory with clinical observation.

255.03. Nursing Care of High Risk Pregnancy. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Explorations of pathophysiological events affecting the maternal-fetal unit in high risk pregnancies. Clinical experience will be provided for integration of theory.
254.04. Nursing Care of High Risk Newborn. (2-4) § F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours.

Dulock

In-depth exploration of the physiological and pathophysiological events affecting the normal and high risk newborn. Current medical and nursing research findings will be incorporated.

254.05. Development of Nursing. (2) § F. Prerequisite: Consent of instructor.

Dulock, Ree, Burkhalter

Course provides theoretical concepts of the interrelationship of growth and development, and their pharmacokinetic effects on the maternal-placental-fetal unit and on the developing newborn. Specific drugs, their clinical considerations, and the nurse's role in drug therapy will be incorporated.

255.01. Child Health Assessment. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

M. Chow

Presentation of theoretical principles of child health assessment. Areas to be covered include exploration of methodologies of data-gathering and data-analysis essential to comprehensive health assessment of infants and children. Laboratory for testing and integration of theory.

255.02. Child Health Maintenance. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

Durand

Course provides exploration of theories, concepts and knowledge for comprehensive child health maintenance, encompassing prevention and promotion. Emphasis on parents as participants in assessment, decision-making and management of common health problems and normal developmental stress in infancy and childhood.

255.03. Management of Common Pediatric Illness. (4) § Sp. Prerequisite: Nursing 255.01 and 255.02. Consent of instructor. Lecture 2 hours. Seminar 2 hours.

Lipp

Covers theoretical basis of physiological and psychological principles necessary for understanding management of common pediatric illnesses. Provides format for integrating clinical findings, utilizing developmental and communication concepts in assessment and management. Collaborative roles between nurse, family and physicians emphasized.

256. Therapeutic Use of Play. (2) § F. W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

Hardgrove

Practical experience using play materials, techniques, and language, in relating to young children to increase the graduate nursing student’s observational skills and afford opportunities to test and develop theories of child development. Practicum optional.

257A. Children at Risk. (3) § W. Prerequisite: Nursing 238A, 238B or Psychology 220 or equivalent and/or consent of instructor. Lecture 2 hours, Lab 3 hours.

Miller


257B. Children at Risk. (3) § Sp. Prerequisite: Nursing 257A. Lecture 2 hours, Lab 3 hours.

Miller


258. Intrapartal Nursing. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

M. Davis

Exploration of theories of pain perception and clinical course of normal labor and delivery. Social, cultural and psychological factors influencing the family's approach to childbirth are studied concurrently with clinical data. Practicum available through Nursing 406.

259. Sex Education and Counseling. (3) § Sp. Prerequisite: Nursing 230 or Psychiatry 180 or equivalent. Consent of instructor. Lecture 2 hours, Lab 2 hours.

G. Adams

Theories and principles of sex counseling and intervention for common problems are analyzed to facilitate interprofessional work with individuals and families related to human sexuality. Relevant personal and societal attitudes and values are explored. Nursing 406 required practicum.

259.01. Health Assessment of Women in the Reproductive Years. (2) § F. Lecture 2 hours. Neeson

Principles and theories of assessment of women's reproductive health; methodologies of data gathering and analysis related to the interconceptional period, the climacteric and the newborn. Consideration of social, cultural and ethnic variations. Laboratory available through Nursing 406.

259.02. Women's Reproductive Health: Theories and Management. (3) § W. Prerequisite: Nursing 259.01 or consent of instructor. Lecture 2 hours. Seminar 2 hours. Neeson

Exploration of theories, concepts and knowledge necessary to maintain and promote women's reproductive health. Emphasis on application of current research; decision making and management of pregnancy, the interconceptional period and the climacteric, including collaboration with health team members.

259.03. Special Problems in Women's Reproductive Health: Theories, Assessment, and Management. (3) § Sp. Prerequisite: Nursing 259.01 and 259.02 or consent of instructor. Lecture 2 hours. Seminar 2 hours. Neeson

Theory and management of bio-psycho-social deviations from normal in women before and during pregnancy, interconceptional period, and climacteric. Emphasis on critical analysis of research in metabolic, infectious and functional disorders including collaborative management of women manifesting these disorders.

260. Research in Human Communication. (3) § W. Sp. Prerequisite: Nursing 214A or equivalent. A. Davis

Seminar examines selected research focusing on human communication. Research topics such as interaction, social context, and language are explored to understand problems encountered in human communication research.

261. Introduction to Computer-based Instructional Systems in Nursing Education and Practice. (2-4) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 0-6 hours. Claus, Kamp, Veatch, Gorton

Focus is on computers to aid instruction in nursing education and practice. Concepts, principles and methods of computer-based instruction will be examined. Laboratory provides opportunities to design and write instructional computer programs or to evaluate use of computerized systems.

262A. Nursing Evaluations of the Long Term Client. (3) § W. Prerequisite: Consent of instructor. D. DavADOW

Selected framework for assessment, analysis of data and presentation of diagnoses are explored as related to long term clients in institutional and community settings. Data bases and methodologies for collecting client information are studied. Concurrent four unit practicum required.

264B. Restorative Nursing with Long Term Care Clients. (3) § Sp. Prerequisite: Nursing 262A or consent of instructor. Lecture 2 hours. Davadow

Examination of restorative nursing with long term clients in various institutional and community settings. Exploring methods of implementation in prescribed nursing and evaluation outcomes toward client goal achievement and independence. Concurrent practicum required.

265. Community Health Planning. (2) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3-9 hours. S. Savedra, Mercer

Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on intergenerational and social-familial functional. Seminar focuses on theoretical applications to nursing education and practice. Core classes and small group sessions are organized around students' interests.

266B. Research Implementation. (3-5) § Sp. Prerequisite: Nursing 265A or consent of instructor. Lecture 2 hours. Lab 3-9 hours. M. Kramer

Data collection, analysis, and reporting of a research project, or of some aspect of a research project, such as tool construction, validity, or reliability studies.

268. Current Professional Issues in Nursing. (2-4) § F. W. Prerequisite: Admission to the DNS program. Lecture 2-4 hours. Horned

Presentation and discussion of current issues and trends in the health professions.

290.01. Conceptual Approaches to Family Study. (2-4) § F. Prerequisite: Enrollment in the DNS program. Lecture 2 hours. Lab 0-6 hours. S. Savedra, Mercer

Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on conceptual approaches to family studies. Seminar focuses on theoretical applications to family studies. Seminar focuses on theoretical applications to family studies.

290.02. Conceptual Approaches to Family Study. (2-4) § W. Prerequisite: Nursing 290.01 and/or consent of instructor. Lecture 2 hours. Lab 0-6 hours. S. Savedra, Mercer

Comparative study and critical analysis of classical theories applicable to family interaction with emphasis on conceptual approaches to family studies. Seminar focuses on theoretical applications to family studies.
404.06B. Clinical Residency-Pediatric Nurse Associate. (4) Sp. Prerequisite: Nursing 404.06A and consent of instructor. Lab 12-36 hours.

409. Continuing Education Residency. (6-12) F, W. Prerequisite: Nursing 201 or equivalent, and consent of instructor. Lab 18-36 hours.

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the Continuing Education Specialist role in maintaining continuing education needs of registered nurses.

410. Teaching Practicum. (1-8) F, W. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Nutrition

130B-C. Human Nutrition. (1-1) W. Lecture 1 hour. Prerequisite: Consent of instructor and chairman of the department.

An introduction to the principles of human nutrition. Subject matter is related to the maintenance of normal nutrition throughout one's life span, and emphasis is on normal nutrition and its pre­

132. Principles of Diet as Therapy in Nursing Inter­vention. (2) W. Prerequisite: Nursing 110 or consent of instructor.

Gutierrez

Concepts of dietary modification as required in the prevention and treatment of major disease entities. Emphasis is on clinical approaches useful in nutritional practice.

160. Foods and Nutrition. (2) Sp. Prerequisite: Nutrition 130B. Lecture 1 hour. Lab 3 hours.

Vinson

A guided clinical laboratory experience is designed to develop mastery of advanced skills.

181. Nutrition Counseling for Families. (3) $ Prereq­uisite: Nursing 114 and/or consent of instructor. Lecture 2 hours, Lab 3 hours.

Gutierrez, Hoare

Course provides theory and practice in the interpretation of diet and principles of nutrition counseling with an emphasis on cultural nutri­tion.

See International Health 182.

408A. Nursing Internship Seminar. (2) Su. Prerequisite: Admission to Biodysfunction Veterans Admin­stration Internship Program.

Frisen

Seminar designed to develop the ability of participant to use sociopsychological theory in dealing with the setting of the UC-V4 internship. To be taken concur­rently with internship which includes individual and small group instruction in clinical management skills.

408B. Nursing Internship Seminar. (2) F. Prerequisite: Admission to Biodysfunction Veterans Admin­istration Program.

Conahan

Seminar designed to develop ability of participant to use sociopsychological theory in dealing with the setting of the UC-V4 internship. To be taken concur­rently with internship which includes individual and small group instruction in clinical management skills.

409. Continuing Education Residency. (6-12) F, W. Prerequisite: Nursing 201 or equivalent, and consent of instructor. Lab 18-36 hours.

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the Continuing Education Specialist role in maintaining continuing education needs of registered nurses.

410. Teaching Practicum. (1-8) F, W. Prerequisite: Consent of instructor. Lab 3-24 hours.

Staff

Nutrition

130B-C. Human Nutrition. (1-1) W. Lecture 1 hour. Prerequisite: Consent of instructor and chairman of the department.

An introduction to the principles of human nutrition. Subject matter is related to the maintenance of normal nutrition throughout one's life span, and emphasis is on normal nutrition and its pre­

132. Principles of Diet as Therapy in Nursing Inter­vention. (2) W. Prerequisite: Nursing 110 or consent of instructor.

Gutierrez

Concepts of dietary modification as required in the prevention and treatment of major disease entities. Emphasis is on clinical approaches useful in nutritional practice.

160. Foods and Nutrition. (2) Sp. Prerequisite: Nutrition 130B. Lecture 1 hour. Lab 3 hours.

Vinson

A guided clinical laboratory experience is designed to develop mastery of advanced skills.

181. Nutrition Counseling for Families. (3) $ Prereq­uisite: Nursing 114 and/or consent of instructor. Lecture 2 hours, Lab 3 hours.

Gutierrez, Hoare

Course provides theory and practice in the interpretation of diet and principles of nutrition counseling with an emphasis on cultural nutri­tion.

See International Health 182.
Operative Dentistry / Ophthalmology / 141

400. Staff Conferences. (1) F. W. Sp. Kramer
Residents prepare and present diagnostic and therapeutic problem cases. Discussion by faculty and visitors follows. Residents also present papers on various aspects of medicine and ophthalmology which are discussed by the faculty.

Residents and prepare diagnostic and ophthalmology courses. Conference by faculty and visitors follows. Residents also present papers on various aspects of medicine and ophthalmology which are discussed by the faculty.

Seminars include didactic lectures in practical work covering pathology, neuroophthalmology, uveitis, physiology, optics, refraction, ocular motility, glaucoma, and microbiology.

403. Basic Ophthalmologic Science Course. (6) Su.
Required for first year residents. UC S. Kramer
Didactic lectures and demonstrations cover the basic sciences as applied to ophthalmology. These include anatomy, histology, biochemistry, physiology, and pharmacology.

450. Clinical Ophthalmology at UC. (1/3) per week
Su. F. W. Sp.
Residents, under supervision, are responsible for patients in the Eye Clinic. First year residents assist in eye surgery and the Eye Bank program. Specialty clinics include external diseases, extracapsular cataract, glaucoma, neuroophthalmology, ophthalmology, plastic surgery, and tumor.

451. Clinical Ophthalmology. (1/3) per week
Su. F. W. Sp.
Residents, under supervision, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases.

454. Clinical Ophthalmology. (1/3) per week
Su. F. W. Sp.
Residents, supervised by the Ophthalmology Staff, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases. Residents consult for other hospital services.

455. Fourth Year Residency. (1/3) per week
Su. F. W. Sp.
Fourth year residency takes at UC or at an approved institution subject to the approval of the chairman of the department and the Dean.


172. Current Oral Pathology. (2) Sp. Lecture 2 hours. Hansen and Staff A seminar designed to acquaint postdoctoral dental students with current advances, techniques, trends, and developments in the field of oral pathology.

180A-B-C. Clinical Pathology Conference. (1½) F, W, Sp. Prerequisite. Fourth year standing. Lecture 1½ hours. S. Silverman and Staff Clinical pathology conference; biology, diagnosis, and treatment of various oral lesions and associated patient problems. Some oral conditions are critically reevaluated in the light of current research advances. Specific medical knowledge is related to patient care.

181. Forensic Odontology. (1) W. Prerequisite: Fourth year standing and consent of instructor. Lecture 1 hour. Hansen and Staff Identification of means of dental evidence, known as forensic odontology. Course includes discussions of identification procedures in single and multiple deaths, including homicides and mass disasters, forensic dental injuries, bite injuries and bite marks, the medicolegal autopsy, fire research, and forensic anthropology.

185. Diagnostic Oral Pathology. (1) F, W, Sp. Prerequisite: Fourth year standing and consent of instructor. Merrill The advanced dental student participates in lecture seminars, in which emphasis is placed on the diagnosis of oral disease correlating the history, clinical, operative, radiographic, laboratory, and histopathological findings.

186. Introduction to the Biological Sciences. (1) SS. Lecture. Laboratory and Demonstration 9 hours for three weeks. Christie Introduction to the biological sciences taught in the first year of dentistry: anatomy, biochemistry, and physiology. Course includes one-half day per week orientation to the campus community.


191. Laboratory Project in Oral Biology. (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.

202. Experimental Techniques in Oral Biology. (3) F, W, Sp. Prerequisite: Oral Biology 126 and 204 or equivalent. Staff Principles and methods employed in studying oral tissues such as histochemistry, autoradiography, decalcification procedures, cryostat sectioning, and enzyme histochemistry will be covered.

206. Seminar in Oral Biology. (1-4) F, W, Sp. Prerequisite: D.D.S. degree and consent of instructor. Seminar 1-4 hours. S. Silverman and Staff A wide spectrum of selected topics related to oral biology are presented with emphasis on basic and applied research methodology, pertinent of problems, significance of findings, and critical evaluation of data.

220. Oral Biology. (1-4) F, W, Sp. S. Silverman Advanced considerations in the field of histopathology. Applications of newer techniques and concepts are presented to increase understanding of the oral cavity in health and disease. Etiology, diagnosis, and therapeutics are discussed.

229. Biology of Connective Tissue. (2) F, W. Prerequisite: Biochemistry 207 or consent of instructor. Lecture 2 hours. S. Silverman A seminar course in connective tissue biology, concerned mainly with the development, differentiation, and function of the body tissues utilizing various diagnostic techniques as regulatory controls of connective tissue macromolecules, fibrosis, wound healing, inflammation, tissue destruction, and selected genetic disorders.

220. Current Topics in Research in Oral Biology. (1-8) § F, W, Sp. Lecture 1½ hours. S. Silverman Staff A seminar series covering current advances in research in oral biology in a systematic manner. Current literature is critically reviewed by students under faculty supervision, or by faculty or guest lecturers.


110. Oral Radiology. (0-1) SS. F, W. Prerequisite: Oral Radiology 121. Lab Rotation 24 hours. Parks


132. Medical Evaluation, Medical Emergencies, and Parenteral Administration of Drugs. (5½) W. Prequisite: R. A. Smith


140. Oral Surgery. (0-4) SS. F, W. Prerequisite: Oral Surgery 170 and 175. Seminar 1-2 hours. Parks


143. Oral Surgery. (0-1) SS. F, W. Prerequisite: Oral Radiology 121. Lab Rotation 24 hours. Parks

144. Oral Surgery. (1) Sp. Prerequisite: Anatomy 117A-B and Microbiology 126A and 126B. Lecture 1 hour. R. A. Smith


**Oral Medicine.** (0-2-2) F, W, Sp. Lecture and Seminar 2 hours.

**Laboratory Project in Oral Radiology.** (1-5) F, W, Sp. Staff

**Medical Evaluation of Dental Patients and In-Depth Evaluation of Patients with Medical Problems.** Evaluation and treatment of cardiac arrest. Discussion of emergency drugs and development of an office emergency kit. Demonstrations of parenteral administration of drugs.

**Surgical Orthodontics.** (2) W. Prequisite: Enrollment in postdoctoral specialty program in orthodontics. Seminar 2 hours. Ware

**Medical Emergencies and Parenteral Administration of Drugs.** (5½) W. Prequisite: R. A. Smith

**Oral Radiology / Oral Surgery**
146 / Oral Surgery / Orofacial Anomalies

175.02. Oral Surgery. (15) Su. Prerequisite: Limited to oral surgery residents. Seminar 2 hours. Hospital and Clinic 40 hours.

Continuation of Oral Surgery 175.01A-B.

175.03. Oral Surgery. (13) F. Prerequisite: Limited to oral surgery residents. Hospital and Clinic 40 hours.

Ware and Staff

Hospital procedures, ward rounds, and clinical practice in several hospitals: treatment of jaw fractures, osteomyelitis, cellulitis, and other complicated oral surgical procedures. Resident will have administrative responsibilities in conducting ward rounds and weekly conferences.

175.04-B-C. Oral Surgery. (10-10) W. Prerequisite: Limited to residents. Lecture 2 hours. Hospital and Clinic 24 hours. Ware and Staff

Continuation of Oral Surgery 175.03 with the addition of surgery of the jaws for correction of such facial deformities as prognathism, apergnathia, and retrognathia. Instruction in temporomandibular joint surgery.

175.05. Oral Surgery (13) Su. Prerequisite: Oral Surgery 175.04-B-C. Limited to oral surgery residents. Hospital and Clinic 40 hours.

Ware and Staff

Continuation of oral surgical care. Certain periods each week devoted to supervised instruction of undergraduate students.


Ware and Staff

Continuation of Oral Surgery 175.05.


Courage

Under oral surgery office conditions, and under immediate supervision of the staff, residents will be responsible for care and management of the ambulatory patient who is to undergo an oral surgery procedure under ambulatory anesthesia.


R. A. Smith

An elective didactic and demonstration course with practice sessions to insure the student's knowledge and capability of managing the psychomotor skills of cardiopulmonary resuscitation.

189.01. Advanced Oral Surgery Clinic. (0-9) Su. Prerequisite: Fourth year standing and consent of instructor. Clinic Variable.

Ware and Staff

Additional clinical experience in oral surgery.


Course provides limited experience in hospital oral surgery including assisting and performing oral surgery procedures, and aspects of premedication as related to the ambulatory patient; orientation in hospital decorum and operating room procedures.


Ware and Staff

This course provides limited experience in hospital oral surgery including assisting and performing oral surgery procedures, and aspects of premedication as related to the ambulatory patient; orientation in hospital decorum and operating room procedures.

189.04. Advanced Clinical Clerkship in Oral Surgery at UC and SFGH. (1/1) per week F, W, Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee.

Ware, Courage, Khosla.

Students participate in oral surgery care of hospital inpatients and outpatients. They also attend seminars and lectures.


Staff

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


This course is designed to teach the dental intern exodontia 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.

Orofacial Anomalies

170. Orofacial Anomalies. (2) F.

Lawnson

Normal development of speech, consideration of speech patterns, habits, and defects as related to dental and orofacial problems.

171. Diagnosis and Treatment of Orofacial Anomalies. (2) F, W, Sp. Lecture 1 hour, Seminar and Clinic 3 hours.

Harvold, Chierici

Diagnosis, preventive, and corrective methods relative to patients with congenital malformations of the orofacial region are discussed.


Seminar 2 hours.

Harvold

Diagnosis of orofacial malformations. Emphasis is on the interrelationship of morphology and physiology.

180.01. Speech Habilitation. (1) W. Seminar 1 hour.

Normal development of speech. Introduction to the acoustic and linguistic elements. Consideration of the speech patterns, habits, and defects related to dental and orofacial problems.

186.01. Habilitation of Abnormal Orofacial Development. (1) F, W, Sp. Prerequisite: Fourth year standing or consent of instructor. Seminar and Clinic 3 hours.

Chierici, Harvold

The pathogenesis of jaw deformities, dental malocclusions, and speech disorders associated with craniofacial malformation are discussed. Instruction in diagnosis and preventive and corrective treatment methods is given in the clinic.

187.01. Special Study for Advanced Undergraduates. (1) F, W, Sp. Prerequisite: Fourth year standing and consent of instructor and approval of Clinic Review Committee. Seminar and Clinic 3 hours.

Harvold

Instruction in biomechanic technique and methodology is given in connection with a selected research project.

187.02. Diagnosis and Treatment Planning in Orofacial Malformations. (1) W. Sp. Prerequisite: Orofacial Anomalies 187.01. Seminar and Clinic 3 hours.

Harvold

A clinical survey, a clinical experiment, or an animal experiment is designed and analyzed.

401. Orofacial Prosthetics. (1-3) F. Prerequisite: D.D.S. degree or equivalent. Seminar and Lab 3-9 hours.

Chierici and Staff

Prosthetic habilitation of the patient with orofacial malformations. Discussions include principles and techniques of construction of obturators, speech appliances, and retention bridges.


Harvold and Staff

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

190. Orofacial Prosthetics. (1-3) F. Prerequisite: D.D.S. degree or equivalent. Seminar, Lab, and Clinic 3-9 hours.

Chierici and Staff

A course designed to acquaint the student with the many facets of prosthetic management of acquired oral defects. Relationship of prosthetics to speech, mastication, deglutition, oral biology, and surgery are discussed. The interdisciplinary management of these problems is stressed.


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

199. Clinical Orthodontics. (0-3) F, W. Prerequisite: Orthodontics 121 and 131A-B, or concurrent enrollment in Orthodontics 131A or 131B.

R. M. Meyer

Clinical evaluation and treatment of orthodontic problems related to general dental practice. Students will evaluate malocclusions, recommend treatment by general practitioner or specialist, and observe treatment of orthodontic problems.

121. Introduction to Growth and Development. (1) Lecture 1 hour.

R. M. Meyer

Course describes the mode of growth of the craniofacial complex. General aspects of growth with clinical implications for the growing child are discussed, including the eruption of teeth and their correlation with facial growth.

131A-B. Orthodontics in General Practice. (0-2, 0-2) F, W. Prerequisite: Orthodontics 121. Lecture 1 hour.

Scholz

Recognition and treatment of the problems most commonly seen by the general practitioner.

132. Principles of Orthodontic Treatment. (1) Prerequisite: Orthodontics 121 and 131A-B. Lecture 1 hour.

Scholz

Discussion of diagnostic techniques used in orthodontics, limitations of orthodontic treatment, and principles of treatment with edgewise appliances.


West and Staff

A discussion of recognition, etiology, and principles of orthodontics for the dental hygienist.

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

171B-C. Orthodontics in Periodontal Practice. (1-1) W. Sp. Prerequisite: Consent of instructor and enrollment in a postdoctoral specialty program. Lecture 1 hour. This course includes orthodontic principles and techniques that are applicable in a periodontic practice.


171.01A-B-C. Craniofacial Growth. (1-1) W, Prerequisite: Orthodontics 171.01 A-B-C. Matthews Embryology of the face and palate, biology of cartilage and bone as applied to dentofacial development of newborn babies, and physiology of tooth movement.

171.03A-B-C. Orthodontics in Periodontal Practice. (1-1-1) F, W, Prerequisite: Consent of instructor and enrollment in a postdoctoral specialty program. Lecture 1 hour. This course includes orthodontic principles and techniques that are applicable in a periododontic practice.

171.08A-B-C. Orthodontics in Pedodontic Practice. (1-1-1) W, Prerequisite: Orthodontics 171.03A-B-C. Lecture 1 hour.

171.02. Biology of Dentofacial Development. (2) Sp. Prerequisite: Orthodontics 171.01 A-B-C. Matthews Study of the dentition and the relationships of occlusion. Participation in group and individual clinical investigations including experience in hypothesis generation, sampling, measurement, data acquisition, and data analysis.

173.01A-B-C. Orthodontic Diagnosis. (3-3-3) F, W, Sp. Seminar 3 hours. Baumrind Introduction to design and analysis of clinical investigations. Special emphasis placed on critical reviews of selected scientific literature in terms of appropriate design, hypothesis testing, and generalization.

172.01A-B-C. Supervised Orthodontic Research. (2-2-2) F, W, Prerequisite: 172.01B-C. Baumrind This course describes growth concepts in the study of orthodontic and periodontist from the viewpoint of oral rehabilitation.

171.04A-B-C. Orthodontics in Pedodontic Practice. (2) Sp. Lecture 1 hour. Roth A systematic review of orthodontic treatment mechanics with particular attention to tooth position and occlusal function.

172.02A-B-C. Comparative Orthodontic Concepts. (0-20, 0-20, 0-20) F, W, Sp. Prerequisite: Orthodontics 171.03A-B-C. Roth Participation in group and individual clinical investigations including experience in hypothesis generation, sampling, measurement, data acquisition, and data analysis.

172C. Comparative Orthodontic Concepts. (2-2) W, Sp. Seminar 2 hours. Poulton Application of general principles of growth and development to specific malocclusions and facial anomalies. Course may be repeated for credit.


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

173.04. Treatment Planning. (3) SS. R. M. Meyer Staff seminar.

173.05. Special Study. (1) SS. Research 3 hours. Baumrind Research project and preparation of thesis.


175. Cleft Palate Orthodontics. (2) F. Seminar 2 hours. Poulton Development of force systems and advanced orthodontic techniques.

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

177. Practice Management. (1) F. Seminar 1 hour. Schols Practice management and office administration.

178. Functional Occlusion. (1) F. Lecture 1 hour. R. Roth Discussion of occlusion from the viewpoint of the orthodontist and periodontist and from the viewpoint of oral rehabilitation.

179.01A-B-C. Orthodontic Mechanics. (1-1-1) F, W, Sp. Lecture 1 hour. R. Roth This course includes orthodontic mechanics with particular attention to tooth position and occlusal function.

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

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

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


182. Applied Growth and Development. (1) F, W. Prerequisite: Orthodontics 121, 131A-B, and 132. Mathes An introduction to design and analysis of clinical investigations. Special emphasis placed on critical reviews of selected scientific literature in terms of appropriate design, hypothesis testing, and generalization.

183. Functional Occlusion. (0-0) F, W, Sp. Prerequisite: Orthodontics 121 and 131A-B. West and Staff standing and approval of Clinic Review Committee. Staff seminar.

184. Clinical Orthodontics. (5-5) SS. Clinic 15 hours. West and Staff Continuation of Orthodontics 179.03 A-B-C.

185. Practice Management. (1) F. Seminar 1 hour. R. Roth Application of general principles of growth and development to specific malocclusions and facial anomalies. Course may be repeated for credit.


187. Functional Occlusion. (1) F. Lecture 1 hour. R. Roth Discussion of occlusion from the viewpoint of the orthodontist and periodontist and from the viewpoint of oral rehabilitation.

188. Applied Growth and Development. (1) F, W. Prerequisite: Orthodontics 121, 131A-B, and 132. Mathes An introduction to design and analysis of clinical investigations. Special emphasis placed on critical reviews of selected scientific literature in terms of appropriate design, hypothesis testing, and generalization.

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

Orthopaedic Surgery

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

Core 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 at UC, SFGGH and VA. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. W. Murray Orthopaedic surgery clinical clerkships are offered in off-campus hospitals approved by the chairman of the department and the Dean.

401. Lectures in Orthopaedic Pathology. (1) F, W. Prerequisite: Third and fourth year residents.

402. Seminars in Physiology of Musculoskeletal System. (1) F, W, Sp. Course includes lectures by students and faculty on gross and functional anatomy, laboratory dissections of cadaver material, and demonstrations of surgical approaches.

Orthodontics / Orthopaedic Surgery / 149
UC Chapman

Seminars are student presentations of selected orthopaedic surgery subjects featuring historical review complete with bibliography. They are moderated by an assigned faculty member.

UC W. Murray

Clinical instruction in the care and management of orthopaedic problems in rheumatoid arthritis and allied diseases. Cases are presented by residents to attending staff and rheumatology consultants.

H T Smith

Seminars include presentation of problem cases by residents for consideration of diagnosis, treatment, and discussion by the attending staff.

SF GH Bovill

Selected problems are illustrated by cases treated under resident supervision. Cases are presented by the resident staff and discussed by members of the attending staff.

SSF Larsen

Conference with emphasis on children's problems in which residents make case presentation of inpatients for review and of new patients for consideration of diagnosis and therapeutic plan.

V A Maurer

Conference includes review of admissions and discharges of hospitalized patients by the attending and consultant staffs. Cases are presented by the residents.

RDMC Borden, F, W, Jackson, SM W. Jackson, VA Maurer, H T Smith.

Seminars are held in rotation at each of these hospitals with residents from all three hospitals attending. They include literature review and demonstrations related to surgical approaches, anatomical dissections, diagnosis and treatment.

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

Residents and present case histories of inpatients and selected outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up and problem cases (consultations).

414. Orthopaedic Clinical Seminars. (½ per week) Su, F, W, Sp. RDMC Mace, Pmc Niebauer, KP L. Johnson, MZ Larsen, RDMC Larsen, RDMC J. Perry, FR Hartwig, UC W. Murray

Residents are responsible for patient care in the wards and outpatient clinics including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.

C L. Larsen, CHMC Borden, RDMC Larsen, SSF I. Larsen

Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.


Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.

417. Clinical Orthopaedica. (½ per week) Su, F, W, Sp. UC W. Murray

Under faculty supervision, the chief resident organizes care and referral of staff patients; supervises a weekly follow-up; administers the teaching-bed fund; independently performs operative procedures in selected cases; advises interns, residents, and fourth year medical students; participates in paramedical teaching.


Clinical instruction in the care and management of orthopaedic problems in athletic injuries. Course consists of clinical practice under supervision as well as didactic lectures every third week.

SF GH Bovill

Interns rotate through orthopaedic wards and follow-up clinics. They are responsible for patient care under the direction of the attending staff, including history-taking, physical examinations, X ray conferences, and consultation.

Otolaryngology

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

Core Clerkship — Surgery 110 and 111 includes lectures and case demonstrations on the examination and diagnosis of otolaryngological diseases, particularly those related to trauma and infection. Instruction is given in the examination and diagnosis of ward and clinic patients with otolaryngological surgical diseases.

140.01. Clinical Otolaryngology Clerkship. (½ per week) Su, F, W, Sp. Prerequisite: Medicine 131 A-B-C and Surgery I. J. Ross

A practical course in general otolaryngology, including diagnosis and treatment of common ear, nose and throat problems. Both inpatient and outpatient experiences will be offered at the following hospitals: UC SFGH, VA and NRMC.

140.02. Clinical Clerkship. (½ per week) Su, F, W, Sp. Prerequisite: Medicine 131 A-B-C and Surgery I.

Bone

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

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

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

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

Schindler

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

400. Didactic Lectures. (2) F, W, Sp. Crumley

Lectures cover the anatomical, physiological, and clinical aspects of otolaryngology.


Crumley

A formal course in the anatomy of the head and neck.


Cradon dissection and demonstrations given by members of the staff.

Debekoum

A review of ear, nose, and throat pathology from currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories.

Boles

Weekly seminars are held with discussion of current problems concerning diagnosis and management of patients with references to current literature, modern theory, and controversial aspects.


Seminar includes psychophysical backgrounds in audiology, basic and advanced tests of hearing, functional hearing loss, hearing aids, testing of children, aural rehabilitation, and speech and hearing problems of children and adults.

UC Dede

Conference includes presentation of patients, study of histories, and discussion of the treatment of the patient in light of modern progress in the field.

409. Surgical Pathology. (1) Su, F, W, Sp. VA J Ross

A review of all gross and microscopic pathology conducted by staff members in conjunction with the Department of Pathology.

140. Temporal Bone Anatomy and Pathology. (½) F, W.
Schindler

A laboratory course conducted in the ear, nose, and throat pathology laboratory. All resident staff members are required to familiarize themselves thoroughly with the microscopic anatomy of the temporal bone under formal staff instruction.


A review of surgical anatomy and dissection of fresh temporal bones conducted by members of the staff.


Tumor cases are presented for diagnosis and recommendations for treatment.

143. Audiology Conference. (1) Su, F, W, Sp. VA J Ross

Combined Audiology and Otolaryngology Staff Conference where all patients evaluated for hearing problems are presented, and diagnosis and treatment recommendations are made.


A review of all current ear, nose, and throat literature.


C McCoy, SF GH Bovill, VA J Ross, UC Boles, VA F Bell, VM C Bell

Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, preoperative and postoperative care, minor surgery, audiometry, vestibular testing, and consultation. Senior residents have certain administrative, teaching, and clinical responsibilities.
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Residents, under supervision, undertake patient care in ward, clinic, and emergency room, including history-taking, physical examination, laboratory tests, preoperative and postoperative care, minor surgery, otolaryngology, vestibular testing, consultations, and Office-of-the-Day duties. Senior resident has certain administrative, teaching, and clinical responsibilities.

452. Technique of Endoscopy. (1) F, W, Sp. All residents except at V/A. Crumley

A study of the techniques of endoscopy and some practical laboratory study including cadaver work.


Residents, in off-campus hospital for surgical training to satisfy Board requirements, are responsible, under supervision, for patient care in wards and clinic and assistance at operations. Diagnosis and treatment of surgical conditions in the head and neck area are stressed.


Interns, under supervision of the attending staff, are responsible for patient care on wards and in the follow-up clinic, including history-taking, examination, and consultation. This rotation is combined with patient-care assignments in the Ophthalmology Service.

Parasitology

135. Medical Parasitology. (3) W. Lecture 2 hours, Lab demonstration 2 hours.

Heyneman and Staff

An introduction to the protozoa, helminths, and anthropods that parasitize man. Parasite ecology and disease epidemiology, clinical and diagnostic aspects of parasitic diseases and their treatment are considered in lecture and laboratory. Emphasis in the laboratory is on demonstration.

Pathology

101. General Pathology. (4) § Sp. Prerequisite: Anatomical Pathology I 100.

Mechanisms of disease are discussed, with emphasis on the dynamic nature of fundamental disease processes; cell injury, immunopathology, inflammation, responses to infectious agents, repair, regeneration, hemodynamic derangements, genetic disorders, disturbances of cell growth, and neoplasia.

102. Systemic Pathology. (6) § F. Prerequisite: Anatomy 103, Medicine 132A. Microbiology 100A-B. Pathology 101 and Physiology 101 or concurrent enrollment. Lecture 3 hours, Lab/Seminar 6 hours.

Margaretten and Staff

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

120. General Pathology. (5) § F. Prerequisite: Substantive courses in biochemistry, physiology, histology, microbiology (first quarter, concurrent) or an introduction to immunology. If in doubt as to adequacy of preparation, consult the instructor. Lecture 3 hours, Lab 6 hours.

Goldberg and Staff

Mechanisms and language of disease are discussed, with emphasis on the dynamic nature of fundamental disease processes: cell injury, immunopathology, inflammation, responses to infectious agents, repair, regeneration, hemodynamic derangements, genetic disorders, disturbances of cell growth, and neoplasia.

135. General Pathology. (4) § F. Prerequisite: Substantive courses in biochemistry, physiology, histology, microbiology (first quarter, concurrent) or an introduction to immunology. If in doubt as to adequacy of preparation, consult the instructor.

M. L. Goldberg and Staff

This course is identical to the lecture portion of Pathology 126.

150.02. Clinical Clerkship. (1½ per week) Su, W, Sp. Prerequisite: Pathology 101 and 102.

Smucker

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

150.03. Surgical Pathology and Post-Mortem Examinations at SFGH. (1½ per week) Su, F, W, Sp. Prerequisite: Pathology 102.

McKay, Margaretten, Howes

A correlative review of clinical pathological materials with the Department of Medicine.

150.08. Studies in Pathology. (1-5) Su, Sp. Prerequisite: Consent of instructor and chairman of the department.

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

150.01. Pathology. (3) F. Prerequisite: Anatomy 118.

M. L. Goldberg and Staff

This course is identical to the lecture portion of Pathology 126. Elective in the dental hygiene curriculum.


Prerequisite: Consent of instructor.

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

190. Laboratory Project in Pathology. (1-5) F, Sp. Prerequisite: Consent of instructor.

A laboratory research project under direction of a member of the faculty.

200. Applied Pathology. (3) W. Prerequisite: Microbiology 126A-B and Pathology 120.

Crumley

Weekly seminars are designed to provide students with an understanding of the basic principles of pathology. Emphasis is placed on research; students will critically review current literature in the field, under faculty supervision.


Rambo

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


Prerequisite: Consent of instructor.

Rambo

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


Prerequisite: Advancement to candidacy and permission of the graduate advisor.

Staff

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


Rambo

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

401. Special Pathology Seminars. (Units to be arranged) Su, W, F, Sp.

Rambo

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


Rambo

Students, under supervision, pursue original investigation in pathology and allied subjects. Instructors review the literature, make observations.
and collect data correlating physiological with pathological concepts. They are encouraged to make original contributions.


Residents attend conferences under the leadership of faculty. Residents participate in the clinicopathological conferences where emphasis is placed on correlation of clinical manifestations of disease with clinical laboratory and autopsy findings.


Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature.


Theory and methodology of pathologic anatomy, interpretation and correlation of data, and study of literature.

Pediatrics

100. Medical Genetics. (2) W, C. Epstein

Basic aspects of human genetics are presented in a context relevant to the diagnosis, treatment, and counseling of genetic and constitutional malformations. Emphasis is placed on the application of genetic knowledge to actual counseling problems.


Grumbach, M. Grossman

Practical work including teaching in the ward, newborn nursery, and outpatient clinics with emphasis on case assignments; seminar covering major aspects of pediatrics and infectious diseases and procedures demonstrated at UC and SFGH.


Grumbach, Pacoone

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01C. Advanced Clinical Clerkship—Outpatient at L. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, J. Stewart

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01D. Advanced Clinical Clerkship—Outpatient at CHMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, Gerdien

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01E. Advanced Clinical Clerkship—Inpatient at CHMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, Gerdien

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01F. Advanced Clinical Clerkship—Outpatient at K. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, Shinelfield

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.


Grumbach, Shinelfield

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01H. Advanced Clinical Clerkship—Outpatient at NRMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, Hayes

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.

140.01I. Advanced Clinical Clerkship—Inpatient at NRMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, Hayes

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.


Grumbach, Phibbs

Students are assigned patients under supervision of attending and resident staff. They present patients on wards, assist with procedures, and attend specialty conferences for discussion of patients.


Grumbach, Pascoe

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


Nilson

Working with a pediatric house staff and pediatric nurse practitioner team and under the supervision of the attending and resident staff. These experiences include primary care and health supervision responsibilities for selected well and acutely ill children in a clinic setting.


Rudolph

Experience in cardiovascular evaluation and treatment including clinical work-up in the ward and clinic, cardiac catheterization, angiography, children's electrocardiograms, surgical management, and postoperative care.


S. Robinson

Experience in clinical evaluation of children with cardiovascular abnormalities in a private office. Setting includes history, physical examination, X-ray, electrocardiogram and any other procedures necessary for diagnosis.

140.05. Pediatric Primary Practice. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

L. P. Smith

Working experience with a pediatrician on the clinical faculty as he sees patients in his office and in the hospital. Student may select time in small group, large group or subspecialty practice, or a combination of these.


Gareis

Clinical clerkship in adolescent medicine with emphasis on outpatient care of adolescent patients in a wide range of health problems of the adolescent.


Gruffin

Combined experience in pediatrics and internal medicine with exposure to management of usual and unusual infections occurring in a high-risk rural population. Daily attendance in ambulatory pediatrics and with hospital-based infectious disease consultants. Work in the clinical microbiology laboratory may also be arranged.

140.08. Ambulatory Pediatric Clerkship at MZ. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

R. Ballard

Experience in ambulatory pediatrics in pediatric outpatient department where multidisciplinary Comprehensive Care Program for children and youth is based. Student works with a team of physicians and follows patients admitted to the inpatient service.


Berg

Supervised participation in clinical activities, both inpatient and outpatient, and all regularly scheduled conferences of the Child Neurology Division. Study of the developing nervous system and diseases of the nervous system affecting infants, children, and adolescents.


Mentzer, Lubin

Instruction in pediatric hematology; students participate in ward rounds, outpatient clinic, and laboratory evaluation of bone marrow specimens at SFGH and CHMC. Pursuit of special interests in the clinic or the laboratory is encouraged.

141.11. Pediatric Cardiology at CHMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Higasaki

Students participate in clinical experience including outpatient evaluation, instruction in the noninvasive methods of diagnosis, care of ward medical and surgical cardiac patients, cardiopulmonary laboratory, and cardiovascular conferences. Emphasis is on the physiological principles of diagnosis and management.

Cohn

Work under the direction of the instructor in Diabetic Camp, clinical and management aspects of diabetes. Students have an opportunity to participate in the operations of the camp program and treatment of many aspects of diabetes in children, adolescents, and young adults.

140.15. Pediatric Hematology and Oncology. (1 ½ per week) Su, F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach and Staff

Morphologic study of blood cells and participation in hematology and oncology conferences. Selected cases will be discussed in depth.

140.16. Pediatric Nephrology. (1 ½ per week) Su, F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Hollyday, Piel, Potter

Introduction to general nephrology. Clinical experience in pediatric nephrology with children having nutritional problems, ESRD and chronic renal failure. Post-transplant and dialysis consultations, new cases from the nursery, and cases requiring TPN. Research projects may be arranged with instructors.


Grumbach and Staff

Evolution and management of children and adults with hereditary (including cytogenetic) diseases, with particular emphasis on genetic counseling, patterns of inheritance, and the biochemical and genetic mechanisms involved in the pathogenesis and transmission of these conditions.


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 illnesses is provided in appropriate specialty clinics. A wide variety of child care problems is seen during visits to offices of senior pediatricians participating in the program.

140.21. Pediatric Primary Care. (1 ½ per week) Su, F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Deamer

Diagnosis and treatment of asthma, allergic rhinitis, and hay fever. Attendance at Pediatric Allergy Clinic daily. Participation in activities of allergy trainees.


Cohn

Clinical experience in a busy community hospital Ambulatory Pediatric Clinic. Preparing the student for daily patient encounters and responsibilities of pediatric or family practitioners. Teaching of patients in well and ill general practice, well baby preventive medicine, and pediatric subspecialties.


Grumbach, Goddard, Ballard

Students participate in the care of infants in the intensive care nursery in close association with the house staff, fellows, and senior staff and in conferences conducted by the chief resident.


Giammona

Experience in normal newborn and intensive care nurseries, according to student's interests and skills. Student participates in the care of transport infants, assisting attending physician.

150.01. Pediatric Endocrinology and Metabolism. (1 ½ per week) Su, F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, Kaplan, F. Conte

Participation in clinical and investigative aspects of endocrine and metabolic problems of children. Students spend time in the laboratory, wards, and clinics.

150.02. Human Cytogenetics. (1 ½ per week) Su, F. W. Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Grumbach, F. Conte

Participation in human cytogenetic studies in children. Emphasis is on laboratory work with exposure to clinical problems and patients.


Grumbach and Staff

Student research projects under the supervision of faculty members. Programs must be approved by instructors. Students may initiate or continue research programs under supervisor of faculty members.


Grumbach, Whisenant

Students prepare case presentations weekly from patients on the pediatrics wards. Course correlates patients' problems with work in the 1 ½ per week curriculum. Experience on the ward in the clinical setting.


Grumbach and Staff

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


Grumbach and Staff

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


Interns and residents. UC Grumbach

Activities include house staff presentation and presentation of clinical case histories, with reference to the literature, laboratory work and special studies. Faculty members and consultants from other departments as well as other universities discuss recent developments in the above fields and recent developments in pediatric research.


Students and residents. UC Godding

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 clinicopathological conferences on pediatric cases.


Interns and residents. UC Grumbach

Residents, under supervision, are responsible for patient care in the wards and outpatient clinic. Special topics may include history-taking, physical examination, laboratory tests, diagnosis, and treatment.

402. Pediatric Clinical Seminar.

Prerequisite: Consent of instructor.


Prerequisite: Consent of instructor. Students participate in patient care in well and ill general pediatrics, well baby service, preventive medicine, and pediatric subspecialties.

490. Internship in Community Pediatrics.

Prerequisite: Consent of instructor. Students participate in patient care in community hospitals including history-taking, physical examination, laboratory tests, diagnosis, and treatment.

Pedodontics

109. Clinical Pedodontics. (0-1) F. W. Sp. Prerequisite: Third year standing. Clinic rotation 10 hours.

M. Morris and Staff

Clinical diagnosis, plan of treatment, dietary analysis and counseling, fabrication of appliances for and treatment of malocclusion, orthodontic treatment, space management, and preventive orthodontics. Units assigned upon completion of clinical requirements.

109.01. Clinical Pedodontics Rotation. (0-½) F. W. Sp. Prerequisite: Third year standing. Clinic rotation 0-½ hours.

M. Morris and Staff

Introduction to the examination of the child patient, treatment planning, preventive instructional analysis, and the performance of operative procedures. Proper management of the child patient will be stressed.

109.02. Pedodontics Rotation. (0-2) F. W. Sp. Prerequisite: Fourth year standing. Clinic rotation 0-2 hours.

M. Morris and Staff

Course is broken up into two components: Monday, Tuesday, and Wednesday's will be spent at the Dental Annex Clinic; Thursdays and Fridays at the Mobile Dental Clinic in Stockton.
130.A-B-C. Pedodontics. (1-1-1) F. W. Sp. Prerequisite: Operative Dentistry 125A-B-C. Lecture 1 hour. M. Morris and Staff

Lecture course presenting dental procedures unique to or modified to meet the needs of the child. Examination, diagnosis, treatment planning, management of rampant caries and techniques of inpatient and ambulatory care. Current techniques in patient management and pain alleviation. Recognition and treatment of developing malocclusion.

170.01A-B-C-D. Clinical Pedodontics. (0-0-3, 0-3, 0-3) F. W, Sp. SS. Clinic Variable. M. Morris and Staff


170.02A-B-C. Clinical Pedodontics. (3-4, 3-4) F. W. Sp. Prerequisite: Pedodontics 170.01A-B-C-D. Clinic 9-12 hours. M. Morris and Staff

Continuation of Pedodontics 170.01A-B-C-D.

171.01A-B-C. Pedodontic Seminar. (1-5, 1-5, 1-5) F. W, Sp. Seminar 6 hours. M. Morris

Assigning required reading of current literature in pedodontics and allied specialties. Review and discussion of each reading assignment to prepare student to critically evaluate dental literature.

171.02A-B-C. Pedodontic Seminar. (2-2, 2-2, 2-2) F. W, Sp. Prerequisite: Pedodontics 171.01A-B-C Seminar 2-3 hours. M. Morris and Staff

Continuation of Pedodontics 171.01A-B-C.

172.A-B. Clinic and Seminar. (2-2) F. W. Sp. Clinic and Seminar 60 hours. M. Morris and Staff

Hospital procedures: admitting, orders, histories, charts and records, laboratory tests, reports, and administrative considerations. Organizing and equipping the hospital operating room for comprehensive dental care of patients under general anesthesia. Clinical experience in treating chronically ill hospitalized patients.

173. Clinical Pedodontics. (0-6) SS. Prerequisite: Pedodontics 170.02A-B-C. Clinic Variable. M. Morris and Staff

Students provide dental care for a non-English speaking migrant population, utilizing facilities of the mobile clinic.

174. Pedodontic Seminar. (2) SS. Prerequisite: Pedodontics 171.01A-B-C. Seminar 4 hours. M. Morris and Staff

Seminar on problems attending the care and treatment of non-English speaking children. Modifications of treatment plans to ensure dental care which requires a minimum of professional supervision for maintenance.

175. Pediatric Oral Surgery. (3) F. SFGH 90 hours. Kholus, Devin

Hospital procedures, management of trauma and emergencies involving the primary and young succedaneous teeth. Extraction, re-implantation, pulp protection, stabilization of luxated teeth, management of infection, and supportive therapy are emphasized.

176. Pediatric General Anesthesia. (0-3) F. CHMC 90 hours. K. Schroeder and Staff

An introductory course in general anesthesia to familiarize the student with general anesthesia; the attendant problems and risks, the agents used, and methods of delivery. Clinical experience under close supervision.

177. Pediatric Hospital Dentistry. (2) F. W. Sp. Hospital dentistry 6 hours. M. Morris, Wells

Students are assigned to an interdisciplinary health care team and are responsible for delivery of dental care for all in-house patients. Definitive dental care is provided on the ward as well as in the operating room.

180.01B-C. Pedodontic Seminar. (1) W. Sp. Prerequisite: Completion of third year pedodontic lecture series and approval of the Dean. B. Smith

Documented discussions on occlusion, mixed dentition, anomalies, malocclusions, deciduous teeth, premature loss, hypoplasias, anomalies, injuries, and oral manifestations of systemic disease. Designed for students considering pedodontics as a specialty. Counseling is provided for postdoctoral education.

185. Advanced Pedodontic Appliance Laboratory. (2) F. W. Sp. Prerequisite: Postdoctoral standing or approval of Clinical Review Committee and chairman of the division. Lecture 1 hour. Lab 3 hours. Aubuchon

A laboratory course concerned with the fabrication of interceptive orthodontic appliances currently being employed in pedodontics.

189.01. Clinical Practice in Pedodontics. (0-9) F. W. Sp. Prerequisite: Pedodontics 130.A-B-C and completion of clinical pedodontics and all third year clinical and didactic courses in operative dentistry. Approval of Clinical Review Committee. Clinic Variable. M. Morris and Staff

Course provides additional clinical experience in pedodontics.

189.02. Community Pedodontics. (0-4) F. W. Sp. Prerequisite: Completion of clinical requirements for graduation or approval of Clinic Review Committee. M. Morris, Stark and Staff

An elective clinic course in pedodontics. Students provide care for children at selected migrant farm labor camps. Course includes preventive education, comprehensive operative procedures including pulpal therapy and minor dental surgery, taking and processing needed radiographs.

189.03. Community Pedodontics. (0-4) F. W. Sp. Prerequisite: Pedodontics 189.01. Clinic Variable. M. Morris, Stark and Staff

Course provides additional clinical experience in pedodontics.

190. Clinical Periodontics. (0.6) F. W. Sp. Prerequisite: Pedodontic Periodontology 121 Clinic Variable. Parr and Staff

Treatment of periodontal diseases.


121. Periodontal Therapy (Introduction). (1) F. Prerequisite: Periodontology 110. Armitage

Introduction to the rationale and objectives of periodontal therapeutic procedures. Also considered are the recognition and treatment of periodontal disease in children, acute periodontitis anes, and periodontal considerations in restorative dentistry.

129. Clinical Periodontics. (0,5) F. W. Sp. Prerequisite: Periodontics 110 and 119. Clinic Variable. Lab rotation 6 hours. Madsen, S. Miller

Introduction to clinical techniques in oral prophylaxis including plaque control, scaling, root planing. Dental caries and winter quarters, periodontal disease and treatment of dental hygiene therapy for senior patients. The spring quarter is utilized for treatment of their own patients.

131. Periodontics. (1) F. Prerequisite: Periodontology 121. Parr

The demonstration and rationale of surgical treatment of periodontal lesions.

150. Periodontics. (2) Sp. Lecture and Demonstration 2 hours. K. Horowitz

Introduction to the oral hygiene problems of the periodontal patient and the means and methods available to the dentist and auxiliaries to motivate the patient to self-care.

160. Periodontics. (1) F. Prerequisite: Periodontology 150. Madsen

Classification of periodontal diseases and methods of their prevention. Principles of pathology are correlated with therapeutic procedures. A faculty panel discusses the role of the hygienist in dental practice.

161. Periodontics. (1) W. Prerequisite: Periodontology 160. K. Horowitz

The demonstration and rationale of surgical treatment of periodontal lesions. The role of the dental hygienist in dental practice, especially related to prevention, recognition, and aid in treatment of periodontal diseases.

170.A-B-C. Histopathology of the Periodontium. (2-2-2) F. W. Sp. Lecture 1 hour. Lab 3 hours. Dienstein

Dynamics of inflammation and its role in the periodontium.

171.A-B-C. Clinical Periodontics. (0-8-4) F. W. Sp. Prerequisite: Enrollment in periodontology program. Clinic 12 hours. Shihata, Green and Staff

Clinical procedures in periodontal therapy.

172. Examination and Treatment Planning. (1) F. Prerequisite: Enrollment in coordinated specialty program or consent of instructor. Parr

Lectures on examination and treatment planning.

172.01. Hospital Anesthesiology. (6) SS. Prerequisite: Consent of instructor. Seminar 10 hours. Clinic 24 hours. Chang

Practical course in operating room anesthesia. Instruction in hospital administration, physical and preanesthesia evaluation of the patient, recognition of vital signs. Administration of intravenous psychosedation, general anesthesia, and handling of resultant medical emergencies. Clinical instruction is supplemented by seminars.

172.02. Hospital Periodontics. (2) F. W. Sp. Prerequisite: Periodontology 171.A-B-C. Shihata

Clinical periodontics integrated into the regular medical curriculum. Course provides patients with quality dental care, appreciation for preventive dentistry, and concept of total health care. Students are exposed to various medical conditions.

173.01. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 171A-B-C. Clinic 60 hours. Shihata

Clinical procedures in periodontal therapy. This course is an enlargement on earlier clinical experience.

173.02A-B-C. Periodontal Therapy. (4-4-4) F. W. Sp. Prerequisite: Periodontology 171A-B-C. Clinic 12 hours. Shihata, Green and Staff

Advanced clinical procedures in periodontal therapy.

173.03. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 173.02C. Clinic Seminar 60 hours. Shihata, Green and Staff

Advanced surgical techniques in management of periodontal lesions.

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174. Periodontics. (1-3) SS. Prerequisite: D.D.S. degree. Lecture 1 hour. Parr
A seminar to discuss and evaluate the problems common to the specialties of orthodontics and periodontics.

175A-B-C-D. Treatment Planning and Surgery Seminar. (0-3, 0-3, 0-3, 1) F, W, Sp, SS. Seminar 1 hour. Shibata and Staff
Students present and discuss management of their cases that are either planned for treatment or currently under treatment. They are expected to defend their treatment plan and therapeutic procedure based on relevant literature and clinical experience.

176. Original Investigation in the Field of Periodontology. (1-3) F, W, Sp. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lab 3-15 hours. Greenspan Research

Study in depth with literature review and seminar discussions on surgical techniques used to treat lesions involving the hard and soft tissue of the periodontium.

Course provides a broad concept of the principles of occlusion, upon which definitive therapeutic procedures can be based.

179A. Applied Biochemistry. (2) F. Lecture 2 hours. Discuss, Wadell
Course covers physiology as it relates to anesthesia and periodontal surgery.

179B. Applied Anatomy. (2.5) Sp. Lecture 2 hours. Lab total of 15 hours. R. Coleman
Course covers anatomy as it relates to anesthesia and periodontal surgery.

Implementation of the skills and knowledge of periodontology in the private practice environment.

180.02A-B. Advanced Periodontics. (1-1) F, W. Prerequisite: Periodontology 131 and consent of instructor. Seminar 1 hour. S. Miller
Study in depth, with literature review and seminar discussions of areas of periodontology having major clinical significance.

180.03. Periodontal Surgical Techniques. (1) F. Prerequisite: Periodontology 131. Lecture 1 hour. Shibata
Surgical techniques are presented which may be used to treat lesions occurring in the hard and soft tissues of the periodontium.

181. Seminar on Connective Tissue. (1) W. Prerequisite: Biochemistry 110A-B and 111 or concurrent enrollment. Lecture 1 hour. Staff
Biochemical and molecular biological basis of connective tissue growth, development, and disorder. Topics discussed include cell fate palate, TMJ, chondrodystrophies, wound healing, periodontal disease, arthritis, and fibrotic diseases including arteriosclerosis, cirrhosis, and gingival fibroplasia.

Continuation of clinical experience beyond the level of Periodontology 109.

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

201A-B-C. Experimental Methods in Biological Chemistry. (3-3-3) F, W, Sp. Lab 3 hours. Shibata (F), Green (W), Greenspan (Sp)
Elements of experimental design, statistical inference, and methods of laboratory and clinical research.

Seminar designed to correlate basic sciences with clinical aspects in radioactivity.

204A-B-C. Bioanalytical Theory and Techniques. (3) F. Prerequisite: Biochemistry 110A-B and 111. Lecture 3 hours, Lab 3 hours. Shibata (F), Green (W), Greenspan (Sp)
A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the autonomic nervous and cardiovascular systems as well as renal function.

205. Principles of Pharmaceutical Chemistry. (3) F. Prerequisite: Pharmaceutical Chemistry 120. Lecture 3 hours. Brochmann-Hanssen
A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the central nervous system.

A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the central nervous system.

207. Pharmaceutical Analysis. (3) W. Prerequisite: Chemistry 113 and 115. Lecture 3 hours, Staff
Pharmaceutical Analysis, (3) W. Prerequisite: Chemistry 113 and 115. Lecture 3 hours, Staff
Principles of pharmaceutical analysis used for evaluation of drugs and dosage forms, with special emphasis on modern separation techniques and instrumental methods of analysis.

208. Radioisotope Measurements. (1) F. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lecture 1 hour. Peng
Detection and measurement of radionuclides commonly used in biology and medicine.

209. Radioisotope Modeling. (2) F. Lecture 2 hours. Perez-Mendez
This course will treat the principles of physical decay in radionuclides, characteristic of nuclear emissions, interaction with matter, and related aspects in radioactivity.

211. Radioisotope Imaging. (1) Sp. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lecture 1 hour. Price
This course will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.

154. Pharmaceutical Quality Control. (2) W. Prerequisite: Pharmacy 165, Pharmacy 166 or concurrent enrollment. Lecture 2 hours. Brochmann-Hanssen
General principles of total quality control applied to the manufacture of pharmaceuticals, introduction to statistical quality control, its application to process studies, and evaluation of dosage forms. Consideration given to simplified control systems for small-scale manufacturing and hospital pharmacy.

Experiments in pharmaceutical analysis applied to drug entities, dosage forms, and samples of biological origin.

156. Bioanalytical Theory and Techniques. (3) Sp. Lecture 2 hours, Lab 3 hours. Sadee
Analytical theory and techniques for determining drugs and metabolites in biological fluids.

157. Radioisotope Measurements. (1) F. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Laboratory 1 hour. Peng
This will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.

158. Pharmaceutical Analysis. (3) W. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lecture 3 hours. Price
This course will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.

159. Pharmaceutical Analysis. (2) F. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lecture 1 hour. Price
This course will treat the theory and methodology in the application of radionuclides to organ imaging in nuclear medicine.
200. Physical Chemical Properties and Biological Activity. (1) § W. Prerequisite: Consent of instructor. Lecture 1 hour. Kollman, Jorgensen

Lectures and conferences dealing with the relationship between physical properties and biological activity, with special emphasis on the uses of molecular orbital calculations in this connection.

201. Advanced Survey of Medicinal Chemistry. (2) § F. Prerequisite: Consent of instructor. Lecture 2 hours. Jorgensen

Basic principles of medicinal chemistry and a survey of the relationships between structure and biological action for major drug classes.


Kutz, Landridge

A review of protein and nucleic acid structures. Emphasis is placed on the secondary and tertiary structure, with an introduction to the current approaches to this problem for proteins and transfer RNA.

203. Drug Metabolism. (1-2) § Sp. Prerequisite: Consent of instructor. Lecture 1-2 hours.

Castagnoli, Sadee

Study of the in vivo and in vitro biotransformation of foreign compounds with particular emphasis on drugs. When possible, detailed chemical and biochemical mechanisms are considered.

204. Hormones. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours. Kollman, Jorgensen

Lectures and conferences dealing with structure-function relationships and action of hormones at the molecular level. Special emphasis is given to steroids and peptide hormones.


Craig

Principles and methods of some of the modern techniques used in pharmaceutical chemistry, including liquid-solid, liquid-liquid, and gas-liquid chromatography, ion exchange, counter-current separation, and vacuum techniques.

206. Experimental Techniques in Pharmaceutical Chemistry. (2) § W. Prerequisite: Chemistry 113 and 157 or equivalents. Chemistry 165 recommended. Lecture 1 hour. Lab 2 hours. Craig

Laboratory work illustrating some of the modern techniques used in pharmaceutical chemistry, including chromatography, ion exchange, counter-current separation, and vacuum techniques.

211. Selected Topics in Pharmaceutical Chemistry. (2) § Sp. Prerequisite: Pharmaceutical Chemistry 120. Jorgensen

Reports and discussion of topics of current interest in pharmaceutical chemistry, with emphasis on relationships between chemical structure, physical properties, and biological response.

212. Basic Concepts in the Kinetics of Drug Absorption and Disposition. (3) § F. Prerequisite: Calculus 115. Calculus background is recommended. Lecture 2 hours. Lab 3 hours.

Zowell, Tozer and Staff

A basic study of the concentration-time course of drugs and their metabolites, methods of pharmacokinetic analysis, and the design of dosage regimens. Laboratory emphasizes the application of electronic calculators and analog computers.

214. Advanced Aspects of the Kinetics of Drug Absorption and Disposition. (3) § Sp. Prerequisite: Pharmaceutical Chemistry 213 and Biochemistry 202 or equivalents. Lecture 2 hours, Lab 3 hours.

Riegelman, Benet and Staff

Advanced consideration of pharmacokinetics including multicompartment models, assessment of intrisic absorption and disposition parameters, and correlation of pharmacological response with the concentration-time course of a drug. Laboratory will include analog and digital computational methods.


Eiler

Genetic mechanism and drug action, cell division and antimetabolites. Relation to control mechanisms, and the uncoupling agents.

217. Physical Pharmacy of Solid Dosage Forms. (3) § W. Prerequisite: Pharmaceutical Chemistry 120 or consent of instructor. Lecture 3 hours.

Staff

Properties of solids, solid-solid interactions, solid dosage forms, and stability of solid dosage forms are discussed.


Staff

Solubility, solution, diffusion, properties of solids of solutions, and drug stability.


Kenyon, Santi

Selected topics on enzyme mechanisms. General survey of enzyme catalysis; general acid-base catalysis, propinquity effects, and informational change. Covalent intermediates in enzyme catalysis. The role of cofactors in enzyme catalysis. Phosphate transfer reactions.


Staff

A program involving the presentation of core material in pharmaceutical chemistry in the medicinal chemistry and pharmaceuticals pathways. The presentations are made by graduate students and examination is by a series of cumulative examinations.

221. Research Conference in Pharmaceutical Chemistry. (1) § 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.


Kutz and Staff

Topics of current research interest in physical and biophysical chemistry.

230A. Spectroscopy. (4) § Sp. Prerequisite: Chemistry 162 or equivalent. Lecture 3 hours, Lab 3 hours. Offered in alternate years. Not offered 1977-1978.

The theory and application of molecular electronic and vibrational spectroscopy; optical rotary dispersion, and circular dichroism.

230B. Spectroscopy. (3) § Sp. Prerequisite: Chemistry 162 recommended. Lecture 3 hours.

T. James

The theory and application of nuclear magnetic resonance and electron-spin resonance; mass spectrometry.

230C. Spectroscopy. (1) W. Lab 3 hours. T. James

Laboratory work in nuclear magnetic resonance and electron-spin resonance; mass spectrometry.

231. Spectroscopy. (1-4) § Sp. Prerequisite: Pharmaceutical Chemistry 230B. Lecture 1-4 hours.

T. James

Selected topics in spectroscopy and related areas. Content of the course changes, as in the case of seminars. Course may be repeated for credit.

240. Radiopharmaceutical Chemistry. (1-2) F, W, Sp. Prerequisite: Consent of instructor. Lab 3 hours. Peng

Theory and techniques related to the synthesis of isotopically labeled organic compounds. Course may be repeated for credit.

241. Radiopharmaceutical Analysis. (1) § W. Prerequisite: Consent of instructor. Lab 3 hours. Peng

Experimental techniques related to various aspects of radiosynthesis of biological specimens, biochemical compounds, and drugs isotopically labeled with tritium and/or radio-carbon.

Pharmaceutical Chemistry / Pharmacognosy / 163

242. Radiotracer Methodology. (1) § W. Prerequisite: Pharmaceutical Chemistry 152 or 160, or consent of instructor. Lecture 1 hour. Peng, Benet, Licko

Discussions on the theory and principles of the use of radionuclides as tracers in biological systems. Emphasis is on the design of experiments and data evaluation.

243. Chemical and Biological Effects of Ionizing Radiation. (1) § Sp. Prerequisite: Pharmaceutical Chemistry 152 or 160, or consent of instructor. Lecture 1 hour. Peng, J. W. Harris, Painter

Effects of ionizing radiation on chemical and biological systems will be discussed.


Staff

266. Conferences in Research Planning. (1) F, W, Sp. Prerequisite: Consent of instructor.

Staff

Discussions and preparation for research problem formulation and design selection. Core classes and small group sessions are organized around students' interests by faculty within the area of specialization.

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

Staff

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

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

Staff

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

300. Practicum in Teaching. (1-8) F, W, Sp. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry and participation in the ongoing teaching program.

Staff

Conferences and discussion dealing with the teaching of courses in the School of Pharmacy under the direction of the faculty.

Pharmacognosy


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


Brochmann-Hanssen

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

100A-B. Medical Pharmacology. (3-5) § W, Sp. Prerequisite: Biochemistry 100A-B and Physiology 120 and 125 or equivalents.

Katzung, Trevor

A systematic presentation of pharmacologic agents based on drug classification. Major emphasis is on clinically significant aspects of therapeutic effects, toxic effects, and evaluation of drugs.

121. Pharmacology and Toxicology. (1-2) W. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 121. Lecture 1 hour.

Burkhalter

Systematic survey of action and uses of drugs with emphasis on steroids, hormones, and drugs for metabolic disorders.

125. Pharmacology and Toxicology. (4) § Sp. Prerequisite: Biochemistry 120A-B and Physiology 120 and 125. Lecture 3 hours. Lab 3 hours.

Hondeghem, Burkhalter

Systematic survey of action and uses of drugs acting on autonomic nervous and cardiovascular systems and the kidneys.

126B-C. Dental Pharmacology. (2-4) § W. Prerequisite: Physiology 110. Lecture 2 hours; W 3 hours Sp. Lab 3 hours Sp.

F. Meyers

Objective of the course is to acquaint dental and dental hygiene students with the fundamentals of pharmacology. Various classes of drugs are examined in regard to actions, absorption, fate, excretion, and toxicity. Agents useful in dentistry are emphasized.

130. Toxicology. (2) W. § Prerequisite: Pharmacology 120 and 136. Lecture 2 hours.

Hine, Hodge, F. Meyers, Piper, Vore

The occurrence, mode of action, recognition, and treatment of poisoning by environmental chemicals and therapeutic agents.

134. Pharmacology and Toxicology. (1-3) § Sp. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 134. Lecture 1 hour.

Trevor, Apple

Systematic survey of action and uses of anti-infective and antineoplastic drugs.

136. Pharmacology and Toxicology (4) § F. Prerequisite: Pharmacology 125. Lecture 3 hours. Lab 3 hours.

Burkhalter and Staff

Systematic survey of action and uses of drugs acting on the central nervous system.

150.01. Pharmacology Research. (1½ per week) Su. F, W. Prerequisite: Consent of instructor. Staff

Students perform individual research in a field of their choice under the guidance and supervision of a member of the faculty.

170. Group Studies Course. (1-4) F, W, Sp. Prerequisite: Consent of instructor. Staff

Group studies of selected topics in pharmacology.

170.01. Experimental Techniques in Pharmacology. (1-5) SS. Prerequisite: Consent of instructor and completion of biochemistry, physiology, and pharmacology. Loh, Trevor

Practical laboratory experiences to acquaint the student with biochemical and physiological techniques used in the study of drug action in systems from the subcellular level to the intact animal.

193. Special Topics in Pharmacology and Toxicology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor.

Staff

A seminar course covering various aspects of pharmacology and toxicology.


Loh, Burkhalter

A laboratory course in biochemical techniques as commonly applied to investigations of drug action.

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

Staff

A laboratory project in pharmacology.

199. Laboratory Project in Pharmacology. (1-5) § F, W, Sp. Staff

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

206A-B.C. General Pharmacology. (3-3-3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.

Trevor, Katzung, Loh

Lecture-conference dealing with fundamental aspects of interactions between chemical compounds and the mechanisms 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, or Sp. Prerequisite: Pharmacology 194 or consent of instructor. Kun

Advanced biochemical experimentation and theories concerning the mechanism of action of biologically active substances on a macromolecular level. The content of the course, beyond certain theoretical material, varies with each participant and consists of guided experiments in novel subjects.

210A-B. Introductory Toxicology. (1-1-1) § F, W. Prerequisite: Consent of instructor. Lecture 1 hour.

Hine, Hodge, F. Meyers, Piper, Vore-Iwamoto

Introductory toxicology divided into the following three components: toxicity testing procedures; environmental toxicology; and selected topics and clinical toxicology, current developments.

211A. Advanced Toxicology. (1-1-1) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour.

Hine, Hodge, F. Meyers, Piper, Vore-Iwamoto

A detailed examination of the field of toxicology as it relates to agricultural, environmental, forensic, industrial, military, regulatory and therapeutic problems. Emphasis is placed on mechanism of action of toxic substances. Current advances and classical concepts of toxicology are presented.

220. Seminar. (0-1) § F, W, Sp. Staff

Seminars to discuss present methods and problems in current teaching and research in pharmacology and toxicology.


Staff

292. Physiological Techniques in Pharmacology. (3) § F, W, or Sp. Prerequisite: Survey course in pharmacology or consent of instructor. Lab 9 hours.

Hondeghem, Katzung

Principles and applications of physiological techniques used in the study of drugs. Emphasis is on the study of cardiovascular and autonomic agents.

296. Laboratory Techniques in Toxicology. (2) § Sp. Lab 6 hours.

Hodge and Staff

Principles and application of experimental techniques in the study of toxicologic hazards of drugs and environmental chemicals: techniques for testing acute and chronic toxicity, skin irritation and sensitization, mutagenesis and carcinogenesis will be covered.

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

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

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

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

Staff

Opportunity is provided to participate in a formalized way in the teaching of pharmacology under the direction of the faculty.

Pharmacy

114. Introduction to the Analysis of Clinical Data. (3) F. Lecture 2 hours. Lab and Conference 3 hours.

J. Jacoby

An applied statistics course where basic data analysis techniques and research designs are considered. Topics include: problem design, sample size, choice of estimates, and probability densities, including normal, t, x² and F.

115. Biopharmaceutics and Physical Pharmacy. (4) W. Prerequisite: Chemistry 115 and concurrent enrollment in Chemistry 116. Lecture 3 hours. Lab 3 hours.

Hoener, Hunt, Day

A study of the physical, chemical and biological factors which interest and dominate the design of dosage forms for drug delivery systems. Course includes laboratory preparation of basic drug delivery systems.


Hunt, Hoener, Day, Spencer

Continuation of Pharmacy 115.

127. Prescription Study and Practice. (4) F. Prerequisite: Pharmacy Administration 112. Lecture 2 hours. Lab 6 hours.

Spencer

Application of philosophical, ethical, and legal principles to the practice of the profession of pharmacy. Due consideration is given to the dispensing of prescriptions.

128. Pharmacokinetics. (3½) W. Prerequisite: Pharmacy 116. Lecture 3 hours. Conference 1-2 hours.

Oat, Tozer

Course covers the pharmacokinetic basis of variability in the therapeutic, pharmacologic and toxicologic effects of drugs.


Oat, Tozer

Continuation of Pharmacy 128.

131. Biologic Products. (3) Sp. Prerequisite: Third year standing. Lecture 3 hours.

K. H. Lee

A study of food and nutrition for all age groups. Diet therapy is discussed.

151. Community Health Education. (2) Sp. Lecture and Discussion 2 hours; participation in at least 4 community health education programs.

Staff

Course is designed to train students for participation in community health programs dealing with drug abuse education and other drug-health related areas, such as poison prevention, maternal infant health care, and birth control. Course may be repeated for credit.
155. External Drug Products. (4) F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours. 

Schwarz Discussion and laboratory exercises on the formulation of products for external use, including drugs and cosmetics. The course deals with the properties and ingredients of such products.

161. Biologic Products. (2) W. Prerequisite: Third year standing. Lecture 2 hours. K. H. Jen A discussion of the pharmaceutical aspects and evaluations of the therapeutic values of biologic preparations in current clinical use, including enzymes, blood, plasma substitutes, hematopoietic preparations, and biologic products.

164. Veterinary Products. (3) Sp. Prerequisite: Microbiology 125, Pathology 135. Pharmaceutical 136 and Pharmacy 116. Lecture 3 hours. Spinelli Course is designed to familiarize the student with the common ailments of domestic animals and livestock, products used for the prevention and treatment of such diseases, the interrelationship of pharmacists, veterinarian and animal owner, and legal limitations on veterinary dispensing.

165. Pharmaceutical Technology. (3) F. Prerequisite: Pharmacy 116. Lecture 1 hour. Lab 6 hours. Gibson, Cooper and Staff An introduction to the technology of liquid and semisolid pharmaceuticals. Special emphasis is given to the problems encountered and the materials used in pharmaceutical manufacturing.

166. Pharmaceutical Technology. (3) W. Prerequisite: Pharmacy 165. Lecture 1 hour. Lab 6 hours. Gibson, Cooper and Staff An introduction to the technology of solid dosage forms, especially tablets and capsules. Emphasis is placed on problems encountered in preparation of this type of medication.

167. Pharmaceutical Technology. (3) W. Prerequisite: Pharmacy 166. Lecture 1 hour. Lab 6 hours. Cooper and Staff An advanced study of the relationship of the art and science of pharmaceutical technology to solid dosage forms.

168. Seminar in Clinical Pharmacokinetics. (2) Su, F, W. Prerequisite: Fourth year standing or consent of instructor. Reports and Conferences 6 hours. Enrollment limited. Tozer, Riegelman Discussion and review of the literature on the clinical application of pharmacokinetic principles in drug therapy.

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

170.01. Listening and Talking to Patients. (2) Sp. Prerequisite: Consent of instructor. Lecture 1 hour. Lab 3 hours. K. Jacoby, Stone An introductory course emphasizing patient interviewing. Small group techniques are used to develop and test communication skills. Observation of numerous patient communication and social problems with opportunities to view tape student interactions and interviewing responses.

170.02. Special Topics in Pharmacaceutics. (2) Sp. Prerequisite: Pharmacy 116 or concurrent enrollment. Lecture 2 hours. Pedersen An intermediate course offering an opportunity to explore, in greater depth, special drug delivery systems and some fundamental relationships involved in their design or action.

180. Drugs and Society. (3) W. Prerequisite: Basic course sequence in pharmacy and consent of instructor. Enrollment limited. Lecture 3 hours. M. Silverman An analysis of the roles of the drug industry, pharmacy and medical professions, trade associations, governmental agencies, the Congress, consumer groups, and the press in the development, safety, efficacy, quality, advertising, prescribing, and pricing of selected drugs.

198. 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 direction of a member of the faculty with approval of the chairman of the department.

475. Parenteral Products. (3) W. Prerequisite: Third year standing. Lecture 2 hours, Lab 3 hours. Schwarz, C. Jackson Introduction to the formulation and technology of parenteral preparations. Laboratory includes participation in hospital activities in which parenterals are made and administered.

Pharmacy Administration

111. Pharmacy Laws. (2) F. Lecture 2 hours. J. R. Nielsen Introduction to court systems and administration boards and their relationship to the health professions. Discussion of specific principles of criminal law, negligence, and business law with particular emphasis on the legal relationship and responsibility of the practitioner to the patient.

112. Pharmacy Laws. (2) W. Lecture 2 hours. J. R. Nielsen A detailed examination of Federal and State drug, cosmetic, and narcotic laws; their promulgation, enforcement, and effect upon the practice of pharmacy. Some administrative aspects of pharmacy are presented.

150. Marketing. (4) W. Lecture 4 hours. Staff An analysis of the marketing functions that facilitate the flow of pharmaceutical products from production to consumption, and of the decision-making processes of marketing institutions. Emphasis is given to the environmental factors affecting marketing decisions.

154. Community Pharmacy Management. (4) Sp. Prerequisite: Pharmacy Administration 150 and 155. Lecture 4 hours. W. Pedersen Principles of management, specially directed toward developing familiarity with current problems peculiar to community pharmacy operation. Emphasis is given to elements in local organizing, operating, and adapting a pharmacy.

155. Accounting. (3) F. Lecture 1 hour. Discussion 2 hours. Staff Consideration of the fundamental concepts of accounting and its applied uses, with special emphasis on the accounting requirements of the community pharmacy. Problem cases and demonstrations are presented.

170.1. Group Studies Course. (1-4) F, W. Prerequisite: Consent of instructor. Staff Group studies of selected topics in pharmacy administration.

180A-B-C. Legal Problems Related to Health Care. (2-2-2) F, W, Sp. Prerequisite: Consent of instructor. Staff Pharmacy Administration 180A is prerequisite to 180B, and 180B to 180C; but completion of entire sequence is not required. J. R. Nielsen Conducted in cooperation with law students who are teamed with students from professional schools on this campus to investigate assigned problems of their respective disciplines, with particular emphasis upon the legal implications arising therefrom.

198. Supervised Study in Pharmacy Administration. (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.

Physical Therapy

100A. Anatomy. (4) F. Prerequisite: Anatomy 102 or equivalent. Lecture 2 hours, Lab 6 hours. Nordeschow This course is designed to present the foundation of the structure and function of the human body with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Dissection of the upper limb, neck, and trunk are emphasized.

100B. Anatomy. (2) W. Prerequisite: Physical Therapy 100A. Lecture 1 hour. Lab 3 hours. Nordeschow

This course is designed to present the foundation of the structure and function of the human body, with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Review plus dissection of the lower limb is stressed.

101A. Pathology. (3) F. M. L. Goldberg A general survey of the fundamentals of pathology with emphasis on correlation between pathological processes and the clinical signs, symptoms, and course of diseases. Gross pathology is demonstrated and autopsy material is available.

102A. Physiology. (3) F. Prerequisite: General human biology or equivalent. Lukin A review of certain aspects of human physiology, with special emphasis on the cardiovascular system and metabolism. Specific aspects of pathological physiology are explored, especially in relation to stroke and heart disease. Applications of physical principles to physiology are discussed.

190A. Neuroanatomy. (2) F. Lecture 1 hour, Lab 3 hours. Garotte The development of the human nervous system with special reference to structure and functional relationships.

104A. Physical Therapy Procedures I. (6) F. Prerequisite: Introductory physics. Lecture 3 hours. Lab 9 hours. S. Jones Lectures and laboratory practice in 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 testing and measuring procedures.

104B. Physical Therapy Procedures II. (6) W. Prerequisite: Physical Therapy 104A. Lecture 3 hours. Lab 9 hours. S. Jones Lectures, demonstrations, and laboratory practice in hydrotherapy, massage, and therapeutic exercise. Emphasized are therapeutic use of water and massage techniques applied to various pathologic problems and techniques of administration of exercises commonly used in orthopedic, medical, and neurological conditions.

1002. Anatomy. (4) F. Prerequisite: Anatomy 102 or equivalent. Lecture 2 hours, Lab 6 hours. Nordeschow

This course is designed to present the foundation of the structure and function of the human body with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Dissection of the upper limb, neck, and trunk are emphasized.
104C. Physical Therapy Procedures III. (6) Sp. Prerequisite: Physical Therapy 104A and 104B. Lecture 3 hours, Lab 9 hours. S. Jones

Lectures and laboratory practice in therapeutic exercise. Emphasized are methods of evaluating the patient and planning his program, use and care of assistive devices in rehabilitation of the handicapped, use and evaluation of changing concepts, and special techniques of exercise.

105B. Physical Medicine and Rehabilitation. (3) W. Ranallo

Lectures and clinical demonstrations concerning peripheral vascular problems, geriatric patients, various types of arthritis, muscular dystrophy, spinal cord injury, cerebrovascular accidents, the brain-damaged child, neck pain, and back pain.

106B. Clinical Medicine I. (5) W. F. Schiller, J. Schoeder

Lectures and clinical presentations of medical and neurologic patients are designed to increase the student's understanding of the basic interrelationship of structure and function of the various body systems. Conditions requiring physical therapy treatments are fully discussed.

106C. Clinical Medicine II. (5) Sp. Prerequisite: Abnormal psychology or equivalent. G. Strange

Lectures in orthopaedic surgery, pediatrics, psychiatry, obstetrics, gynecology, geriatrics, and dermatology are presented by physicians in these specialties.

107B. Neuromuscular Physiology. (2) W. S. Sabbadini

A study of the physiology of striated muscle and selected aspects of endocrine pharmacology and pathology are studied in lectures, demonstrations, and clinical illustrations.

110. Integrative and Nutritive Systems. (6) Sp. Prerequisite: College level biology, physics, and chemistry, or consent of instructor. Lecture 5 hours. Conference 3 hours. S. Jones

Study of the nervous, endocrine, circulatory, respiratory, alimentary, and immune systems. Importance of organ systems for the success of multicellular forms serves as focus. Fundamental cell processes are also considered and possible mechanisms discussed.

125. Mammalian Physiology. (7) F. Prerequisite: Consent of instructor. Lecture 5 hours, Conference 2 hours, Lab 4 hours. G. Strange and Staff

Introduction to mechanisms by which mammals, especially man, function. The interaction of internal and external environments and their relationship to the functions of cells and muscular, circulatory, respiratory, gastrointestinal, and excretory systems.

150.01. Research in Physiology. (1 1/2 per week) Su, F, W. Prerequisite: Consent of instructor. S. Jones and Staff

Individual research in endocrinology, respiratory physiology, neurophysiology, cardiovascular physiological cell, pathology, or other areas offered by individual staff members.

150.02. Research in Endocrinology. (1 1/2 per week) Su, F, W. Prerequisite: Consent of instructor. S. Jones and Staff

Research in endocrinology carried out in the Department of Physiology.

170.02. Electronic Instrumentation. (3) F. Prerequisite: College physics. Winston

Basic information on electronics and electricity. Circuity and operating principles of a wide range of electronic instruments used in physiological and biochemical investigations.

180. Supervised Study in Physiology. (1-5) F, W, Sp. Prerequisite: Consent of instructor. S. Jones and Staff

Library research and directed reading under supervision of a member of the faculty. The research project is evaluated by the chairman of the department.

201. Physiology of Vision. (3) F. Prerequisite: Anatomy 103 or Physiology 110 or equivalent. M. Dallman

Study of the integrative systems of the mammalian organism, particularly the nervous and endocrine systems.

202. Tutorial in Physiology. (0) F, W. Prerequisite: Consent of instructor. K. B. Brown

Directed reading organized in seminar or tutorial fashion to review aspects of physiology under supervision of a member of the faculty.

203. Cardiopulmonary Research Seminar. (1) F, W. Prerequisite: Consent of instructor. Lecture 1 1/2 hours. E. Coleridge, Comroe

Lectures on cardiovascular and pulmonary systems. Sessions on experimental methods and ways of solving cardiopulmonary problems. Work presented is researched and evaluated by the faculty and fellows. Students present a critical evaluation of one of the seminars.

204. Seminar: Topics in Physiology. (1) W. Prerequisite: A minimum of six units of introductory physiology. Rothman

This seminar discusses selected topics in cellular and integrative physiology. Readings are drawn from primary and secondary sources.

205. Functional Neuroanatomy Projects. (4) Sp. Prerequisite: Consent of instructor. Lecture 3 hours, Lab 3 hours. Hesser

Each year a different neuroanatomical project is undertaken in order for students to learn a variety of techniques used in electron microscopy, including freeze-fracture. Students will be able to prepare a three hour seminar on a basic aspect of electron microscopic neuroanatomy.

206. Advanced Kidney and Electrolyte Physiology. (3) Sp. Prerequisite: Physiology 100 or 120, or equivalent. Lecture 3 hours. C. Berry

Current theories regarding renal hemodynamics and the transport mechanisms operating across renal tubular membranes are discussed, with emphasis on their role in the regulation of whole body, acid-base, electrolyte, and fluid balance.

207. Neuroendocrinology. (1-3) Sp. Prerequisite: Endocrinology and neural sciences or consent of instructor. M. Dallman

Mechanisms for regulation of endocrine function by the central nervous system and the influence of hormones on the nervous system are considered in view of anatomical data in the literature. Course may be repeated for credit.

209. Physiology of the Auditory, Vestibular, and Other Sensory Systems. (2) Sp. Prerequisite: Anatomy 103 or equivalent. Merzenich

Lectures and demonstrations provide basic information on the physiology of the auditory system, vestibular system, chemical senses, and somatosensory system. Material includes historical and current concepts derived from relevant psychophysics, neuroanatomy, and neurophysiology.
210. Cellular Mechanisms of Hormone Secretion. (2) § F, W. Prerequisite: Physiology 101 or consent of instructor.
Discussion of current literature pertaining to the mechanism of hormone synthesis, packaging, and release.

219. Seminar. (1) F, W. Prerequisite: Consent of instructor.
Seminar presentations by guest speakers, alternating with discussion by physiology staff members of their current research. Each quarter a different topic of physiological interest is the subject of guest presentations. Course may be repeated for credit.

220. Advanced Cardiovascular, Renal, and Pulmonary Physiology. (2) § F, W. Prerequisite: Physiology 100 or equivalent.
This course includes critical reviews of topics of current importance, presentation of unresolved problems by staff, and critical evaluation of published articles by the group. The total program is presented over six successive quarters.

221. Endocrinology Seminar. (1) F, W. Ganong
Guest lectures alternating with reports of research in progress by members of the campus endocrinology group. A different topic of endocrinological interest is the subject of guest presentations each quarter. Course may be repeated for credit.

250. Research. (1-8) F, W. Prerequisite: Consent of instructor.
Research in Endocrinology for graduate level work in the Department of Physiology.

251. Research in Endocrinology. (1-8) F, W. Prerequisite: Consent of instructor.
Research in Endocrinology carried out by members of the campus endocrinology group.

298. Thesis. (1) F, W. Prerequisite: Consent of instructor.
The thesis is a research project under direction of a faculty member. Students work in the North Dental Health Center, which is a satellite of SFGH, providing dental care in a community setting of comprehensive health care.

Students work in the Guadalupe Health Center, providing dental care in a community setting of comprehensive health care.

199. Laboratory Project In Preventive Dentistry and Community Health. (1-5) F. Wycoff, Silverstein
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

Psychotherapy

100A-B. The Behavioral Science Basis for Psychiatry and Medicine. (2-2) W. Prerequisite: Consent of instructor.
A seminar in teaching techniques. Students present short lectures, and video tapes of the presentations are analyzed by self- and group-criticism.

Preventive Dentistry and Community Health

109.01. Community Health Problems and Practice. (0-1) W. Prerequisite: Consent of instructor. Lecture 3 hours. 1 F, Fine
Students work in community clinics which serve deprived areas. Both seminars and supervised clinical experience will be designed to provide students with the opportunity to relate economic, social, and cultural theory to the people they will be treating.

111. Changing Aspects of Dental Practice. (1) F. Lecture 1 hour. Wycoff
A course in teaching techniques. Students present short lectures, and video tapes of the presentations are analyzed by self- and group-criticism.

120. Behavioral Sciences. (1) W. Lecture 1 hour. Wycoff
An introduction to the basic concepts, theories and findings of the social sciences. Emphasis is on the application of these concepts and modes of reasoning to pressing social problems and the delivery of health services.

121. Research Design. (1) F. Lecture 1 hour. Wycoff
Course presents basic principles of biostatistics. Introduces the concept of experimental reliability, fundamental principles of sampling techniques, selection of data, and variability. The student plans, develops, and writes a research protocol.

128. Community Health Methods. (2) F. Silverstein
Dental hygiene students work in the North Oakland Community with the Children and Youth Project staff. Students are assigned to area schools where oral screening is done. Students also make home visits.

Participatory seminars utilizing role playing, open discussions, and exercises to study interpersonal relationships in dentistry. Topics covered include active
listening, effective ways of communicating, and creative conflict-solving.

Students work in the Guadalupe Health Center, providing dental care in a community setting of comprehensive health care.

199. Laboratory Project In Preventive Dentistry and Community Health. (1-5) F, W. Wycoff, Silverstein
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

Psychiatry

100A-B. The Behavioral Science Basis for Psychiatry and Medicine. (2-2) W. Prerequisite: Consent of instructor.
A course in teaching techniques. Students present short lectures, and video tapes of the presentations are analyzed by self- and group-criticism.

Preventive Dentistry and Community Health / Psychiatry / 171
160.08. Psychosomatic Case Conference. (1½) F, W.
Sp. Prerequisite: Consent of instructor.
Murphy Case conference, open rotation by social work students.
Emphasis is placed on the interrelationship between psychological, social, and somatic factors.
Although primarily intended for social work students, course may be taken by psychiatric residents and other mental health professionals.

160.11. Psychotherapeutic Interview Techniques. (4-5) F, W.
Sp. Prerequisite: Ostwald
Interview and group supervision of clinical interviewing with patients.
The focus is on developing rapport, obtaining relevant information, and establishing a satisfactory therapist-patient relationship.
Supplementary reading assignments may be assigned as needed.

160.13. Hysteria. (2) F, W. Prerequisite: Consent of instructor.
Berlinger
Seminar course designed for students who intend to enter the area of non-psychoanalytic specialties.
Emphasis is on the diagnosis and management of the hysterical personality in medical practice.
Clinical case material will serve as a basis for assigned readings.

Sp. Prerequisite: Psychiatry 180, and consent of instructor.
Berlinger
Although primarily intended for social work students, course may be taken by psychiatric residents and includes inpatient, crisis, and rural services.

Sp. Prerequisite: Consent of instructor.
Berlinger
A didactic experimental overview of the etiology and nosology of functional sexual problems and of the principles underlying treatment.
Lectures, clinical demonstrations, and group process are included.

170.07. Mental Health Aspects of Social, Physical, and Sensory Deprivation. (2) § W.
Sp. Prerequisite: Consent of instructor.
Schlesinger, Meadow
Compares and contrasts influences of cultural, physical, social, and sensory deprivation on cognitive and emotional development.
Emphasis on social stigma and family response to handicap.

170.08. Research in Human Sexuality. (2) Su, F.
Sp. Prerequisite: Consent of instructor.
Berlinger
Collaborative or directed research in various topics related to human sexuality.

170.09. Research in Human Sexuality. (2) Su, W.
Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor.
Berlinger
Research in human sexuality as a part of health.
Emphasis is on accurate information and research and biofeedback.

170.10. Introduction to the Study of Suicide. (2) F.
Sp. Prerequisite: Consent of instructor.
Motto
Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field.

170.02. Basic Science Aspects of Psychiatry. (2, 4) F, W.
Sp. Prerequisite: Consent of instructor.
Felberg
This elective seminar explores in depth psychophysiological studies of mental disorders.
Students have an opportunity to learn laboratory techniques as well as theoretical issues in EEG, sleep research, and biofeedback.

170.03. Behavioral Specialist Pathway Elective. (2-6) F, W.
Sp. Prerequisite: Psychiatry 110, Boatman
Students in the Behavioral Specialist Pathway elect individual or group study of a topic not included in other formal courses.
Supervised reading, research, field work, and clinical assignments are given in accordance to the student's level of interest and experience.

170.04. Pediatric Psychiatry. (1) F, W, Sp. Prerequisite:
Berlinger
Seminars on normal development from infancy through adolescence, to point out potential psychopathogenesis in the various phases of development.

170.05. Psychology of Consciousness. (1) Sp.
Lecture 12 hours.
Course given over a weekend.
Ornstein
Course considers the new interest in consciousness in psychology and philosophy and the relationship of mental and physical events.
The objective study of hypnosis, sleep and dreams, and rational and irrational modes of thought are included.

170.06. Research in Human Sexuality. (2) Su, W.
Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor.
Berlinger
Research and course given over a weekend.

170.07. Mental Health Aspects of Social, Physical, and Sensory Deprivation. (2) W.
Sp. Prerequisite: Consent of instructor.
Schlesinger, Meadow
Compares and contrasts influences of cultural, physical, social, and sensory deprivation on cognitive and emotional development.
Emphasis on social stigma and family response to handicap.

170.08. Research in Human Sexuality. (2) § W.
Sp. Prerequisite: Consent of instructor.
Berlinger
Collaborative or directed research in various topics related to human sexuality.

170.09. Research in Human Sexuality. (2) Su, W.
Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor.
Berlinger
Research in human sexuality as a part of health.
Emphasis is on accurate information and research and biofeedback.

170.10. Introduction to the Study of Suicide. (2) F.
Sp. Prerequisite: Consent of instructor.
Motto
Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field.

170.02. Basic Science Aspects of Psychiatry. (2, 4) F, W.
Sp. Prerequisite: Consent of instructor.
Felberg
This elective seminar explores in depth psychophysiological studies of mental disorders.
Students have an opportunity to learn laboratory techniques as well as theoretical issues in EEG, sleep research, and biofeedback.

170.03. Behavioral Specialist Pathway Elective. (2-6) F, W.
Sp. Prerequisite: Psychiatry 110, Boatman
Students in the Behavioral Specialist Pathway elect individual or group study of a topic not included in other formal courses.
Supervised reading, research, field work, and clinical assignments are given in accordance to the student's level of interest and experience.

170.04. Pediatric Psychiatry. (1) F, W, Sp. Prerequisite:
Berlinger
Seminars on normal development from infancy through adolescence, to point out potential psychopathogenesis in the various phases of development.

170.05. Psychology of Consciousness. (1) Sp.
Lecture 12 hours.
Course given over a weekend.
Ornstein
Course considers the new interest in consciousness in psychology and philosophy and the relationship of mental and physical events.
The objective study of hypnosis, sleep and dreams, and rational and irrational modes of thought are included.

170.06. Research in Human Sexuality. (2) Su, W.
Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor.
Berlinger
Research and course given over a weekend.

170.07. Mental Health Aspects of Social, Physical, and Sensory Deprivation. (2) W.
Sp. Prerequisite: Consent of instructor.
Schlesinger, Meadow
Compares and contrasts influences of cultural, physical, social, and sensory deprivation on cognitive and emotional development.
Emphasis on social stigma and family response to handicap.

170.08. Research in Human Sexuality. (2) § W.
Sp. Prerequisite: Consent of instructor.
Berlinger
Collaborative or directed research in various topics related to human sexuality.

170.09. Research in Human Sexuality. (2) Su, W.
Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor.
Berlinger
Research in human sexuality as a part of health.
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Sp. Prerequisite: Consent of instructor.
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Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field.

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Sp. Prerequisite: Psychiatry 110, Boatman
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Supervised reading, research, field work, and clinical assignments are given in accordance to the student's level of interest and experience.

170.04. Pediatric Psychiatry. (1) F, W, Sp. Prerequisite:
Berlinger
Seminars on normal development from infancy through adolescence, to point out potential psychopathogenesis in the various phases of development.

170.05. Psychology of Consciousness. (1) Sp.
Lecture 12 hours.
Course given over a weekend.
Ornstein
Course considers the new interest in consciousness in psychology and philosophy and the relationship of mental and physical events.
The objective study of hypnosis, sleep and dreams, and rational and irrational modes of thought are included.

170.06. Research in Human Sexuality. (2) Su, W.
Sp. Prerequisite: Psychiatry 160.14 or 180, and consent of instructor.
Berlinger
Research and course given over a weekend.

170.07. Mental Health Aspects of Social, Physical, and Sensory Deprivation. (2) W.
Sp. Prerequisite: Consent of instructor.
Schlesinger, Meadow
Compares and contrasts influences of cultural, physical, social, and sensory deprivation on cognitive and emotional development.
Emphasis on social stigma and family response to handicap.
170.09. Social and Cultural Basis of Illness Behavior. (2) W. Lecture 2 hours. Kessler
Patients whose cases illustrate the social and cultural determinants of illness behavior and of health care system responses will be presented. Students and the interdisciplinary faculty will review pertinent literature, discuss and integrate the anthropological, sociological and psychiatric viewpoints.

170.10. The Biological Core of Medicine. (1) W. Lec­ ture 1 hour. J. Felsenberg
Course covers blood flow and metabolism in the human brain, electrophysiological manifestations of different sets of consciousness, human memory, and animal models for behavioral disturbances in man.

170.11. Psychologies: East and West. (1) F. Lecture 12 hours. Course is given over a weekend. Ornstein
Students of cognition, perception and medicine find that many advanced questions in their disciplines are treated in the psychologies of the East. This course brings together representatives of Eastern and Western psychological traditions to explore their limits, interface and interaction.

An introduction to psychodynamics which will focus on the interaction of the self and others and the cognitive processes involved in conscious experience, psychological defenses, and unconscious process.

170.13. Biofeedback, Meditation and Self-Regula­ tory Therapies. (1) W. Lecture 12 hours. Course is given over a weekend. Ornstein
A symposium presenting a critical overview of the most important research and clinical applications of biofeedback, meditation, and other self-regulatory therapies. Intended primarily for physicians, nurses, psychotherapists, and other health professionals as well as psychological and biological researchers.

170.14. Seminar in Human Development. (2) W. Kiefer
Philosophical relationships between medical, behavioral, physical sciences and major theories of the life cycle. Applications of the theories to medical practice and the psychology of stress and relation to disease; cultural/subcultural variations in the meaning of health, illness and treatment.

Psychiatry 170.01 and consent of instructor.
Motto
Continuation of the study of mortality and morbidity resulting from self-destructive behavior. Subjects to be covered and the method of study are determined by the interests of the students.

D. H. Wallace and Staff
Social, behavioral, and clinical aspects of human sexuality are covered in lectures, discussion, and seminar periods. Lectures present didactic material and seminars focus on clinical and ethical problems related to sex and medical practice.

181. The Black Experience. (2) Sp. Prerequisite: Consent of instructor. Cobbs
Seminar discussions concerning the varieties of interpersonal experiences of black people which are relevant to understanding their personality development. This is of importance in the initiation and maintenance of an effective doctor-patient relationship in any medical specialty.

182. Transcultural Psychiatry. (1) F. Sp. Prerequi­ site: Consent of instructor. Hartog
A series of seminars discussing transcultural psychiatry from entering the alien community and epidemiology to folk healing. The relevance to American urban and ethnic issues is emphasized. Examples, problems, methodologies, and possibilities for research are also presented.

184. The Social Organization of the Hospital. (1) F. W. Sp. Open to registered students for credit. Other members of the campus community may audit course. Seminar 3 hours. Gerson
Analysis of work organization in large hospitals, with special emphasis on structural impediments to effective performance; conduct of the relationships among health workers and patients, and impact of hospital organization on the health worker and patient quality of life.

188. Supervised Study in Psychiatry. (1-2) § F, W. Sp. Prerequisite: Consent of instructor. L. J. Epstein and Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

189. Laboratory Project in Psychiatry. (1-5) F. W. Sp. Prerequisite: Consent of instructor. L. J. Epstein and Staff
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

210. Theoretical Bases of Psychotherapeutic Inquiry. (1-5) § F, W. Sp. Prerequisite: Consent of instructor. Lecture 1-5 hours. L. J. Epstein, Weinschel
Directed reading and small group seminars regarding models of understanding and psychotherapeutic intervention in emotional disturbance.

Prerequisite: Consent of instructor. Lecture 1 hour. Reading and field work. M. R. Harris
Course will focus on history, classification, and concepts and theory as well as practice considerations relating to mental health consultation. In addition to seminars, students may, where appropriate, arrange a supervised field experience in mental health consultation.

213. Advanced Mental Health Consultation. (1-3) § F, W. Sp. Prerequisite: Psychiatry 212 and consent of instructor. Lecture 1 hour. Field work optional 6 hours. M. R. Harris
Participants in this seminar have current or recent responsibility for a mental health consultation. Focus is on the theory and practice technique of mental health consultation. Consultation experiences provide the major content for discussion.

214. The Practice of Clinical Social Work. (1 ½) F. W. Sp. Prerequisite: Consent of instructor. Lecture 1 ½ hours.
Ahern
Theoretical background for trainees in psycho-social diagnosis, individual and group therapy, family therapy, brief therapy and crisis intervention, cross-cultural therapy; work with systems and other disciplines. Emphasis on clinical social work with particular reference to physically ill, mentally ill, and others.

400. Psychiatric Grand Rounds. (1-2) F. Sp. R. S. Wallerstein
Members of the Department of Psychiatry make clinical center presentations reflecting all areas of the department’s work. Each topic involves a two­session sequence, with the second week consisting of formal discussion of the previously presented work from various viewpoints.

Guided tours through the research facilities of Langley Porter Institute and introductory presenta­ tions of research projects by individual investigators.

Ostdahl
Individual consultation with psychiatric residents and other advanced trainees concerning treatment and management problems. Diagnostic questions, indications for somatic and psychiatric interven­tions, the course of therapy, and research issues are emphasized.

404. Theories of Personality. (1) F. W. LPI, Fisher, Burke
Focus is on personality theories other than Freudian, e.g., Piaget, Skinner, Rogers, existential psychology. Course includes an examination, study and discussion of contemporary personality theories, their concepts, systematic application to the behavioral sciences, and research potentials. Parallel reading is required.

405. Personality Assessment (1) W. Sp.
LPI, Fisher, L. Davison
Seminar presents techniques of assessing personality and intellectual functions in relation to psychodiagnostics and evaluation studies of prognosis with psychotherapy. Emphasis on design, and theory of clinical psychological methods and clinical applications and demonstrations with appropriate case material.

Individual and group instruction is given for psychiatric residents working with medical students in Psychiatry 110. Technical and theoretical issues in supervision and learning are analyzed, together with selected reading assignments.

Course consists of supervised clinical and basic research in behavioral aberrations, psychopathology, and experimental psychiatry. Specific subjects for research are chosen in conjunction with members of the staff.

LPI Malamud
Discussion of the neuropathology of neurological and psychiatric disorders with illustrations from gross and microscopic material.

Brookes
On-going review of major principles of Jung’s analytical psychology with special reference to their application to psychotherapy. Specialized to elaborate dynamics of psychotherapeutic process by utilizing psychotherapists from widely differing theoretical backgrounds in simultaneous dialogue around clinical material.

413. Introduction to the Computer. (2-3) F. W. Sp.
Starkweather
Seminar presents a review of digital computing and its applications in psychiatry. Residents explore these concepts through their own programming efforts.

LPI Binger
Survey of the literature in child development and child psychiatry. Parallel reading is required.
   LPI Callaway
   Discussion of readings on major problems in contemporary psychiatric research. Advance registration is required.

   Starkweather
   Supervised research with computer methods for the simulation of behavioral interactions. Applications of computers to the analysis of human communication.

419. Child Development and Personality. (½) Su.
   Prerequisite: Consent of instructor.
   LPI F. Conrad, Friedlander, D. Morrison
   Seminar is focused on the most common and prevalently used methods of assessing intelligence, perceptual-motor integration and personality in children. Actual testing materials as well as supervising research are covered. Participation is required.

   Prerequisite: Graduate or advanced resident standing. One year of advanced psychological or psychiatric work.
   M. Horowitz
   Guided research using experimental, field, and clinical modes of investigation into the typical and idiosyncratic behaviors of external stressors. The focus is on conscious and unconscious ideational, emotional, and defensive processes.

   Prerequisite: Consent of instructor.
   M. R. Harris
   Course will focus on history, classification, concepts and practice techniques of mental health consultation. In addition to seminar participation, students may, where appropriate, arrange a supervised field experience in mental health consultation.

   Prerequisite: Psychiatry 425. Lecture 1 hour. Field work options available.
   M. R. Harris
   Participants in this seminar have current or recent responsibility for a mental health consultation. Focus is on the theory and practice techniques of mental health consultation and consultation experiences provide the major content for discussion.

   Prerequisite: One year of full time experience in the conduct of outpatient psychotherapy or equivalent. Lecture 2 hours. Lab 4-10 hours.
   M. Horowitz
   Course covers psychotherapy of selected cases with recordings of the process, supervision during treatment, and group seminars in which the therapy is reviewed in retrospect using humanistic and analytical levels of abstraction.

428. Practicum in Sex Counseling. (8) Su, W.
   Prerequisite: Psychiatry 160.14 and 160.15, or 180, or consent of instructor. Psychiatry 428 must be taken in order and consecutively with 429.
   L. W. Wallace
   Six month rotation in the Sex Counseling Unit involving presentations, case conferences, and supervised counseling experience with couples and individuals presenting sexual dysfunctions.

   Prerequisite: Psychiatry 160.14 and 160.15, or 180, or consent of instructor. Psychiatry 429 must be taken in order and consecutively with 428.
   L. W. Wallace
   Six month rotation in the Sex Counseling Unit involving presentations, case conferences, and supervised counseling experience with couples and individuals presenting sexual dysfunctions.

   I. Philips
   Members of the faculty and visiting professionals present clinical discussions and new developments related to the field of child and adolescent psychiatry.

   Prerequisite: Intended primarily for postdoctoral students. Psychiatry 431 is equivalent to Psychology 221.
   Attiksson, Hargreaves
   A seminar course designed to provide a basic overview of the organizational context of program evaluation; design and implementation of information systems; assessment of community needs; evaluation of program quality and effectiveness, and training of evaluators.

   Prerequisite: Intended primarily for residents and postdoctoral students.
   Psychiatry 432 is equivalent to Psychology 181.03.
   Pelletier
   Integration of biofeedback with psychotherapy and medical practice; methods of intervention and prevention will be presented in a therapeutic model emphasizing psychological factors in stress disorders. Biofeedback instruments are demonstrated and applied. Course is intended for clinical practitioners.

   Prerequisite: Intended primarily for residents and postdoctoral students.
   Psychiatry 433A-B-C is equivalent to Psychology 233A-B-C. Seminar 2 hours.
   Callaway
   An ongoing seminar devoted primarily to the research interests of the group studying human event related potentials. It includes visiting scientists, as well as presentations by staff and postdoctoral fellows.

434. Cerebral Hemispheric Specialization and Integration. (2) Sp.
   Prerequisite: Intended primarily for residents and postdoctoral students.
   Psychiatry 434 is equivalent to Psychology 181.02.
   Galin
   Group discussions of readings in seminar format of neuropsychology of hemispheric specialization for cognitive function, and integration of the two hemispheres; developmental, psychiatric and educational implications of sex differences from studies of brain lesions, electrophysiological recordings, and behavioral testing.

440. Impact of Health Insurance and Legislation on Practice. (2) W.
   Prerequisite: Intended primarily for residents and postdoctoral students. Psychiatry 440 is equivalent to Psychology 290. Lecture 2 hours.
   L. Doren
   Review of the nature and types of health insurance as economic forces in practice: discussion of health care delivery models, manpower resources and peer review systems with utilization data; proposals for national health insurance study: illustration of the legislative process.

441. Social and Psychological Factors in Health Education. (2) W.
   Prerequisite: Intended primarily for residents and postdoctoral students.
   Psychiatry 441 is equivalent to Psychology 181.05.
   J. B. Henderson
   Overview of the major concepts and approaches in health education, focusing on chronic diseases and primary and secondary prevention of health risks and problems; societal factors and individual determinants; specific techniques for helping people modify life styles.

442. Current Topics in Biological Psychology. (2) Sp.
   Prerequisite: Intended primarily for residents and postdoctoral students.
   Psychiatry 442 is equivalent to Psychology 232.
   Salany, H. Pecke
   A seminar course focusing on a current topic in biological psychology such as neuroethology, lateralization of brain function, psychophysiology of stress, or physiology of attention. Individual presentations and discussion are required.

   Prerequisite: Intended primarily for residents and postdoctoral students.
   Psychiatry 443 is equivalent to Psychology 180.
   Garfield
   Models for dealing with psychosocial issues involved in caring for the dying patient. Emphasis on the sequence of events encountered by the health professional and patient from diagnosis through death.
   Course is intended for medical, nursing, and mental health students.

   Required for residents at LPI, SFGR, and UC. Elective for all others.
   I. F. Epstein, Manto, C. Brodsky
   Residents are responsible for the study and treatment of psychiatric patients and consultation of non-psychiatric patients and consultation of non-psychiatric patients under the supervision of senior staff members of the faculty. In the second year the required.

   Prerequisite: Chief residents.
   M. R. Harris, L. J. Epstein
   Program planning and consultation concerning administrative, teaching, and research roles of chief residents.

   Required for residents in their second year of child psychiatry.
   LPI I. Philips
   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.

   Prerequisite: Psychiatry 452. Required for residents in their second year of child psychiatry.
   LPI I. Philips
   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.

   Prerequisite: Open to third, fourth and fifth year residents.
   D. Brown
   Lectures in the theory and practice of mental health consultation, program evaluation and administration, and preventive services. Supervision of related field experiences by senior faculty in seminar setting. Interdisciplinary interaction emphasized. Review of relevant literature.

   Amini
   Introduction to the basic psychiatric syndromes; required for first year psychiatric residents.

   Prerequisite: Psychiatry 463.
   Attkisson, Hargreaves
   Introduction to the theory and practice of family, group, and behavior therapy; required for second year psychiatric residents.

   LPI Amini
   Seminar offers instruction in the theoretical bases of psychoanalysis.
Seminar offers instruction in the technique of psychoanalytic psychotherapy and its theoretical basis.

468. Interdisciplinary Seminar in Human Development. (3) F, W, Sp. Prerequisite: Consent of instructor. Three-quarter course. Fluke and Staff
Theory and research covering adolescence to old age from sociological, psychological, psychoanalytical, and anthropological perspectives. Topics include stress, personality and cognitive change, time perspective, values, processes and adaptation. Reading and paper required.

469. Speech, Hearing, and Psychology. (1) Su, F, W, Sp. Prerequisite: Consent of instructor. Outlaw
Diagnosis and treatment of psychiatric problems associated with speech, hearing, or language difficulty. Supervised clinical work with selected patients according to resident's level of experience. Instruction with such alternative audiovisual communication systems as manual signing and voice reinforcement.

Problems in psychotherapy conducted within a psychodynamic framework. Topics include: treatment indications, goals, selection of therapy, resistance and defense, transference and countertransference, dreams in psychotherapy, third party involvements, emergency and hospitalization, adjuvant drug management, note taking and recording, transfer and termination.

Instructor's psychotherapeutic sessions with the patient are videotaped and played back and discussed with second and third year residents and other trainees. The material is objective and repeatable: the therapist is frank and self-critical; various theoretical views are compared.

Psychology

41A-B. Human Growth and Behavior. (3) F, W. Prerequisite: First year standing or consent of instructor. Schaw
Examination of patterns and sequences of human development. Emphasis on 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 psychoanalytic concepts.

Patient's cooperation with health regimens contributes significantly to outcomes of health care. This course reviews factors that affect degree of compliance achieved and examines results of attempts to improve compliance.

178. Psychoanalytic Psychotherapy. (4) F, W. Garfield
Psychoanalytic psychotherapy and its theoretical foundations. Topics include: treatment indications, goals, selection of therapy, resistance and defense, transference and countertransference, dreams in psychotherapy, third party involvements, emergency and hospitalization, adjuvant drug management, note taking and recording, transfer and termination.

179. Sociotherapy. (2) F, W. Garfield
Models for dealing with psychosocial issues involved in caring for the dying patient. Emphasis on the sequence of events encountered by the health professional and patient from diagnosis through death. Course is intended for medical, nursing and mental health students.

180.01 Seminar in Psychology. (1) W. Seminar 1 hour. Plainfield
Weekly discussions in which students' clinical cases are analyzed by dynamic application of behavioral theory.

180.02. Psychological Aspects of Treatment Planning. (1) § F, Sp. Plainfield
This course integrates students' basic training from the specialty courses in dentistry with knowledge of the psychological considerations necessary to individualize treatment. Material may then be planned to the practitioners' awareness of the unique needs of patients.

180.03. Advanced Psychology for Dental Hygienists. (1) Sp. Seminar 1 hour. Plainfield
Seminar discussions on the emotional aspects of interpersonal transactions among office personnel, therapists, and patients.

181.01. Behavior Interventions in Medicine. (2) § W. Sp. Prerequisite: Consent of instructor. S. Hall
Review of the research literature on the behavioral treatment of physical disabilities. Therapy, cardiovascular risk factors including smoking, anxiety-related disorders, chronic diseases, and preventive care are emphasized.

181.02. Cerebral Hemispheric Specialization and Integration. (2) § Sp. Prerequisite: Consent of instructor. Galin
Group discussions of readings in seminar format of neuropsychology of hemispheric specialization for cognitive development, and integration of the two hemispheres; developmental, psychiatric and educational implications: evaluation of data from study of brain lesions, electrophysiological recordings, and behavioral testing.

181.03. Clinical Biofeedback. (2) § F, Sp. Pelleier
Integration of biofeedback with psychotherapy and medical management of intercurrent intervention and prevention will be presented in a therapeutic model emphasizing psychological factors in stress disorders. Biofeedback instruments are demonstrated and applied. Course is intended for clinical practitioners.

181.04. Issues and Research in the Treatment of Substance Abuse. (2) § W. Sp. Prerequisite: Consent of instructor. S. Hall, Hessett
Survey of research on issues concerning treatment of substance abusers and of theories of etiology and treatment. Substances covered are heroin, alcohol, barbiturates, amphetamines, caffeine and nicotine. Obesity will also be included.

181.05. Social and Psychological Factors in Health Education. (2) § W. J. B. Henderson
Overview of the major concepts and approaches in health education focusing on chronic diseases and primary and secondary prevention of health risks and problems; societal factors and individual determinants; specific techniques for helping people modify lifestyle.

185. Nonverbal Communication. (1) § F. Ekman
Reading messages from the face and body; what patients reveal without words about their feelings and personality, and what you are revealing to them.

190A. Introduction to Teaching Communication Skills. (1) § F. Prerequisite: Psychology 190A. Lecture 1 hour, Lab 3 hours. G. Stone, Jacoby
Course provides the basis for a supervised practicum in teaching communication skills to students in the health professions. Theory and techniques are presented through reading and classroom discussion. Students participate in exercises to gain practice with techniques.

190B. Practicum in Teaching Communication Skills. (3) § Sp. Prerequisite: Psychology 190A and consent of instructor. Lecture 2 hours, Lab 3 hours. G. Stone, K. Jacoby
Building on principles learned in Psychology 190A, students lead small groups of beginning students of communication skills in discussion and laboratory exercises. Students attend lecture sessions in the subsite course and meet weekly with instructor to discuss issues of teaching.

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

200. Theory and Research in Learning and Cognition. (3) § Sp. Prerequisite: Graduate standing in Health Psychology Program, or upper division courses in learning and cognitive psychology, and consent of instructor. Seminar 3 hours. Offered in alternate years. Offered 1977-1978. G. Stone
Course provides a basis for continued study of current research and theory in learning and cognition, and for designing interventions in health teaching. Course is intended for research and graduate students.

202A-B. Computer Simulation of Personality and Human Interaction. (3-3) § W. Sp. Prerequisite: Psychology 257 or equivalent. Lecture 1 hour, Lab 6 hours.
The development and testing of theoretical models of personality are explored by means of computer programs. Students program the computer for simulations and symbol manipulation.

210. Personality Psychology. (3) § F. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978. F. Cohen
General and systemic issues in the study of personality; evaluation of major theories and points of view; developmental issues; theoretical and methodological issues in the assessment of personality; evaluation of research methods.

211A-B. Theories of Personality. (2-2) § W. Sp. Prerequisite: Graduate standing and consent of instructor. Psychology 211A is prerequisite to 211B, but may be taken independently of 211B. Seminar 2 hours.
J. Fisher
Survey of major contemporary theories of personality, including some more recent, selected philosophical viewpoints; history of study of structure, how they conceptualize personality development, how they relate to empirical phenomena, and what research is generated by them.

F. Cohen
Course examines stress theory and research from clinical, field, and laboratory settings; physiological, psychological, and sociological measures of stress; coping reaction patterns; coping processes; and development of effective coping strategies.

211 Program Evaluation in Mental Health and Other Human Service Organizations. (2) § F, W. Sp. Prerequisite: Consent of instructor.
Atkinson, Hargreaves
A seminar course designed to provide a basic overview of the organizational context of program evaluation; design and implementation of information systems; assessment of community needs; evaluation Psychology / 179
of program quality and effectiveness, and training of evaluators.

230. Physiological Aspects of Health Psychology. (3) § F. Prerequisite: Graduate standing in Health Psychology Program or consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978.

An overview of major systems of the human body stressing psychological impacts on their functioning and psychological consequences of abnormality. Course will provide student for reading medical literature and interacting effectively with health professionals in planning research.

231. Basic Physiological Psychology. (3) § Sp. Prerequisite: Basic courses in experimental psychology and consent of instructor. H. Peake

Central nervous system mechanism involved in the regulation of behavior will be emphasized. Elementary neurophysiology and neurochemistry will be discussed as background material. Focus is on the substrates of behavior of the intact organism.

232. Current Topics in Biological Psychology. (2) § Pr. Sp. Prerequisite: Basic courses in physiological psychology, experimental psychology, and consent of instructor. Salamy, H. Peake

A seminar course focusing on a current topic in biological psychology such as neurocraniology, lateralization of brain function, psychophysiology of stress, or physiology of attention. Individual presentations and discussion are required.

233A-B-C. Special Seminar in Physiological-Biological Research in Psychopathology. (1-1-1) § F, W, Sp. Prerequisite: Consent of instructor. Seminar 2 hours.

An ongoing seminar course devoted primarily to the research interests of the group studying human event related potentials. It includes visiting scientists, as well as presentations by staff and postdoctoral fellows.

234. Neurochemical Basis of Abnormal Psychology. (2) § W. Sp. Prerequisite: Consent of instructor. Ellman

Seminar and readings on subjects related to the neurochemical, neuropharmacological basis of CNS functions; cell physiology of the nervous system.


Kamiya

Course considers the relationships among behavior, subjective experience and physiological processes. Introduces the autonomic and central nervous System. Review of methods of achieving increased awareness and control of physiological activity. Demonstrations, laboratory.

240. Social Psychology. (3) § F. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978. N. Adler

A survey of social psychological theory and research. Topics to be covered include attitude formation and change, decision-making, role theory, group dynamics, conformity and social influence, person perception and attribution theory.

245. Independent Study. (1-6) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Independent study under the supervision of a member of the faculty.

249A. Special Seminar in Cognitive-Information Processing. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of cognitive-information processing. Topics to be announced.

249B. Special Seminar in Personality. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of personality. Topics to be announced.

249C. Special Seminar in Developmental Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of developmental psychology. Topics to be announced.

249D. Special Seminar in Evaluation. (1-3) § F, W. Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of evaluation. Topics to be announced.

249E. Special Seminar in Physiological-Biological Psychology. (1-3) § F, W. Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of physiological-biological psychology. Topics to be announced.

249F. Special Seminar in Social-Organizational Psychology. (1-3) § F, W. Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of social-organizational psychology. Topics to be announced.

249G. Special Seminar in Statistics-Methodology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of statistics-methodology. Topics to be announced.

249H. Special Seminar in Health Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of health psychology. Topics to be announced.

249I. Special Seminar in Communication-Change Methods. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of communication-change methods. Topics to be announced.

249J. Special Seminar in Clinical Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in the area of clinical psychology. Topics to be announced.

249K. Special Seminar in Other Areas of Psychology. (1-3) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Special seminar in other areas of psychology. Topics to be announced.


Introduction to parametric and non-parametric techniques appropriate for analyzing outcomes of experiments and field studies.


Introduction to general linear model, including multiple regression; general concepts of multivariate analysis are also considered.

253. Introduction to Multivariate Statistical Methods (1-3) § F. Prerequisite: Graduate course in statistics including univariate analysis of variance and regression and correlation.

Fein

Regression, discriminant function, canonical correlation, factor analysis. Multivariate methods will be evaluated in terms of inferential powers that can be made; sample sizes and statistical power; statistical assumptions and robustness; and strategies for establishing replicability of results.

254A. Research Methods. (3) § W. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978. N. Adler

An overview of research methods and their associated strengths and weaknesses: experimental and quasi-experimental designs, correlation approaches, interview techniques, survey and questionnaire construction, use of archival data, simulations, evaluation research, participant observation and other observational techniques.

254B. Research Methods. (3) § Sp. Prerequisite: Consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978. N. Adler

An in-depth study of major research approaches: experimental research, quasi-experimental research, field and evaluation research. Problem design, art, and ethics of research will be considered.

255. Tests and Measurement. (2) § W. Prerequisite: Consent of instructor. Lecture 2 hours. O'Sullivan

Psychological test construction, including item analysis, standardization, reliability, and validity.

257. Introduction to the Computer for Behavioral Sciences. (3) § F. Prerequisite: Elementary statistics and consent of instructor. Lecture 1 hour. Lab 6 hours.

Starkweather

The computer is studied as a useful tool for data analysis and controlled experiment. Students will learn to make use of existing program systems.

260A. The Health System. (3) § W. Prerequisite: Graduate standing in Health Psychology Program, or consent of instructor. Offered in alternate years. Offered 1977-1978. F. Cohen

Examination of empirical research and theoretical perspectives in current problems in the health system where psychological knowledge is of direct relevance, such as psychological problems of chronic illness, psychological factors predisposing illness, compliance, de-individuation among health professionals.


A seminar to acquaint students with researchers in health psychology. Presentations of research studies in health care problems, and discussion of related issues.


Introduction to problems and methods in ongoing health care systems research. All time involvements in clinical, field and laboratory research settings: discussion of methodological and practical problems of health research.

N. Adler
Students will be placed in an ongoing research project, initially as an apprentice; subsequently they will carry out an individual project. They will participate in a concurrent seminar, where research methods and strategies are introduced primarily for advanced clinical psychology students.


G. Stone
Process of seeking and gaining health services are viewed as multi-person problem situations to be resolved through communication. Selected approaches to problem solving and communication are applied to traditional medical dissemination of information to promote health, and risk counseling.

265. Stress and Bodily Diseases. (3) § W. Prerequisite: Consent of instructor. Offered in alternate years. Not offered 1977-1978.

F. Cohen
Examination of the psychological and physiological models and empirical research linking stress and other psychological factors to disease; psychosomatic theories; links between personality dimensions and health-related behaviors.

266. Reproductive Behavior. (3) § W. Prerequisite: Consent of instructor. Offered in alternate years. Not offered 1977-1978.

N. Adler
Examination of the role that psychological and social factors can play in a variety of reproductive behaviors: pregnancy, obstetrical complications, postpartum reactions, contraceptive use and non-use, spontaneous and induced abortion.

270A-B-C. Communication Skills in Health Transactions. (2-2-2) § F, W, Sp. Prerequisite: Graduate standing in Health Psychology Program, or consent of instructor. Lecture 1 hour, Lab 3 hours. Offered in alternate years. Offered 1977-1978.

G. Stone
A three-part course that teaches a number of skills involved in face-to-face interactions and prepares the student to teach the skills to others. Includes data gathering, offering criticism, problem-solving, giving information, making recommendations, leading discussions.

280. Clinical Approaches to Psychological Disorders. (3) § W. Prerequisite: Psychology 210 or equivalent, and consent of instructor. Lecture 3 hours. Offered in alternate years. Offered 1977-1978.

F. Cohen
Critical evaluation of current models of behavior pathology including psychological, psychosomatic, and biochemical theories; problems of labeling and stigmatization; issues of prevention; therapy and method of clinical assessment; processes of therapeutic intervention; defenses and coping.

281A-B-C-D. Seminar in Clinical Psychology. (1-1-1-1) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours.

J. Fisher
Nature, causes, development and treatment of major behavior disorders such as the neuroses and the psychotic psychoses which result in disabling disturbances of interpersonal relations. Contemporary theories of personality development and clinical considerations.

283. Seminar in Clinical Neuropsychology. (1) F, W. Prerequisite: Consent of instructor. Lecture 2 hours F, W. Seminar 1 hour W, Lab 2 hours W.

Steinheuser, Davison
Clinical investigations of human brain-behavior functions, emphasizing relationships between higher cognitive components of behavior and brain disorders. The laboratory component consists of supervised neuropsychological evaluations of brain damaged patients. Course is intended primarily for advanced students in clinical specialties.


Rogers, Steenheuser
Beginning with those that occur at the beginning of therapy and proceeding through the process to those associated with termination. Clinical material is provided from cases seen by the participants.

290. Impact of Health Insurance and Legislation on Practice. (2) W. Lecture 2 hours. Examination of the psychological impact of current and proposed types of health insurance as economic forces in practice; discussion of health care delivery models, manpower resources and peer review systems with utilization data; proposals for national health insurance studied; illustration of the legislative process.

299. Dissertation. (0) F, W. Prerequisite: Advanced standing and permission of the graduate adviser.

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

300. Practicum in Teaching Psychology. (0) F, W. or Sp. Prerequisite: Consent of instructor. Staff
Supervised classroom or tutorial teaching experience.

Radiation Oncology
140.01. Radiation Oncology Clinical Clerkship at UC. (1) per week F, W, Sp. Prerequisite: Medicine 131A-B-C.
T. Phillips
Participation in examination of cancer patients under treatment in radiation oncology. Students participate in rounds, conferences and clinics, and see demonstrations on the use of newer radiotherapeutic techniques.

140.02. Clinical Clerkship in Radiation Oncology at MZ. (1) per week F, W, Sp. Prerequisite: Medicine 131A-B-C.
J. Castro
Participation in examination of cancer patients under treatment in the Claire Zellerbach Tumor Institute at MZ. Students participate in rounds, conferences, and clinics, and see demonstrations on the use of newer radiotherapeutic techniques.

150.01. Research Selective. (1½ per week) F, W, Sp. Prerequisite: Research training in 313/B-C. T. Phillips
Individual research in radiation oncology by arrangement with the chairman of the department. Students work under close supervision of a member of the staff.

T. Phillips
Rounds include presentation of problem cases with discussion of diagnosis and treatment as well as biologic implications. Frequent guest lectures are used to cover important aspects of oncology.

T. Phillips
Seminars include discussions of the diagnosis, treatment and additional aspects of oncological problems, including head and neck, gynecologic, otorhinolaryngologic, pediatric, dermatologic, lymphomatous and general malignancies.

T. Phillips
Study of principles of radiobiology and their application to radiotherapy. Seminars deal in depth with textbooks, selected readings and prepared seminars leading to understanding of mechanisms of action of radiation in clinical radiotherapy. Oriented to radiotherapy fellows and residents.

Radiology
100. Introduction to Clinical Radiology. (2) F, W. Prerequisite: Anatomy 100 and 103, Medicine 130, Pathology 102, and Psychiatry 130; concurrent enrollment in Medicine 131A-B-C.
T. Phillips
Course provides instruction in basic aspects of therapeutic and diagnostic radiology and nuclear medicine. Illustration of diagnostic and therapeutic modalities in specific disease states provides instruction in use of radiologic resources.

140.01. Roentgen Diagnosis. (1½ per week) F, W, Sp. Prerequisite: Medicine 110 and Surgery 110.
T. Phillips
Growth of Margulis
Clerkship in radiology. Observation of procedures, review of pathology, radiophysics, diagnosis, and natural history of selected diseases through study of roentgenograms with case histories. Potentials and limitations of radiologic method included.

140.02. Clinical Clerkship. (1½ per week) F, W, Sp. Prerequisite: Medicine 131A-B-C.
T. Phillips
Clerkship in radiology. Clinical aspects of the patient’s case. Joint arrangement and approval of the chairman of the department and the Dean.

140.04. Clinical Clerkship in Nuclear Medicine. (1½ per week) F, W, Sp. Prerequisite: Medicine 131A-B-C.
T. Phillips
Hoffer
Observation of basic nuclear medicine procedures and participation in nuclear medicine rounds. Includes isotopic tracer use. Completion of Radiation 140.04.
140.12, 170.08, and 170.09 meet the State of California requirements for licensure to use radioactive
isotopes in clinical medicine.

140.05. Diagnostic Radiology at MZ. (1 ½ per week) Su, F, W. Sp. Prerequisite: Third or fourth year standing.

A lecture course analyzing the living through the use of radiographs. Objectives are to show the usefulness of knowing anatomy, to begin acquiring a medical vocabulary, the elements of clinical thinking, and useful habits in learning. For freshman "Blue" group. 170.06A-B-D. Pathology of Internal Organs. (1-3, 1-3, 1-3) Su, F, W. Lecture 1-3 hours. S. Ross A lecture course analyzing small groups, with active participation on selected aspects of pathological anatomy and its usefulness in understanding disease, its origins, development, and clinical manifestations. For sophomores.

170.07A-B-C. Clinical Applications of Anatomy. (1-2, 1-2, 1-2) F, W, Sp. Lecture 1-2 hours. S. Ross Course demonstrates anatomy in the living through the use of radiographs. Objectives are to gain acquiring a medical vocabulary, the elements of clinical thinking, and useful habits in learning. For sophomore "Gold" group.


Introduction to the physics of radioactivity, nuclear instrumentation and gamma ray imaging techniques.


Introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radiopharmaceuticals.


Weekly seminar covering the radiologic studies of surgical cases emphasizing indications, risks, and information derived from procedures. Active participation in X ray interpretation in incidence.


Consider an elective course for fourth year medical students.

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

411. Introduction to Nuclear Medicine. (2) Su, F, W. Prerequisite: Concurrent enrollment in Radiology 421. Hoffer and Staff

Introduction to basic nuclear medicine diagnostic procedures, both in vivo and in vitro, and therapy with radiopharmaceuticals.


Course includes review of surgical pathology material and attendance at autopsy rounds.

413. Pathology. (1) Su, F, W Sp. SF/PH Minagi

Course includes presentation of pathological material on special radiology with emphasis on the correlation of diagnostic X rays and pathological findings and a study of the pathology of patients under radiation treatment.

414. Physics of Diagnostic Radiology. (2) W. Prerequisite: Radiology 406. Lecture 1 ½ hours, Lab 2 hours.

A seminar course with laboratory experiments designed to acquaint the student with current knowledge of physics applicable to diagnostic radiology. Topics include generation and extraction of radiologic information, image conversion, recording methods, and special applications.

415. Growth Kinetics of Cells, Tissues, and Tumors. (2) Sp. Prerequisite: Consent of instructor.

An analysis of cell population growth in tissues, tumors, and cultures. Emphasis is given to radioactive tracers (thymidine and its biochemistry) and experimental methods for studying cell proliferation in vivo and in vitro.


Rotating assignments of topics for discussion by residents of nuclear medicine training programs in all affiliated hospitals. Critical reviews of available information in limited areas are used to provide a broad review of nuclear medicine for all trainees.

421. Nuclear Medicine Physics. (2) Su, F, W, Sp. Prerequisite: Residents assigned to nuclear medicine section.

Introduction to physics of radioactivity, nuclear instrumentation, and gamma ray imaging techniques.

422. Basic Radiological Sciences. (3) Su.

Course intended for all first year residents in radiology; provides an introductory survey of radiobiology, diagnostic X ray physics, radioactivity, and radiation instrumentation.

450. Clinical Nuclear Medicine. (1 ½ per week) Su, F, W, Sp. Prerequisite: Radiology 422. Hoffer and Staff

Clinical experience with diagnostic and therapeutic nuclear medicine to satisfy requirements of American Board of Radiology for certification in diagnostic radiology and radiation therapy.


Residents, under supervision, carry out radiological examination and interpretation of X rays of patients referred from wards and outpatient clinics. The chief resident has certain administrative duties relative to the resident training program.


Residents, under supervision, are responsible for the diagnostic activities of the department, including diagnostic consultations and reports, history-taking, and physical examinations. In addition, the chief resident has certain administrative duties relative to the resident training program.

453. Clinical Radiology. (1 ½ per week) Su, F, W, Sp. Prerequisite: Radiology 450. SF/PH Coulomb

Residents are responsible for the diagnostic and therapeutic activities of the department under the direction of staff radiologists including diagnostic consultations and reports, history-taking, physical examinations, radiation therapy, and follow-up of patients referred for therapy.

455. Radioactivity Laboratory. (1 ½ per week) Su, F, W, Sp. Prerequisite: Residents assigned to nuclear medicine section and consent of instructor.

An introductory course including lectures on maxillofacial, mandibulectomy, facial and cranial prosthesis.

126.01. Partial Dentures. (3) F. Prerequisite: Removable Prosthetics 116B-C. Lecture 1 hour, Lab 6 hours.

Fundamentals of partial denture design and construction of the partial denture.

126.02. Immediate Dentures. (2) W. Prerequisite: Removable Prosthetics 116B-C. Lecture 1 hour, Lab 6 hours.

Fabrication of complete upper and lower dentures.

126.03. Complete Denture Design. (2) W, Sp. Prerequisite: Removable Prosthetics 126.01 and 126.02. Lab 6 hours.

Regli, M. L. Parker

Instruction in clinical and laboratory procedures related to complete prosthodontics. Course will include preclinical courses.

127A-B-C. Partial Dentures. (4-4-4) F, W, Sp. Laboratory 1 hour.

Original investigation in the field of removable prosthodontics.

127. Prosthetics Seminar. (4) W, Sp. Prerequisite: Students in removable prosthodontics certificate program must enroll in this course each quarter and summer session for entire program. Seminar 4 hours.

Regli, M. L. Parker and Staff

Review of the literature related to prosthodontics.

116B-C. Elementary Complete Denture Prosthodon­tics. (2-2) W, Sp. Prerequisite: Concurrent enrollment in Removable Prosthetics 110B-C. Removable Prosthetics 116B-C is Prerequisite to 116C.

Lectures on the elementary principles of complete denture prosthodontics. Laboratory exercises demonstrate technical and clinical procedures.

122. Immediate Dentures. (1) W. Prerequisite: Removable Prosthetics 110B-C, 116B-C and 126.01. Concurrent enrollment in Removable Prosthetics 126.02. Lecture 1 hour.

Presentation of clinical procedures for immediate dentures.

123. Maxillofacial Prosthosis. (1) Sp. Prerequisite: Removable Prosthetics 110B-C, 116B-C, 122, 126.01 and 126.02. Lecture 1 hour.

T. Curtis, Zlotolow, R. Gillis

Clinical experience in fabrication of immediate dentures.

126.03. Complete Denture Design. (2) W, Sp. Prerequisite: Removable Prosthetics 126.01 and 126.02. Lab 6 hours.

Regli, M. L. Parker

Instruction in clinical and laboratory procedures related to complete and partial prosthodontics.

171A-B-C. Complete Prosthetics. (3-3-4) F, W, Sp. Prerequisite: Removable Prosthetics 171A-B-C. Lecture 1 hour, Lab 6 hours.

Concurrent enrollment in Removable Prosthetics 171A-B-C. 172A-B-C and 172A-B-C. Lab 12 hours.

Regli, M. L. Parker and Staff

Clinical practice on patients for partial and complete prosthodontics.

110B-C. Elementary Complete Denture Prosthodon­tics. (1-1) W Sp. Prerequisite: Concurrent enrollment in Removable Prosthetics 110B-C. Removable Prosthetics 110B-C is Prerequisite to 110C. Lecture 1 hour.

M. L. Parker

Lectures on the elementary principles of complete denture prosthodontics emphasizing the biological background and clinical application of the technical steps.
180. Prosthodontics. (1) F, W. Sp. Prerequisite: Removable Prosthodontics 130C. 
Brigante
An elective course offering instruction in procedures and materials other than those normally used in the clinic.

181. Fixed and Removable Methods. (1) F, W. Prerequisite: Fourth year standing. Lecture 1 hour.

Augburger
Concepts of vertical and cross-arch stabilization relating to partial prosthodontics are reviewed. Preservation of a few remaining teeth and the edentulous ridge through engineering principles is emphasized. Patient psychology, periododontics and dental implants are related to removable prosthodontics.

Course is designed to acquaint postdoctoral and senior dental students with multidisciplinary aspects of maxillofacial prosthetics. Lectures will be given on maxillofacial prosthetic techniques, oncology, head and neck surgery, plastic surgery, oral surgery, therapeutic radiology, psychology and related oral biology.

Residents and advanced prosthodontic students will observe and perform maxillofacial prosthetic services for patients in the Maxillofacial Clinic. A detailed case history will be required each quarter. Attendance at related tumor board conferences and field trips to other therapy centers.

Restorative Dentistry
171A-B-C. Advanced Restorative Dentistry. (3-3-3) Yr. Lecture 1 hour. Clinic 6 hours. Schuchard, Stark
Recitation and current literature review correlating basic and preclinical science with the practice of restorative dentistry. Selected cases requiring medical and dental diagnostic procedures and treatment planning will be presented.

173. Postdoctoral Clinical Practice. (2) SS. Prerequisite: Restorative Dentistry 171A-B-C. Clinic 6 hours.

Restorative Dentistry is directed toward defining areas of further study and considerations of modifying scope of dental education to include advances. Research protocols are developed and implemented.

177.02. Seminar. (2) SS. Prerequisite: Restorative Dentistry 177.01A-B-C.

177.03A-B-C. Seminar. (2-2-2) F, W. Sp. Prerequisite: Restorative Dentistry 177.02. Seminar 2 hours.

177.04. Seminar. (2) SS. Prerequisite: Restorative Dentistry 177.03A-B-C. Seminar 2 hours.

177.05. Seminar. (2) SS. Prerequisite: Restorative Dentistry 177.04. Seminar 2 hours.

Sconrad, Schuchard, Stark
Continuation of Restorative Dentistry 177.01A-B-C.

Society

A general examination of society and the problems associated with it, summarized as well as broadened through the study of history, sociology and current literature. Students will have the opportunity to present a paper on a topic of interest.

122. Health and Illness in American Society. (3) F. Extess

Broad survey of features of American society that produce either health or morbidity or both. A variety of significant factors are explored in conjunction with ideological implications for the quality and quantity of health care services.

123. Social Systems Theory and Application to Nursing Practice. (2) W. Prerequisite: Fifth quarter standing or consent of instructor. Lecture 2 hours.

Staples
Schatzman
Course presents a theoretical framework from which patient care and health delivery systems can be analyzed, approached, and influenced by the professional nurse.

124. Marriage and the Family. (3) F. Staples

Examinations of family life styles in the United States and other societies. Changing forms of dating and marital practice are explored and the viability of the monogamous nuclear family is examined. An area of interest is Black family patterns.

126. Families of the Third World. (3) W. Lecture 2 hours. Lab 3 hours.

Staples
Examination of family structures and dynamics among Third World peoples. Families to be discussed include African and Afro-American, Asians, Native Americans and Latinos. Emphasis on continuities of the family life for these groups in their native land and the United States.

127. Race and Racism in the Modern World. (3) F. Lecture 2 hours, Lab 3 hours.

Staples
An exploration of factors that create and maintain superordinate-subordinate relations ordered along racial lines. A crosscultural analysis with special emphasis on race relations in the United States.

132. Individual and Change. (3) F. Prerequisite: Consent of instructor. Olsonen

The relationship of social structures to individuals and their behavior. Emphasis will be on individuals as members of society rather than on individuals or society as such.

134. Perspectives on Women's Roles in Health Care and Healing Systems. (3) F. W or Sp. Lecture 3 hours.

Olsenen
Analysis of sex roles in general and women's roles in particular in health care receipt and delivery, with particular emphasis on recruitment problems to health professions, images of women in therapeutic situations, and creation of features of health care.

136. Pain: Social, Organizational and Interactional Aspects. (3) Sp. Lecture 2 hours. Lab 3 hours.

A. Strauss
Pain as experienced, expressed, and managed in a variety of settings by patients, staff, and family. Sociological and organizational perspectives on assessing, legitimizing, and controlling pain.

137. Sociology of Sexual Behavior. (3) F. Lecture 2 hours, Lab 3 hours.

Staples
A sociological perspective of human sexuality as expressed in various forms, varied among different segments of the population and influenced by diverse social forces, with emphasis on sexual relations as an element of social relations.

138. Sociology of Change in Health Care Systems. (3) W. Sp. Prerequisite: Open to upper division and graduate students.

Staff
Review of social change in health care systems with particular attention to implications of change at all system levels such as patients, alternative curic practives, policies, organizations, types of future care. Debate on examination of key issues.

167. Social Organization of Health Care With Primary Emphasis on Hospitals (2) F. Prerequisite: Consent of instructor.

Staff
An inquiry into the nature of the organizational forms by which health care is distributed, with particular emphasis on hospital organization and the interaction among health care personnel.
186. Contemporary Social Problems. (3) § F, W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

205. The Sociology of Health Professions and Occupations. (3) § F, W. Prerequisite: Consent of instructor.

213. Studies in Participant Observation. (3) § W. Prerequisite: Consent of instructor. Schatzman

214A. Discovery of Social Reality. (3) § F, W. Prerequisite: Required for graduate students in sociology. Lecture 1 hour, Lab 3 hours. Schatzman

214B. Discovery of Social Reality. (3) § W. Lecture 2 hours, Lab 3 hours. A. Strauss

214C. Qualitative Analysis. (3) § F, W. Prerequisite: Sociology 214A and 214B. Lecture 2 hours, Lab 3 hours. A. Strauss


219. Political Sociology of Aging. (3) § W. Prerequisite: Consent of instructor. Staff

220. Thesis or Comprehensive Examination. (0) § F, W. Prerequisite: Advancement to candidacy and permission of the graduate adviser.

229. Dissertation. (0) § F, W. Prerequisite: Admission to candidacy and permission of the graduate adviser.

249. Independent Study. (1-8) § F, W, Sp. Prerequisite: Consent of instructor. Olesen and Staff


250. Research in the Field. (3) § F. Lectures 2 hours, Lab 3 hours. A. Strauss

255. The Sociological Method. (3) § F. Olesen and Staff

269. Problems in Microsociology: Urban Life. (2-4) § Sp. Prerequisite: Consent of instructor. Sociology 207 recommended.

271. Seminar on the Future of the Family. (3) § Sp. Lecture 2 hours, Lab 3 hours.

275. The Sociology of Education. (3) § W. Prerequisite: Consent of instructor. Staff

280. Social Psychology of Health and Illness. (3) § F. Prerequisite: Required for graduate students in sociology. Lecture 2 hours, Lab 3 hours. Olesen


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

Speech and Hearing Science

247. Special Studies in Audiology. (1-3) § F, W. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours.

249. Independent Study. (1-5) § F, W. Prerequisite: Consent of instructor. Flower, Owens and Staff

258. Contemporary Social Problems. (3) § F. Staff

262. Social Psychology of Health and Illness. (3) § F. Prerequisite: Required for graduate students in sociology. Lecture 2 hours, Lab 3 hours. Olesen

263. Social and Psychological Aspects of Chronic Illness. (3) § F, W. Prerequisite: Consent of instructor.

268. Contemporary Social Problems.

270. Microsociology. (2-4) § W. Prerequisite: Consent of instructor.

Olesen

Analysis of social behavior utilizing concepts of terri- toriality, proxemics, social schema; review of relevant animal studies, as well as such concepts as privacy, consideration of cross-cultural uses of space.

271. Seminar on the Future of the Family. (3) § Sp. Lecture 2 hours, Lab 3 hours.

278. The Sociology of Education. (3) § W. Prerequisite: Consent of instruction.


A graduate research seminar on selected problems in microsociology especially related to urban life, the urban environment, and its bearing on health care settings such as clinics. Application and critique of research and concepts in this area.


A critical review of classical and recent contributions to the sociology of formal organizations. A variety of types of organizations will be considered, with special emphasis on service organizations.

298. Problems in Microsociology: Urban Life. (2-4) § Sp. Prerequisite: Consent of instructor. Olesen and Staff

An advanced seminar dealing with theoretical and conceptual problems in various areas of social psychology. Recent developments in theory and concept will be reviewed.

295. Problems in Microsociology: Urban Life. (2-4) § Sp. Prerequisite: Consent of instructor.

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

Speech and Hearing Science

247. Special Studies in Audiology. (1-3) § F, W. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours.

Directed reading and laboratory work in the auditory process and its disorders.
psychophysical, and behavioral aspects of the speech and hearing sciences.

Surgery

110. Required Core Clinical Clerkship in General Surgery. (1½ per week) Su, F, W. Sp. Prerequisite: Core curriculum in basic sciences.

Ebert, Blaisdell, L. Way

Core general surgery in surgery. Students assigned to wards and clinics at UC, SFGH, VA, and C. The application of basic sciences to surgery is emphasized in ward rounds and seminars.


T. Hunt, Blaisdell, L. Way

Students serve as senior clerks on the wards and in the operating rooms at UC, SFGH, and VA. Rounds and seminars focus on the pathological approach to surgery.

140.01. Advanced General Surgery Clerkship. (1½ per week) Su, F, Sp. Prerequisite: Surgery 110 and 111.

T. Hunt

Senior clinical clerks participate in clinic, ward, and operating related experience with the Medical Student Surgical Services. Students work as interns on the surgical service.

140.02. Clinical Clerkship. (1½ per week) Su, F, W. Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111.

R. Lim and Teufel

Students serve as junior clerks on the wards and in the operating rooms at UC, SFGH, and VA. Rounds and seminars focus on the physiological approach to surgery.

140.07. Shock and Trauma Research. (1½ per week) Su, F, W. Sp. Prerequisite: Core curriculum in basic sciences and medicine 110 or Surgery 110 and 111.

Sheldon

Course involves clinical and laboratory investigation and a detailed study of specific patients with trauma and shock.

140.08. General Surgery Clinical Clerkship at C. (1½ per week) Su, F, W. Sp. Prerequisite: Second and third year clinical clerkship in surgery. V. Richards

Students work as interns on Surgical Service; they evaluate general surgical patients pre-operatively; work with patients in operating rooms; assume student responsibility in post-operative and pre-operative care at UC, SF GH, VA, and RDMC.

140.09. Clinical Clerkship in Trauma Surgery. (1½ per week) Su, F, W. Sp. Prerequisite: Surgery 110 and 111 and consent of instructor.

Sheldon

Clinical clerkship in the trauma service of the Department of Surgery at SF GH. The student will work an intern-clerk level as an integral part of the service.

140.10. Clinical Experience in Cardiothoracic Surgery. (1½ per week) Su, F, W. Sp. Prerequisite: Medicine 110 or Surgery 110 or 111.

Ullyot

As an integral member of the cardiothoracic team, the student directly and actively shares in pre-operative evaluation, operative procedures, and postoperative care. Cardiac and thoracic conferences and daily ward rounds provide the didactic teaching.

140.11. Burn Care Elective. (1½ per week) Su, F, W. Sp. Prerequisite: Surgery 110.

Trunkey

Clinical rotation on a large Burn Service Center. Pathophysiology of thermal injury including pulmonary aspects will be stressed. Students act as integral members of the team and participate directly in patient care.


Gant

Instruction in techniques of wound repair and healing, management of maxillofacial trauma, and planning and indications of various types of wound closure, flaps, and skin grafting. Emphasis given to complications and sequelae of burns, head and neck surgery, and the extremities.

160.03. Clinical Cardiopulmonary Surgery. (2) Sp. Prerequisite: Third or fourth year standing. Lecture 2 hours.

Sheldon

Seminars are conducted on a series of subjects relating to cardiopulmonary surgery, which may be attended separately or in conjunction with weekly rounds on cardiopulmonary patients.

160.05. Advanced Surgery Reading Course. (2) F. Sp.

Trunkey

A weekly seminar where previously assigned papers are discussed and critiqued. Papers representing the classical and current concepts in general surgery are covered.


Sheldon

Course emphasizes nutritional and metabolic requirements of injured, ill, and malnourished patients. Clinical rotation involves methods of preparation, administration, and assessment of patients receiving calorie protein or amino acid support as part of specific therapy.

170.01. Basic Surgical Techniques. (1) F, W. Prerequisite: Anatomy 100. Early registration to course with instructor recommended; Enrollment limited. Lab 4 hours.

Sheldon

Course emphasizes the basic principles of operative surgery including anesthetic and operative techniques. Students function as surgeon, assistant surgeon, and assistant in preparation of specific operations on animals and use of anesthetics. Postoperative evaluation, management, and cardiovascular resuscitation are also emphasized.

170.02. Emergency Medical Care at SF GH. (1) F. Lecture 2 hours given in alternate weeks.

R. Lim and Staff

Topics include first aid care with an introduction to suturing, splinting, resuscitation, psychosomatic emergency, and civil disaster. Format includes lectures, demonstrations, and a tour of Mission Emergency. Course is offered primarily for first and second year medical students.

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

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

199. Laboratory Project in Surgery. (1-5) F, W. Sp. Prerequisite: Consent of instructor. Ebert and Staff

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

400. General Surgical Staff Conferences. (1½) F, W. Sp. Prerequisite: Surgery 110 and 111.

Ebert, VA, L. Way

Conferences include presentation of case studies with reference to the literature, case records, laboratory tests, and special studies. Faculty and occasional guest lecturers discuss surgical problems. Death and complications are reviewed weekly.


UC, UCB, Sp. Prerequisite: Consent of instructor.

Seminars include case reports and demonstrations of the currently available gross and microscopic surgical pathological material from the operating rooms and pathology laboratories.


RDMC, Heer, SF GH, Blaisdell, L. Way, Sheldon

Seminar is held in the surgical wards with discussion of current problems concerning the diagnosis and management of general surgical patients.


Ebert, V. Richards

Residents, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postoperative care, and attendance at follow-up clinic. Senior residents have certain additional administrative, teaching, and clinical responsibilities.

452. Experimental Surgical Laboratory. (1½ per week) Su, F, W. Sp. Prerequisite: Surgery 450 and 452 may not be taken concurrently.

UC, Ebert, SF GH, Blaisdell, L. Way

Course includes experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in general surgery.


Ebert

Assistant residents in off-campus hospitals approved by the chairman of the department and the Dean. Course includes clinical and experimental investigations of general surgical problems and the
development of technical and laboratory methods to be applied in surgery.


SFH G Bladderell

Interns rotate through the general surgical service, including the intensive care unit. Under the direction of the attending staff, experience is provided in vascular, chest, hand and plastic surgery, and surgery of maxillofacial injuries.


UC Ebert

Interns, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postoperative care, and attendance at follow-up clinic.

Teaching Methodology


Staff

Course provides resource information in the form of a systematic overview of educational technology. This information is introduced in conjunction with the development by the individual student of an actual microcourse, teaching a single skill.


Staff

Practical teaching experience in selected courses under the supervision of members of the staff.

180.02A-B-C. Teaching Methods. (0-3, 0-3, 0-3) F, W, Sp. Prerequisite: Fourth year standing or consent of instructor. Lecture 1 hour

R. J. Miller

Predominantly group discussion based on selected readings in educational methodology. Specialists in education are invited to participate. Practical experience in teaching is included in Teaching Methodology. Students teach in selected courses under supervision.

186.01A-B-C. Practice Teaching. (0-3, 0-3, 0-3) F, W, Sp. Lab 3 hours

R. J. Miller

Practical teaching experience in selected courses under the supervision of senior members of the staff.

Urology

Core Clerkship — Surgery 110 includes clinical clerkships in the outpatient clinics and hospitals, assistance at operations, and participation in residents’ seminars.

140.01. Urology Clinical Clerkship at UC. (1 ½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. 

Tanagho

Students work as interns on the Urology Service at UC. They also attend rounds and scheduled seminars with residents and visiting staff.

140.02. Urology Clinical Clerkship. (1 ½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. 

Tanagho

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

140.03. Urology Clinical Clerkship at V.A. (1 ½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. 

Meares

Students work as interns on the Urology Service at V.A. They also attend rounds and scheduled seminars with residents and visiting staff.

140.04. Urology Clinical Clerkship at SFH. (1 ½ per week) Su, F, W, Sp. Prerequisite: Surgery 110. 

F. Hinman

Students work as interns on the Urology Service at SFH. They also attend rounds and scheduled seminars with residents and visiting staff.

170.01. Fundamentals of Urology. (2) F, W. Sp. Prerequisite: Consent of instructor. 

Tanagho and Staff

Seminar and library research.


Tanagho and Staff

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


Prerequisite: Consent of instructor. 

Tanagho and Staff

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


D. R. Smith

Seminar includes study of the basic sciences and urologic roentgenology with members of the attending staff.


Tanagho

Course includes experimental investigation in urologic problems.


D. R. Smith

Seminar includes discussion of diagnosis and treatment of patients in the urology wards with the attending staff.


D. R. Smith

Conference includes presentation and discussion of urologic problems by the house staff and faculty.