COURSES

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

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

**Abbreviations**—These abbreviations are used where applicable: Su = summer term, SS = summer session, F = fall quarter, W = winter quarter, Sp = spring quarter, Yr = three consecutive quarters: A = course taught in the fall quarter, B = course taught in the winter quarter, and C = course taught in the spring quarter. For courses where units are followed by a §, the courses so designated are open to graduate academic students for credit. Hospitals are designated by the following initials:

- A, Alta Bates Hospital, Berkeley.
- C, Children's Hospital and Adult Medical Center, San Francisco.
- CC, Crippled Children's Hospital, Phoenix, Arizona.
- CCP, Center for Training in Community Psychiatry, Berkeley.
- CHMC, Children's Hospital Medical Center of Northern California, Oakland.
- CHS, Community Hospital of Sonoma County, Santa Rosa.
- CM, Cowell Memorial Hospital, Berkeley.
- F, Franklin Hospital and Medical Center, San Francisco. Refer to RDMC.
- FR, French Hospital, San Francisco.
- GS, Good Samaritan Hospital, San Jose.
- H, Highland General Hospital, Oakland.
- IMBB, Irwin Memorial Blood Bank, San Francisco.
- K, Kaiser Foundation Hospital, San Francisco.
- KP, Kaiser Permanente Medical Center, Oakland.
- KSSF, Kaiser Foundation Hospital, South San Francisco.
- L, Letterman Army Medical Center, San Francisco. (Formerly Letterman General Hospital)
- LPNI, Langley Porter Neuropsychiatric Institute, San Francisco.
- MC, Maricopa County Hospital, Phoenix, Arizona.
- MG, Marin General Hospital, Ross.
- MM, Mills Memorial Hospital, San Mateo.
- MZ, Mt. Zion Hospital and Medical Center, San Francisco.
- NRMC, Naval Regional Medical Center, Oakland. (Formerly Oak Knoll)
- OC, O'Connor Hospital, San Jose.
- P, Perata Hospital, Oakland.
- PH, Peninsula Hospital and Medical Center, Burlingame. (Formerly Peninsula Hospital)
- PHS, United States Public Health Service Hospital, San Francisco.
- PMC, Pacific Medical Center, San Francisco. (Formerly Queen's Hospital)
- RDMC, Ralph K. Davies Medical Center, San Francisco. (Formerly Franklin Hospital)
- RLA, Rancho Los Amigos Hospital, Downey.
- S, Stanford Medical Center.
- SCC, Santa Clara Valley Medical Center, San Jose.
- SFCH, San Francisco Community Health Service, San Francisco.
- SFGH, San Francisco Medical Center, San Francisco. (Formerly San Francisco General Hospital)
- SGH, Scenic General Hospital, Modesto.
- SH, Shriners Hospital for Crippled Children, Honolulu, Hawaii.
- SJ, San Joaquin General Hospital, Stockton.
- SM, Samuel Merritt Hospital, Oakland.
- SRM, Santa Rosa Memorial Hospital, Santa Rosa.
- SSF, Shriners Hospital for Crippled Children, San Francisco.
- STA, St. Agnes' Hospital and Medical Center, Fresno.
- STJ, St. Joseph's Hospital, San Francisco.
- STL, St. Luke's Hospital, San Francisco.
- STM, St. Mary's Hospital and Medical Center, San Francisco.
- T, Tripler Army Medical Center, Honolulu, Hawaii.
- UC, University of California Hospitals and Clinics, San Francisco. (Includes UC, Moffitt, and Ambulatory Care Center)
- VA, Veterans Administration Hospital, San Francisco.
- VAF, Veterans Administration Hospital, Fresno.
- VAP, Veterans Administration Hospital, Phoenix, Arizona
- VAPA, Veterans Administration Hospital, Palo Alto.
Ambulatory and Community Medicine

VMC, Valley Medical Center of Fresno, Fresno, California

VPC, Valley Park Convalescent Hospital, Mill Valley, California

Course Numbers—All courses are numbered according to the following system: 100 series = upper division professional course, 200 and 300 series = graduate level 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 consent. Lecture 3 hours, Seminar 1 hour. Petrikas

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

110. Required Clinical Clerkship in Ambulatory and Community Medicine. (1½ per week) Su, F, W, Sp. Prerequisite: Determination by students, clinical personnel, and experience in utilizing appropriate community health resources for solution of medical and family problems.

110.01. Internal Medicine Clerkship at VMC. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Howard

Students participating in this clerkship will be introduced to family medicine in the broadest sense. They will be encouraged to see families themselves, but will participate where needed.

110.02. Emergency Medicine Clerkship at VMC. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Howard

Students are assigned to a variety of health agencies where they will have contact with patients. Seminars may be used to clarify issues. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare participate where needed.

110.03. Ambulatory and Community Medicine/73

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

160.01. Clinical Aspects of Community Medicine. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Barbaccia, Howard

Students are assigned to a variety of health agencies where they will have contact with patients. Seminars may be used to clarify issues. Faculty from Schools of Medicine, Public Health, Nursing, Dentistry, and Social Welfare participate where needed.


Clinical demonstrations and case presentations representative of occupational and environmental disease.

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

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

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

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


Students meet in small group seminars led primarily by family physicians. Through 110 and Pediatrics, 110, 111, 112, and 113, and 114, and continued contact with families undergoing medical care, students will be introduced to family medicine in the broadest sense.

160.08. Introduction to Family Therapy. (1) F, W. Seminar 3 hours. Ransom, Schroder

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

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

Seminars explore one area or more in social medicine or community health. Faculty from Social 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 or crippling disease in children, surgical specialties, or disorders of special senses, individualized programs will be arranged to integrate rehabilitation services and related facilities.

171. Computers and Problem Solving with Applications to Health Care. (3) § F, Wasserstein, Tulle, Bios

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, W, Tennehouse

Fundamental legal principles and procedures affecting medical practice including civil, criminal, administrative, business, and insurance law, with emphasis on medical negligence, malpractice, and the medicolegal aspects of the operation of health care systems.

173. Clerkship Seminar in Primary Care. (1½-2) F, Sp. Prerequisite: Must be enrolling students to social, political, economic, and environmental factors influencing community health and provision of care. Topics include clinical preventive health care, community health planning, and formulation of social health policy.


Lectures and seminars introduce entering students to social, political, economic, and environmental factors influencing community health and provision of care. Topics include clinical preventive health care, community health planning, and formulation of social health policy.


Prerequisite: Third or fourth year standing for Pharmacy students (required course); consent of instructor for other students.

Petkas

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

184. Contemporary Spanish-Speaking Subcultures. (3) F, W. Prerequisite Consent of instructor.

Sanchez

Investigation of selected theories of migration, urbanization, assimilation, and conflict with an emphasis on diverse Spanish-speaking populations in urban areas; relationships between this grouping and formal institutional settings, such as education, law enforcement, and medical services.


Barbaccia, Adamson

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 and regulation and control, economic policies, government programs, and health services research.

186. Work/Health Problems in a Clinical Setting (11-2) F. Lecture 1½ hours. Pulitzer project or research required for 2 units.

Werdegar, Brodsky

Presentations of current types of patients with specific health problems. Students are required to interview patients struggling with unresolved employment problems imposed by medical diagnosis.

187.01. Practitioner-Patient Relationship I. (1-1) F. Seminar 1½ hours.

Schroder, Dienst

Explores communication skills and variables of interviewing techniques in medicine and related fields. Direct observation of interviews conducted by physician and practitioners; post-interview discussion with providers and/or patients. Analysis of key elements of practitioner-patient interaction through videotape review.

187.02. Practitioner-Patient Relationship II. (1) W. Seminar 1½ hours.

Schroder, Dienst

Provides experience in various interviewing contexts through 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. L. 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.

L. and Staff

An introductory series relating health care issues to health policy and ethical analysis, specifically, "Principles of Health Policy and Ethical Analysis—A Case Study Review."

188.03. Health Policy Seminar. (2) Sp.

P. L. and Staff

An introductory series relating health care issues to health policy and ethical analysis, specifically, "Financing Health Care.

188.04. Practitioner in Therapeutic Relationships: An Interdisciplinary View. (2) W.

P. L. and Staff

Descriptions of practitioner-patient interactions, followed by explanation of practitioner's actions by past forces of education, socialization, personality, and present organizational. Psychological, sociological, economic, political and health policy viewpoints are evaluated. Emphasis is placed on the on the biomedical, and ethical and policy dimensions of several current medical care situations in respect to their implication to the role of the pharmacist in the health care.

188.05. Practitioner-Patient Relationship: An Interdisciplinary View. (2) W.

P. L. and Staff

Descriptions of practitioner-patient interactions, followed by explanation of practitioner's actions by past forces of education, socialization, personality, and present organizational. Psychological, sociological, economic, political and health policy viewpoints are evaluated. Emphasis is placed on the on the biomedical, and ethical and policy dimensions of several current medical care situations in respect to their implication to the role of the pharmacist in the health care.

189.01. Workshop in Ethics and Medical Care. (1) W.

P. L. and Staff

Lecture and workshop discussion of several medical care situations in respect to their ethical and public dimensions; care of endangered and defective newborns, experimental use of normal cholesterol, the right of informed consent, right to treatment, the sign of Clinical Research Involving Human Subjects.

189.02. Workshop in Ethics and Biomedical Issues. (1) F, W.

P. L. and Staff

Lecture and workshop discussion of ethical and policy dimensions of several current biomedical issues: aging and health care, fetal research, behavior technology, and the role of the pharmaceutical industry in health care.


Prerequisite: Consent of Instructor. Seminar 3 hours.

Ransom, Schroder

Students observe family therapy sessions, both live and on videotape. Role playing family situations and related psychotherapeutic strategies will be emphasized. Appropriate readings are assigned and discussed in seminar.

198. Supervised Study in Ambulatory and Community Medicine. (1-5) F, W. Prerequisite Consent of instructor.

Staff

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

200. Scientific, Ethical and Legal Design of Clinical Research Involving Human Subjects. (2) F.

Prerequisite: Substantive standing.

Jonsen, M. Parker, Sheiner

Jonsen, M. Parker, Sheiner

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

201. Ethical Theory. (4) F.

Prerequisite: Consent of instructor.

Jonsen, Lebacqz

Lecture 3 hours, Independent study 3 hours.
400. Family Practice: Seminars in Med­
Scheibel, Fishbein
Radiologists on attending staff present systematic overviews of important issues of interpreta­
tion of X rays as needed by the family physi­
cian. Roentgen findings in selected medical, surgical, pediatric, urological, obstetric, and orthopaedic problems are covered. Normal findings and their variants are stressed.
401. Family Practice: Office Counseling and Family Therapy at CHS. (1 ½) Su, F, W, Sp. Ransom, Grace
Theory and techniques for working with common emotional, behavioral and interper­
sonal problems are developed. The process is facilitated by the use of a one-way mirror, video-recording, and case conferences.
402. Family Practice: Staff Confer­
ces at CHS. (3) Su, F, W, Sp. Menachof
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.
403. 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.
404. Family Centered Health Care at CHS. (4) Su, F, W. Sp. Lecture 3 hours, Lab 3 
hours. Ransom, Grace
Theory and techniques of family-centered 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. BS Barnett, VMC Mohanty
Weekly lectures, rounds, informal semi­nars, and case presentations are conducted by visiting faculty members from the Univer­
sity of California San Francisco representing diverse clinical disciplines and basic sci­
ences.
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 Confer­
ces in Internal Medicine at CHS. (4) Su, F, W, Sp. Gude
Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in family practice, intern­
nal medicine, and its various subspecialties.
406.02. Family Practice: Conferences in Surgery at CHS. (1 ½) Su, F, W, Sp. Cary, Fraser
Family practice residents and members of attending staff prepare and present case histories of patients as well as clinical reviews of selected problems in general surgery and its various subspecialties.
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.
409. Seminar on Issues in Family Prac­
tice at CHS. (1½) Su, F, W, Sp. R. Barnett, Dervin
Resident physicians meet weekly to dis­cuss a broad range of issues 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 sem­
inar format.
A series of conferences on family process and family change, utilizing speakers promi­
rent in the field of family therapy. A forum type atmosphere is encouraged with inter­
change between speaker and audience.
432. Family Practice: Clinical Confer­
ces at SFGH. (1½) Su, F, W, Sp. Massad
Conferences on medical subjects rele­vant to ambulatory care with participation by members of the faculty of the Family Practice Residency and appropriate representatives of diverse specialties. Series of meet­
ings about specific problems are scheduled.
A series of seminars in which specific projects of Family Practice residents are pre­
ferred, or in which broad issues are dis­cussed that relate health care problems to the patients' sociocultural milieu.
450. Clinical Ambulatory and Commum­
ity Medicine Residency Program. (1½ per week) Su, F, W, Sp. Prerequisite: One year postinternship in medicine or pediatrics.
Crede
Clinical training is predominantly in an
ambulatory setting, but limited hospital ad­­missions may be provided. Residents are encouraged to participate in community health activities under the supervision of the faculty and are expected to participate in un­dergraduate medical student instruction.
460. Clinical Primary Care—Medicine. (1½ per week) Su, F, W, Sp. Prerequisite: Refer to Medicine 460. Crede and Staff
Interns in the Primary Care Track of In­
ternal 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.
461. Clinical Primary Care—Medicine. (1½ per week) Su, F, W, Sp. Prerequisite: Refer to Medicine 461. Crede and Staff
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.
Anatomy
100A. Systemic, Regional and Devel­opmental Anatomy. (5) 1 F. Lecture 3 hours, Lab 6 hours.
Anatomy
100A. Systemic, Regional and Devel­opmental Anatomy. (5) 1 F. Lecture 3 hours, Lab 6 hours.
The gross structure of the body is studied by means of dissected cadaver prepara­tion, X ray, surface, developmental and cross-sectional anatomy with special refer­ence to the functional aspects of the struc­tures examined.
100B. Systemic, Regional and Devel­opmental Anatomy. (4) 1½ Lecture 2 hours, Lab 6 hours.
The gross structure of the human body is studied by means of dissecting, demonstra­tion, X ray, surface, developmental and cross-sectional anatomy with special refer­ence to the functional aspects of the struc­tures examined.
100C. Systemic, Regional and Devel­opmental Anatomy. (6) 1½ SS. Lecture 4 hours, Lab 12 hours.
The gross structure of the human body is studied by means of dissecting, demonstra­tion, X ray, surface, developmental and cross-sectional anatomy with special refer­ence to the functional aspects of the struc­tures examined.
100D. Systemic, Regional and Devel­opmental Anatomy. (3) 1½ Lecture 2 hours, Lab 3 hours.
The gross structure of the human body is studied by means of dissecting, demonstra­tion, X ray, surface, developmental and cross-sectional anatomy with special refer­ence to the functional aspects of the struc­tures examined.
102. Histology. (5) F. Lecture 3 hours, Lab 4 hours.

This 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 and for graduate students, Lecture 5 hours, Lab 4 hours.

Ralston, Fields and Staff

The structure and function of the mammalian nervous system studied in lectures, conferences, demonstrations and laboratory sessions on the nervous system and its organization. Intended for students in the School of Medicine and as an introduction for graduate courses.

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

Mills and Staff

A study of the microscopic structures of the tissues and organs of the human body by means of lectures, demonstrations, and microscope slides. Functional aspects of the structures are stressed.

116. Gross Anatomy. (3) § W. Lecture 2 hours, Lab 3 hours. A. Evans and Staff

A study of the macroscopic structure of the 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.

Coleman

Gross anatomy of the trunk, upper extremity, head, neck, and lower extremities is 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. A. McDowell

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. S. Sutherland, Wong-Riley

The structure and function of the nervous system are studied in lectures and laboratory.

150.01. Gross and Regional Anatomy. (1½ per week) § Su, W. Prerequisite: Program must be approved by department and advisor during quarter previous to enrollment.

Asling

150.03. Regional and Topographical Anatomy. (1) F, W. Prerequisite: Second and third year medical students.

Living clinical anatomy is stressed; the diaphragm, complete review of the neck, and abdomen. Clinical congenital anomalies are discussed in detail regarding their relationship to clinical medicine.

170.09. The Language of Anatomy. (1) § Su, W, Prerequisite: Concurrent enrollment in Anatomy 100.

Asling

A three-component elective, to foster vocabulary-building in anatomico-medical terminology, to reflect history of medical and cultural themes influencing development of anatomical nomenclature, and through student oral reports on epymyic terms, to introduce some major figures in anatomy.


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


Course offers advanced training in electron microscopic techniques applicable to basic research and clinical problems.


Course is for students desiring to supplement required course work in anatomy. (School of Dentistry) with additional dissection time. Consent of instructor required.

198. Supervised Study in Anatomy. (1-3) § Su, W, F, W.

Staff

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

199. Laboratory Project in Anatomy. (1-5) § Su, W, F, W.

Staff

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

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

S. Wolf

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

202. Seminar Course on Tissue Culture Methods in Biological Research. (1) W. Prerequisite: Biophysical and biochemical studies on induced in vivo and in vitro mutations that give insight into the structure of chromosomes and the interaction of radiation with biological material.
cytology, development and plasticity of neu­
ral networks, the manner in which neurons
interact and communicate, and their interac­
tion with the cellular and molecular environ­
ment.


Raitson
A seminar series dealing with current lit­
erature in neuroanatomy and neurophysi­
ology.

230. Comparative Placentology and
Foetal Endocrinology, (2) F. Contopoulos
A series of discussions covering the
comparative anatomical and physiological as­
pects of placenta and its role in the
development and the physiology of the foetal
endocrine systems.

231. Molecular and Cellular Analysis
of Development (3) W. Prerequisite: Consent of
instructor.

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

A course in the planning and execution of
research experiments, with emphasis on the
planning, execution, and evaluation of
research.

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

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

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

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

Prerequisite: Consent of instructor.

Hamill
Training in teaching in a course offered by
the Department of Anatomy under the
supervision of instructor in charge. It in­
cludes didactic lecture, preparation and presen­
tation of lecture material, experience in setting up
and correcting of examinations and participation in
course critiques.

Anesthesia

110. Clinical Clerkship in Anesthesia, (1½ per week) Su, F, W, Sp. Prerequisite:
Medicine 130, Psychiatry 130, Ambulatory
and Community Medicine 130, Medicine
131A-B-C, Psychiatry 100, and Pharma­
cotherapy 100.

SFGH Barber, UC Willenkin, VA M. Harper
The course consists of instruction and experience in operating room anesthesia in­
cluding preoperative and postoperative eval­
uation and care. Cardiovascular resuscita­
tion and care of the unconscious patient are stressed. The course is conducted at SFGH,
UC and VA hospitals.

140.01. Clinical Anesthesia, (1½ per
week) Su, F, W, Prerequisite: Medicine
131A-B-C, Pharmacology 100A-B, Physiology
100, and Anesthesia 110.

Hamilton and Staff
Clerkship at UC, SFGH, or VA. Students
Supervised experience in operating room
anesthesia, care of unconscious patients,
management of pain problems, informal lec­
tures and departmental teaching confer­
cences.

140.02. Clinical Clerkship, (1½ per
week) Su, F, W, Prerequisite: Medicine
131A-B-C, Pharmacology 100A-B, Physiology
100, Anesthesia 110, and consent of instruc­
tor.

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

140.03. Intensive Care Clerkship, (1½
per week) Su, F, W, Prerequisite: Limited
to fourth year students with consent of instruc­
tor. Familiarizes students with intensive care
techniques, emphasizing clinical respiratory
and circulatory physiology applied to support
patients with cardiopulmonary insufficiency.
Seminar and discussion groups, active par­
ticipation, and computerized techniques utilized in intensive care
and management of the critically ill.

140.04. Obstetrical Anesthesia, (1½
per week) Su, F, W, Prerequisite: Anesthesia
110, Obstetrics and Gynecology 110 and consent of
instructor.

G. Levinson, Shindler
Course covers anesthesiology and analgesia
for vaginal delivery and cesarean section.
Emphasis is placed on effects of anesthetic
techniques and drugs on normal physiologic
changes in labor and on the placental
transfer of drugs and resuscitation of the
newborn.

178. Anesthesiology, (6) Sp. Prerequi­
site: interns and residents. Clinic

Hamill and Staff
The systemic effects of the various mus­
cle relaxants, sedatives, and stimulants and
the administration of general anesthetic
agents.

400. Anesthesia Staff Conferences, (2)

Stevens, Miller
Course includes didactic lectures in sci­
ences basic to the specialty of anesthesiology, as well as case presentations, clinical discussions, and seminars on current medical literature in anesthesiology.

Anesthesia Clinical Work, (1½ per
week) Su, F, W, Prerequisite: Established
status, required during first year of residency, also during either second or third year.

UC Hamilton
Residents are responsible for anesthetic
care and management of patients in the
operating rooms and outpatient depart­
ments, under immediate supervision of the
staff. Preoperative and postoperative evalu­
ation of patients, oxygen therapy, and resusci­
tation and care of the unconscious patient are stressed.

460. Anesthesia Special Assignments, (1½ per
year) Su, F, W. Prerequisite: Consent of instruc­
tor for anesthesiologists, pathology for children, problems related to open heart surgery, cardiology, and opportunity for
research in related fields.

Animal Science

162. Principles of Laboratory Animal
Science, (3) F, W, Lecture, 1 hour, Lab 6 hours.

Spinnell
Introduction to the selection, anatomical and
physiological peculiarities and preoperative
and postoperative care of animals. Labora­
tory experiments in anesthesia, surgical
experiences, administration of perfusion
techniques, and individual experiments are
included.

Anthropology

221A-B. History and Theory of Anthro­
pology, (3) F, W. Prerequisite: Consent of
instructor. Generally limited to students in
anthropology.

Ruffini
A review of the history and development of
anthropology and its major theoretical ap­
proaches. Lectures, discussion and readings
focus on major issues, trends, personalities, and
present concerns in the field.

230A-B. Culture and Personality, (3–3) F, W. Prerequisite: Consent of
instructor.

Ruffini
Exploration of the relationship between culturally conditioned ways of perceiving, thinking, and evaluating behavior and personality development.

231. Ethnopsychiatry, (2-3) W. Prere­
quivalent: Consent of instructor. Lecture
2 hours, plus research project for 3 units.

M. Clark, Hartog, Lauer, Maduro
Course examines principles of healing systems in the treatment of diseases. Includes
folk healing, cross-cultural comparisons,
research methods, and implications for
community practice. Students study local examples of folk healers or folk
healing institutions.

233. The Anthropology of Aging, (3-3) W. Prerequisite: Consent of instructor. Lecture
2 hours, plus research project for 3 units.

M. Clark
Cross-cultural approaches to roles,
statuses and problems of aged populations.
Cultural factors influencing the condition and
development of aging in anthropological
paradigm. Topics to be covered include cultural
attitudes and values, social relationships and
health problems.

234. Culture and Symbolism, (2-3) F. Prerequisite:
Anthropology 230A or equiva­
 lent, or consent of instructor: Lecture 2 hours, plus research project for 3 units. Maduro
Symbolic expressive behavior is considered
from psychoanalytical, psychoanalytical per­
spectives. Various projective
systems are analyzed: psychological
dreams, fantasy, myths, religious cultu­
as, altered states of consciousness, and heal­
ing procedures.

235. Transcultural Aspects of Child­
hood, (3) F. Prerequisite: Consent of
instructor. Lecture 2 hours, plus research paper.

Koss
A review of child development, child rearing
and family dynamics in various non­
western cultures and in selected ethnic sub­
cultures of the United States. Cultural context of
personality formation, deviations in

development and childhood illnesses will be discussed.

237. Hallucinogens and Culture. (3) § Sp. Prerequisite: Consent of instructor.

deRios

A cross-cultural survey of the use of mind-altering plants in religion, treatment of disease and magic. A wide range of non-Western societies will be included, from hunters and gatherers, incontinent agriculturalists, intensive farmers, to the ancient civilizations.

240. Urban Anthropology. (2-3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 hours independent study for 3 units.

Ablon

The culture of modern cities. Evaluation of theories and methods for understanding urban behavior. Ethnic, racial, and subcultural minorities in modern cities. The relevance of anthropological concepts for health planning. Field research project required.

241. Social Deviance. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, plus field research project. Ablon

A review of theory and concepts dealing with social deviance. Example topics will be on deviant life styles and subcultural groups in urban areas.

242. Anthropological Considerations in the Contemporary Health Field. (2-3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, plus research project for 3 units.

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


Todd, Ruffini

Cross-cultural survey of problems at law-medicine interface, including medical determinants of legal status; complementary/competitive approaches to alcoholism, drugs, sexual conduct; therapeutic functions of societal sanctions (witchcraft, possession); 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 the legal problems, needs, and behavior of the elderly, relating data from other societies to problems in the contemporary United States. Concepts, theories, and methods drawn from anthropological, legal, and gerontological literature.

245. Health and Human Migration. (2-3) § Sp. Prerequisite: Consent of instructor. Zarugh

Examination of a variety of topics of migration, including the cross-cultural components of physical, psychological, and social and health implications of these population movements. Special emphasis is placed on demographic growth, fertility, pre-natal development, birth, early postnatal development, adolescence, senescence, and developmental adaptation and racial differences in growth.

246. Comparative Medical Systems. (2-3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, plus 3 credits 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, prognosis, treatment, and preventive settings, and the therapeutic encounter.

247. Group Study. (1-5) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Groups of two or more collaborate on special problems in anthropology under the direction of the faculty. Students may select areas related to their long-term interest and future research program.

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

Independent study.

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

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

255A-B-C. Seminar in Medical Anthropology. (3, 3, 4) § F, W, Sp. Prerequisite: Consent of instructor. Lectures, problems, and independent study 3 or 6 hours for additional units.

M. Clark, Dunn

Examination of the human growth process; critical periods of growth - adolescence, senescence; and developmental adaptation and racial differences in growth.

260. Epidemiology and Medical Anthropology. (5-5) § F, W. Prerequisite: Consent of instructor. Rutter

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

263. Statistical Methods in Medical Anthropology. (2) § F. King

A comprehensive, year-long course of study, including the application of statistical methods and data analysis applicable to medical anthropology. Discussion is based on proposed research projects of students in the course.

265. Biological Perspectives on Growth and Development. (2) § Sp. Prerequisite: Consent of instructor. Koss

Pawson

Examination of the human growth process with emphasis on: cellular and growth differentiation; biochemical basis of growth and development; factors promoting growth - nutrition, hormones, especially growth hormone; and consideration of problems and treatments presented by growth retardation and precocious growth.

268. Principles of Human Variation. (2) § W. King, Pawson, Petrikis

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

270. Research in Population. (2) § W. Ernstner

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 relevant to the use and acceptability of contraceptive methods.

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

Independent study.

299. Dissertation. (0) § F, W, Sp. Prerequisite: Consent of instructor. Staff

Dissertation for the Ph.D. degree.

300A-B. Cell Structure and Function. (5-5) § F, W. Prerequisite: Consent of instructor. Rutter

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

300A-B-C. General Biochemistry. (3-3-3) § F, W. Prerequisite: Calculus, physical chemistry, organic chemistry, introductory biochemistry, and an advanced course in biology are recommended. Students with adequate background may enter at any quarter with the consent of the instructor.

M. Goodman, McCarthy, Boyer

A comprehensive, year-long course of lectures, problems, and group discussions.
Bacteriology

151B. Biostatistics. (2) W. Mizis

Elementary statistical concepts including mean, median, mode, centiles, standard deviation, z-scores, probability, binomial distribution, normal curve, and one-sample hypothesis testing. Simple group research projects are undertaken. Examples taken from dentistry, biology and medicine.

151C. Biostatistics. (2) Sp. Citron Pearson-r, two-sample tests, standard error, large and small sample tests, confidence limits, chi-square tests are covered. Group research projects will be undertaken summarizing dental research literature, and statistical tests will be performed on data gathered in the clinic.

180. Biomathematics. (1) Sp. Jendresen A survey of current research in biomathematics, including applications of differential equations to a variety of biological problems.

193A-B-C. Advanced Calculus and Differential Equations. (3-3-3) F, W, Sp. Pre-requisite: Biomatematics 190A-C or consent of instructor.

200A-C. Introduction to Biochemistry. (3) § Sp. Pre-requisite: Consent of instructor. This course acquaints biennially with Biochemistry 200A-C.

201A. Physical Biochemistry I. (3) § F. Sp. Pre-requisite: A year each of organic and physical chemistry, or consent of instructor. Yang Application of physical concepts and experimental methods to the study of the structure and function of biopolymers.


Methods of digital and analog computation with applications to biochemical and physiological research. Elements of Fortran programming, numerical analysis, and data processing. Demonstrations and exercises on computers.

203. Introduction to Biomathematics. (3) § Sp. Landahl, Martinez, Peller Mathematical modeling of enzyme kinetics, metabolic and hormonal control mechanisms, computer techniques for the analysis of biochemical systems, and enzyme kinetics. Course may be taken for credit or for personal development.

204. Advanced Calculus and Differential Equations. (3-3-3) F, W, Sp. Pre-requisite: Consent of instructor. Advertisement for candidacy and permission of the graduate adviser.

207. Biochemistry of Connective Tissues. (3) § W. Pre-requisite: Biochemistry 110A-B-C, or equivalent. Offered in alternate years.

211. Biological Transport Systems. (1) § Sp. Pre-requisite: Biochemistry 100A-B, Physiology 100, and Physical Chemistry 110B-A, or equivalents. (Sant) Santi An advanced course in the study of the structure, function, and metabolic control of the biological transport systems.

213A-B. Bio-Organic and Enzyme Mechanisms. (2-2) § F, W. Biocatalytic reactions of complex biological systems. Emphasis is placed on understanding catalytic mechanisms involved in enzymatic reactions, and to the development of enzyme model systems. Santi

215. Preparation for Research in Biochemistry and Biophysics. (3) § F, W, Sp. Pre-requisite: Consent of instructor. Jendresen A laboratory research course to familiarize new departmental graduate students with various approaches to biochemical and biophysical research.


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

299. Dissertation. (0-5) § F, W, Sp. Pre-requisite: Approval to candidacy and permission of the graduate adviser. Landahl and Staff

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

299. Dissertation. (0) § F, W, Sp. Pre-requisite: Approval to candidacy and permission of the graduate adviser. Staff

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


Biostatistics

200A-C. Introduction to Biochemistry. (3) § Sp. Pre-requisite: Consent of instructor. This course acquaints biennially with Biochemistry 200A-C.

201A. Physical Biochemistry I. (3) § F. Sp. Pre-requisite: A year each of organic and physical chemistry, or consent of instructor. Yang Application of physical concepts and experimental methods to the study of the structure and function of biopolymers.


Methods of digital and analog computation with applications to biochemical and physiological research. Elements of Fortran programming, numerical analysis, and data processing. Demonstrations and exercises on computers.

203. Introduction to Biomathematics. (3) § Sp. Landahl, Martinez, Peller Mathematical modeling of enzyme kinetics, metabolic and hormonal control mechanisms, computer techniques for the analysis of biochemical systems, and enzyme kinetics. Course may be taken for credit or for personal development.

204. Advanced Calculus and Differential Equations. (3-3-3) F, W, Sp. Pre-requisite: Consent of instructor. Advertisement for candidacy and permission of the graduate adviser.

207. Biochemistry of Connective Tissues. (3) § W. Pre-requisite: Biochemistry 110A-B-C, or equivalent. Offered in alternate years.

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

299. Dissertation. (0-5) § F, W, Sp. Pre-requisite: Approval to candidacy and permission of the graduate adviser. Landahl and Staff

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

299. Dissertation. (0) § F, W, Sp. Pre-requisite: Approval to candidacy and permission of the graduate adviser. Staff

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

16. Organic Chemistry—Laboratory. (3) W. Prerequisite: Chemistry 11, Lecture 1 hour, Lab 6 hours. Ortiz de Montellano Laboratory techniques in organic chemistry. The preparation and study of organic compounds, with an introduction to quantitative organic analysis.


115. Physical Chemistry. (5) F. Prerequisite: Chemistry 5 or equivalent laboratory course in qualitative analysis and differential and integral calculus. Lecture 4 hours, Conference and demonstration 1½ hours. Shetlar, Kunz

116. Physical Chemistry. (2) W. Prerequisite: Chemistry 115 or equivalent. Lecture 1½ hours. Conference and demonstration 1½ hours. T. James

120. Survey of Physical Chemistry. (2) F. Prerequisite: Differential and integral calculus and college physics. Shetlar, Kunz

151. Physical Chemistry. (3) F. Prerequisite: Chemistry 116 or equivalent. Lecture, 1 hour, lab 9 hours. Craig

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

160. Advanced Physical Chemistry. (3) Sp. Prerequisite: Two quarters of physical chemistry or consent of instructor. Shetlar Theory and applications of chemical kinetics.

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


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

198. Supervised Study in Chemistry. (1-5) F, W. Sp. Prerequisite: Consent of instructor. Castagnoli, Wolff

202. Advanced Organic Chemistry. (3) Sp. Prerequisite: Chemistry 113 and 157, or equivalent. Chemistry 165 recommended. Craig, Wolff

204. Organic Chemistry: Reactions and Synthetic Methods. (2) § F. Prerequisite: Chemistry 113 and 157, or equivalent. Chemistry 165 recommended. Craig

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

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

253A. Practicum in Biostatistical Computation. (3) § F. Prerequisite: Consent of instructor. Staff

253B. Practicum in Biostatistical Computation. (3) W. Prerequisite: Consent of instructor. Staff

Chemistry

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

12. Organic Chemistry. (3) W. Prerequisite: Chemistry 11. Craig A continuation of the study of compounds of carbon including some aromatic compounds.
local instruments; calibration procedures, methods for determining accuracy, and procedures of test results.

102A-B. Immunochemistry. (1-1) W, Sp. Prerequisite: Clinical Laboratory Science 102A is prerequisite to 102B. Lecture 1 hour, Lab 1 hour.

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


This course completes the pharmacology requirements of Clinical Laboratory Science students. Course content is similar to that of Pharmacology 126C, but is much briefer. Emphasis is placed on laboratory aspects of drug therapy.

105. Clinical Laboratory Computer Science. (2) W, Sp. Prerequisite: A.B. in premedical or biological science. Henley

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

120. Statistical Methods Applicable to Quantitative Patient Data. (2) W, Sp. Prerequisite: Consent of instructor; a familiarity with basic statistical and biostatistical concepts.

Sheiner, E. Slaffoff

An overview of modern statistical approaches to the analysis and understanding of quantitative patient data, primarily as available through the clinical laboratories. Topics include: quality control, normal values, multivariate structure, parametric and non-parametric approaches, and forecasting and classification methods.

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

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

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

Nussenbaum

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

207A-C. Enzymology. (2-2-2) F, W, Sp. Prerequisite: Consent of instructor. Joyce

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

209. Quality Control. (2) W, Sp. Prerequisite: Enrollment in Clinical Laboratory Science master's program. Barr

A review of principles of statistics and their application to quality control in the clinical laboratory; legal aspects of quality control, preventive maintenance.

210A-B. Clinical Pathology Seminars. (1-1) F, W. Prerequisite: Consent of instructor.

Brocher, Loken

Specialists on various established and proposed laboratory tests will present in interpretation and evaluation of tests as related to pathophysiology.

212A-B. Laboratory Management. (2-2) W, Sp. Prerequisite: Enrollment in Clinical Laboratory Science master's program. Bennington, Westlake

A survey course in management principles important to the clinical laboratory. Special emphasis will be given to laboratory organization, budgeting, and cost analysis.

215. Clinical Toxicology. (2) W, Sp. Prerequisite: Consent of instructor. P. Reynolds, McKie

This course acquaints students with the implications as well as the systematic schemes and specific techniques of volatiles, acidic, neutral and basic drugs, metals, and miscellaneous drugs and toxic agents encountered in clinical and forensic laboratories.

216. Clinical Toxicology Laboratory. (2) W, Sp. Prerequisite: Consent of instructor. Staff

This course will be given as a three week training program in one of the most active toxicology laboratories in the Bay Area.

230A. Clinical Microbiology. (2) F, W, Sp. Prerequisite: Consent of instructor. Hadley

Principles of clinical laboratory methods for diagnosis of infectious diseases are reviewed. Newer detection methods (immunofluorescence, radioimmunoassay, gas chromatography) are examined. In-vitro methods of susceptibility testing and assay of antimicrobial drugs are discussed and critically evaluated.

230B. Clinical Microbiology. (2) F, W, Sp. Prerequisite: Consent of instructor. Hadley

Principles of clinical laboratory methods for diagnosis of infectious diseases are reviewed. Newer detection methods (immunofluorescence, radioimmunoassay, gas chromatography) are examined. In-vitro methods of susceptibility testing and assay of antimicrobials are discussed and critically evaluated.

254. Clinical Immunology. (2) F, W, Sp. Prerequisite Consent of instructor. Senyk

Principles of antigen-antibody reactions and the evaluation of their usefulness in the diagnosis of disease. The role of cellular and humoral immunity in host defenses against infections.

298. Thesis. (0-1) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser. Hadley, Senyk

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

Clinical Pharmacy

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

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. (2) F, Sp. Prerequisite: Pharmacy 129 and Pharmacy 125. Lecture 4 hours, Conference 2 hours.

Kimble, Benet and Staff

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

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

Continuation of Clinical Pharmacy 130.


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

145. Senior Clinical Conference. (1) F, Prerequisite: Clinical Pharmacy 132 Conference 2 hours.

T. Dunphy and Staff

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

146. Senior Clinical Conference. (1) F, W, Prerequisite: Clinical Pharmacy 145 Conference 2 hours.

T. Dunphy and Staff

Continuation of Clinical Pharmacy 145.

147. Senior Clinical Conference. (1) W, Sp. Prerequisite: Clinical Pharmacy 146 Conference 2 hours.

T. Dunphy and Staff

Continuation of Clinical Pharmacy 146.


Kayser, Gamberoglio and Staff

Supervised experience in the patient care area of pharmacy service. Course may not be repeated for credit.


Dong, Levin and Staff

Supervised experience in the Ambulatory and Community Medicine Outpatient Clinics, including Comprehensive Care, Pediatrics, and Primary Care Clinics. Course may not be repeated for credit.

152. Problems in Drug Induced Diseases. (3) F, W, Sp. Prerequisite: Pathology 130 and third year standing or higher. Lecture 2 hours, Conference and Special project 4 hours. T. Tong

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

153. Pharmacy Systems. (3) F, Sp. Prerequisite: Third year standing or higher. Lecture 3 hours, Conference and Special project 6 hours.

deLeon, Herfindal, Beste
Orientation to inpatient and outpatient pharmacy services. Projects in design, justification and implementation of distribution systems such as unit dose, intravenous additive services, and minor applications are the major grading criteria. Evaluation will be based on the ability to implement a program.

154. Seminar in Intraprofessional Communication (1-8) F, W. Prerequisite: Consent of third or fourth year standing and consent of instructor. Seminar 1 hour. Field trips.

GeLeOn, Beste

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


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

156.02. Clinical Pharmacy Clerkship at the South Coast Practice/Health Center (1-8) F, W. Sp. Prerequisite: Clinical Pharmacy 130, 131 and 132. Consent of instructor. Kimble, Whooley, Torigoe

Students collect data for a problem-oriented medication record, dispense medication, educate patients as to proper medication use, and answer drug therapy questions generated by physicians, pharmacists, and patients in a pharmacy located within a community medical practice.


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


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

156.25. Clinical Pharmacy Clerkship in Renal Medicine at UC (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148 or 149. Consent of instructor. Gambertoglio, Kimble, Nagata and Staff

Students participate in the activities of the Renal Medicine Service, including patient monitoring, attending at conferences, seminars and rounds, and application of pharmacokinetics to drug therapy. Where appropriate, students will prepare detailed consultations regarding individual patient therapy.

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

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

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

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


Students participate in the activities of the inpatient Pediatric Service. Activities include routine review 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 148 or 149. Consent of instructor. R. L. Levin

Students review infectious Disease Service therapeutic consultations and evaluate patients' responses to recommendations made by following chart records and by direct inter-

views. Attendance at conferences, seminars and rounds. Special projects are assigned.


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: Clinical Pharmacy 146 and 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.

156.50. Clinical Pharmacy Clerkship in Inpatient Medical Service at VA (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148 and 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.

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

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

156.59. I.V. Additives and Parenteral Fluid Therapy at UC (1-8) F, W. Sp. Prerequisites of site: Clinical Pharmacy 148 and consent of instructor. Kimble, Chand

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

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

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


Experience in collection, evaluation and dissemination of drug information in a community based drug information service. Activities include answering drug information requests from community practitioners.

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

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


Beste, Owyang, Herfindal

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 pharmacy.

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

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

196.03. Clerkship in I.V. Additive Services at Mary's Help Hospital. (1-4) F, W. Sp. Prerequisite: Fourth year. Kimble, Kotabe, Rupp

Students participate in the preparation of I.V., irrigation and inhalation solutions and are exposed to various types of I.V. equipment. Conferences will be held on topics related to infusion therapy and drug distribution systems.
PRACTICAL EXPERIENCE: Working in a community hospital pharmacy unit dose system. Conferences will be held on topics related to the principles associated with the unit dose system, drug therapy problems encountered in monitoring, and interprofessional relationships.


Experience in various sub-specialty areas in the Obstetrics and Gynecology Clinic. Students work with other health professionals, participate in conferences and seminars. They will prepare detailed consultations regarding drug therapy where appropriate.


Participation in an interdisciplinary health care team to provide home care service to ambulatory patients. Activities include reviewing prescription and proprietary medication utilization, providing patient education, and therapeutic consultations to physicians.


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.


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

196.55. Medical Specialties Clerkship at SFGH. (1-8) F, W, Sp. Prerequisite: Clinical Pharmacy 148 or 196.73. Consent of instructor. Enrollment limited. Tong.

Students rotate through the Coronary Care Unit, the Ambulatory and Community Disease Units where they participate in conferences, work rounds and seminars, monitor drug therapy, provide therapeutic consultations and drug information retrieval and analysis.


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


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


Participation in peer review and quality assurance aspects of various health programs. Course includes selecting and preparing case histories for review, evaluating and interpreting findings, and attending pre-sentation cases to the peer review committee. Didactic instruction is also included.


Students design a prospective drug utilization review study. Activities include literature searches, preparing reports and other communications, and teaching and administrative responsibilities including the Drug Information Service.

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

Students practice in adult specialty clinics, including those of oncology, cardiac, chest, hypertension and medical screening. They consult with physicians and patients about drug therapy, provide limited primary care and the identification of a physician, and obtain drug histories.


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


Students practice in a convalescent hospital and gain exposure to the pharmaceutical services provided to such institutions by a community pharmacist. Students review drug regimens, prepare case histories for presentation to preceptors, and attend various hospital committee meetings.


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


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


Residents provide drug information and consultation services on request. Activities include literature searches, preparing reports and other communications, and teaching and administrative responsibilities including the Drug Information Service.


Residents are responsible for arrangements related to the administration of a modern hospital pharmacy service. Activities include preparation of budgets, supervision and development of staff, program planning, and related administrative assignments.

453. Pharmacy Research Clinical. (1-5) Su, F, W, Sp. Prerequisite: Admission to the resident program in clinical pharmacy. Herfindal, Beste and Staff.

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

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

Dental Auxiliary Utilization


Clinical training in four-handed, sit-down dentistry using full-time chairsides and auxiliary personnel. Course is conducted in two-week blocks of five students in conjunction with the Division of Periodontics.

120. Introduction to Use of Dental Auxiliaries. (1½) Sp. Prerequisite: Preventive Dentistry and Community Health 111. Lecture 1 hour, 6 hours laboratory and 6 hours clinic. Orientation to the dental auxiliaries and demonstration of the effective use of the dental assistant.

130. Introduction to Use of Dental Auxiliaries. (½) Sp. Prerequisite: Preventive Dentistry and Community Health 111. Lecture 1 hour for one-half of quarter. Ino and Staff.

Classroom instruction and demonstration of the effective use of the dental assistant.
students in the effective use of the dental assistant. High productivity practice methods will be emphasized.

180. Managerial Aspects of Employing Auxiliary Personnel. (5) Sp. Prerequisite: Dental Auxiliary Utilization 130. Francisco

Ino, Fischer

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

Dental Health Education

150B. Introduction to Patient Education. (2) W. Talbot

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

150C. Chairside Dental Health Education. (2) Sp. Prerequisite: Dental Health Education 150B. Francisco

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

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

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

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

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

178. Supervised Study in Dental Health Education. (1-5) F, W, Sp. Prerequisite: Dental Health Education 150B, 150C, 160A, 160B and Biostatistics Francisco

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

199. Laboratory Project in Dental Health Education. (1-5) F, W, Sp. Prerequisite: Dental Health Education 150B, 150C, 160A, and 160B. Lecture 1 hour, Lab 10-12 hours. Francisco

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

Dental Hygiene

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

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

150A-B-C. Introduction to Dental Hygiene. (2-2) Yr. Halterman

The role of the dental hygienist in preventive dentistry is studied emphasizing the objectives and principles of oral prophylaxis. Introduction to the anatomy and physiology of the oral cavity and to dental disease.

150.01. Dental Morphology. (2) F. Prerequisite: Concurrent enrollment in Dental Hygiene 150A.

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

151. Orientation to Dentistry. (1) W. Prerequisite: Consent of instructor. Novak

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

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

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

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

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

160A-C. Office Management and Ethics. (2-2) F, Sp. Talbot

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

181A-B. Orientation to Dentistry. (2-2) F, W. Prerequisite: Dental Hygiene 151. Novak

Continuation of Dental Hygiene 151.

181B-C. Advanced Clinical Oral Prophylaxes. (3-4) Yr. Prerequisite: Dental Hygiene 155A-B. Clinic 11 hours. Francisco

Advanced oral prophylaxis techniques including work in institutional dental clinics.

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

Students select an area of interest for independent study or research. These may include clinical, community, educational, institutional, or other areas.

189.01. Clinical Experience in Mobile Dental Clinics. (3-3) SS. Clinic Variable. Novak

Clinical experience in mobile dental clinics.

189.02. Community Health Clinical Practice. (1) F, W, Sp. Prerequisite: Winter quarter standing of second year dental hygiene curriculum; or fall, winter or spring clinical experience in mobile dental clinics. Poupard

One-half unit of credit for every 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. 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.

Dental Jurisprudence

180. Dental Jurisprudence. (1/2) 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, Sp. Lab 3 hours. Stark

The first year student is oriented to the necessity for accuracy in manipulation of materials. Impression taking, pouring of dental casts, investing, casting, and soldering are covered. Manipulation of restorative materials will be demonstrated and used in the laboratory.

185. Introduction to Basic Dental Technics. (2) SS. Lab 18 hours, for three weeks. Briggs

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. (1/2 per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Cram

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

140.02. Clinical Clerkship. (1/2 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. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Fukuyama

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

160.01. Clinical and Research Dermatology. (1) Su, F, 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. Informal discussions of diagnosis and management of the hospitalized dermatology patient.

160.03. Introduction to Dermatology. (1) W. Prerequisite: Second year standing.

Cram and Staff

Introduction to the basic language and diagnostic techniques, and recognition of common skin disorders seen by the practitioner. Course is in part pathologic demonstrations followed by open discussions and color slides of the pertinent disease.

199. Laboratory Project in Dermatol- ogy. (1-5) F, W. Prerequisite: Consent of instructor. Fukuyama

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

Dermatology Staff Conferences. (2) F, W, Sp. 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 professional work from other UC departments and other universities.


UC Goodman

Lectures and demonstrations of the histopathological skin diseases with special emphasis on correlation with clinical findings. Activities include the study of microscopic sections and discussions of material presented.

Seminar in Dermatological Literature. (1) F, W, Sp. Maibauch and Staff

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


L. Epstein and Staff

Seminars include discussions, required reading, and reports on dermatology and the related basic sciences: embryology, mycology, histopathology, and parasitology in relation to diagnostic conditions and oncology as it relates to the skin.


L. Epstein and Staff

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


Fukuyama

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

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

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


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


J. H. Epstein

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


Assistant residents work at off-campus hospitals, clinics, and laboratories. Open only to those 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 sec-
tor 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) Staff

An introduction to the principles of economic analysis. Investigating the process of determining the allocation of resources, the composition of output, and the level of income in the modern American economy. Not recommended for students who have received credit for either Economics 1A or 1B.

180A-B. Economics. (1-1) F, W

Winters

Lectures and group discussions related to dentistry. Subject areas included equipment selection, auxiliary personnel, consultation and financial procedures, recall, and accounting systems. Prepaid dental care programs and the role of professional organizations are presented by guest lecturers.

Endocrinology

190. Animal Hormones and Their Ac- tions. (2) I. Lecture 2 hours. Offered in alternate years.

Lostroh, Papkoff

Basic information on animal hormones, their structures, functions, and interrelationships. Concepts regarding hormonal actions are derived from chemical structure-function and biological in vivo, in vitro studies. Where possible, mechanisms will be discussed.

191. Topics in Endocrinology. (1) I. Prerequisite: Endocrinology 190 or consent of instructor. Offered in alternate years.

Lostroh, Papkoff

Selected topics of current interest.

192. Structure and Function of the Hor- mones. (2) I, II, III. Prerequisite: Consent of instructor.

Papkoff, Ramachandra

Basic information on hormones, their structures, functions, and interrelationships. Concepts regarding hormonal actions are derived from chemical structure-function and biological in vivo, in vitro studies. Where possible, mechanisms will be discussed.

199. Laboratory Project in Endocrinol- ogy. (1-5) I, II, III. Prerequisite: Consent of instructor.

Papkoff, Ramachandra

Course will examine the chemical nature of the endocrines; 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 Endocrinolo- gy. (2) I, II, III, IV. Prerequisite: Consent of instructor.

Papkoff, Ramachandra

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 Endocrinol- ogy. (1-5) I, II, III. 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.

202. Mechanisms of Hormone Action. (2) I, II, III. Prerequisite: Physiology 101 and/or Human Biology 200 and 200B, or Biochemistry 100A-B or consent of instructor.

Goldfine, J. A. Williams

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

220. Seminar in Experimental Endocri- nology. (1) I, II. Lecture 2 hours, given in alternate weeks.

Papkoff, Ramachandra

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

222. Reproductive Endocrinology Seminar. (1) I, II. Prerequisite: Consent of instructor.

Weiner

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

230. Reproductive Endocrinology. (2) I. Prerequisite: Consent of instructor.

Weiner

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

250. Research. (1-8) I, II, III. Prerequisite: Staff

Endodontics

109. Clinical Endodontics. (0-2) F, W. Prerequisite: Endodontics 1, 109, and 125A-B. C

Nguyen and Staff

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

189.01. Endodontics Clinical Practice. (0-9) F, W. Prerequisite: Approval of the division chairman. Clinic Variable.

Nguyen and Staff

Clinical experience at the level of Endodontics 109.

96 / Economics

97 / Endodontics
189.02. Advanced Clinical Endodontics, (3-2) Sp. Variable. Sapone
Advanced instruction in the field of clinical endodontics.

189.03. Expanded Clinical Endodontics, (3-2) W. Prerequisite: Completion of endodontics graduation requirements and satisfactory progress toward graduation in all other divisions. Approval of Clinic Review Committee and instructor. Clinic Variable. Enrollment limited. Nguyen and Staff
Objectives of the course are to offer more extensive endodontic service, rather than extraction, to clinic patients; and to expand clinical experience in diagnosis and treatment for students showing interest in endodontics.

189.04. Undergraduate Clerkship in Endodontics, (15½) W. Sp. Prerequisite: Fourth year standing and completion of majority of graduation requirements. Lecture 5½ hours for fixed prosthodontics. Clinic Nguyen, Sapone and Staff
An endodontic clerkship offering advanced senior students the opportunity to gain in-depth experience in diagnosis, emergency care, all facets of non-surgical and surgical endodontics, as well as the related endodontic-pedodontic-periodontic problems.

Exfoliative Cytology
401A-B-C-D. Exfoliative Cytology, (14-14-14-14) Su, F, W, Sp. E. King
Lectures in cytology include normal, malignant and normal nonmalignant cells. Instruction covers method of specimen collection; preparation, staining, and microscopic examination of specimens; development of speed and accuracy in microscopic examination; and correlation of cellular and tissue pathology.

Fixed Prosthodontics
Clinical instruction must be taken concurrently with third and fourth year lecture courses.

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

115. Techniques in Fixed Prosthodontics, (2) Sp. Prerequisite: Concurrent enrollment in Fixed Prosthodontics 110. Lab 6 hours. Hamaguchi and Staff
The basic techniques of fixed prosthodontics.

120A-B. Fixed Prosthodontics Techniques Theory, (1-1) F, W. Prerequisite: Fixed Prosthodontics 110 and 115. Lum, Eissmann
125A-B. Fixed Prosthodontics Techniques, (2-2) F, W. Prerequisite: Fixed Prosthodontics 110 and 115, Biomaterials 110B-C and Dental Technologies 115A-C. 18 hours. Hamaguchi

130A-B-C. Fixed Prosthodontics Theory, (1-1-1) SS, F, W. Lecture 1 hour, F, W. Meil, Tueller, Noble
170. Seminar in Fixed Prosthodontics, (2) F, W. Prerequisite: Students in Fixed Prosthodontics Certificate Program must register for this course each quarter and summer session. Lorenczi
New concepts and theories are discussed and related to research and clinical practice. Students encouraged to develop new ideas 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. Pr. Prequisite: Admission to postdoctoral standing and consent of instructor. Lecture 1 hour, Clinic 6 hours. Noble
Instruction and practice in the diagnosis, treatment planning, and treatment of clinical patients.

171.02. Clinical Procedures in Fixed Prosthodontics, (2) SS. Prerequisite: Fixed Prosthodontics 171.01A-B-C. Clinic 6 hours. Noble
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. Prerequisite: Completion of the 1st and 2nd year and summer session of Fixed Prosthodontics Certificate Program. Lecture 1 hour, Clinic 6 hours. Eissman
Advanced instruction and practice in the diagnosis, treatment planning, and treatment in fixed prosthodontics.

Clinical procedures in fixed prosthodontics. This course covers a continuation of experience received in Fixed Prosthodontics 172.01 A-B-C.

Clinical experience at 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 to 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. Noble
Individual student members will offer seminar-type instruction on selected topics related to fixed prosthodontics.

180.02. Senior Restorative Elective, (1) F. Meil
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 Procedures, (2) F, W. Prerequisite: Admission to postdoctoral standing and consent of instructor and approval of Clinic Review Committee. Lecture 1 hour, Clinic 6 hours. Noble
Clinical experience at the level of Fixed Prosthodontics 109.

189.02. Advanced Restoration Elective, (0-0-2) SS. Prerequisite: Consent of instructor and approval of Clinic Review Committee. Lab variable. Noble
Clinical experience at the level of fixed prosthodontics.

200. Introduction to Health Sciences Training, (2) F. Prerequisite: Consent of instructor. K Jacoby
Course focuses on instructional techniques and strategies useful for the beginning teacher. Emphasis is on the development of an effective personal teaching style. Open to advanced graduates, residents, teaching assistants and new faculty.

220A-B. Health Sciences Education Seminar, (1) F, W. Prerequisite: Consent of instructor. Rosinski
Consider principles of learning, including student individual differences, techniques of instruction, and approaches to evaluation of student progress. Individual teaching plans are developed and evaluated. Emphasis is placed on the graduate and professional school student as a learner.

221. Allied Health Sciences Seminar, (2) F, W. Prerequisite: Consent of instructor. K Jacoby
Graduate seminar integrating clinical experiences and academic course work of students enrolled in allied health education programs. Emphasis is placed on the student's role as an allied health professional. Relationships of course work experiences to future roles as allied health teachers are considered, individual professional problems are analyzed.

300. Evaluation of Clinical Performance, (2) F, W. Prerequisite: Consent of instructor. K Jacoby
A seminar to review and develop objective techniques in assessing the clinical performance and competence of students and practitioners. Techniques will be developed and validated for a number of clinical disciplines.

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

189.01. Advanced Clinical Clerkship in General Dentistry at VA, (0-24) Su, F, W. Prerequisite: Fourth year standing and approval of Clinic Review Committee. Kroll, G. Hall
Students provide comprehensive dental care to patients assigned to them under supervision of staff in the medical and hospital environment. Attendance at seminars and conferences included.

Health Sciences Education
200. Introduction to Health Sciences Training, (2) F. Prerequisite: Consent of instructor. K Jacoby
Course focuses on instructional techniques and strategies useful for the beginning teacher. Emphasis is on the development of an effective personal teaching style. Open to advanced graduates, residents, teaching assistants and new faculty.

220A-B. Health Sciences Education Seminar, (1) F, W. Prerequisite: Consent of instructor. Rosinski
Consider principles of learning, including student individual differences, techniques of instruction, and approaches to evaluation of student progress. Individual teaching plans are developed and evaluated. Emphasis is placed on the graduate and professional school student as a learner.

221. Allied Health Sciences Seminar, (2) F, W. Prerequisite: Consent of instructor. K Jacoby
Graduate seminar integrating clinical experiences and academic course work of students enrolled in allied health education programs. Emphasis is placed on the student's role as an allied health professional. Relationships of course work experiences to future roles as allied health teachers are considered, individual professional problems are analyzed.

300. Evaluation of Clinical Performance, (2) F, W. Prerequisite: Consent of instructor. K Jacoby
A seminar to review and develop objective techniques in assessing the clinical performance and competence of students and practitioners. Techniques will be developed and validated for a number of clinical disciplines.

History
180. History of Dentistry, (1) W. Hartman
An elective course in which the student performs patient treatment in a variety of clinical settings.

189.01. Advanced Clinical Clerkship in General Dentistry at VA, (0-24) Su, F, W. Prerequisite: Fourth year standing and approval of Clinic Review Committee. Kroll, G. Hall
Students provide comprehensive dental care to patients assigned to them under supervision of staff in the medical and hospital environment. Attendance at seminars and conferences included.

Health Sciences Education
200. Introduction to Health Sciences Training, (2) F. Prerequisite: Consent of instructor. K Jacoby
Course focuses on instructional techniques and strategies useful for the beginning teacher. Emphasis is on the development of an effective personal teaching style. Open to advanced graduates, residents, teaching assistants and new faculty.

220A-B. Health Sciences Education Seminar, (1) F, W. Prerequisite: Consent of instructor. Rosinski
Consider principles of learning, including student individual differences, techniques of instruction, and approaches to evaluation of student progress. Individual teaching plans are developed and evaluated. Emphasis is placed on the graduate and professional school student as a learner.

221. Allied Health Sciences Seminar, (2) F, W. Prerequisite: Consent of instructor. K Jacoby
Graduate seminar integrating clinical experiences and academic course work of students enrolled in allied health education programs. Emphasis is placed on the student's role as an allied health professional. Relationships of course work experiences to future roles as allied health teachers are considered, individual professional problems are analyzed.

300. Evaluation of Clinical Performance, (2) F, W. Prerequisite: Consent of instructor. K Jacoby
A seminar to review and develop objective techniques in assessing the clinical performance and competence of students and practitioners. Techniques will be developed and validated for a number of clinical disciplines.
Projections, based on a background of the growth and development of the profession, develop ‘curves of probability’ of future technical and biological developments. Growing social facts upon the present and future practice of dentistry are stressed.

History of Health Sciences


Leake

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

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

Saunders

Lectures and informal seminars on aspects of medical history.


Brieger

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


Veith

Changing concepts of therapeutics from earliest times to the present, in relationship to the changing climate of thought on the nature of the psychic process and psychiatric disorders.

170.06. Introduction to the History of Medicine. (1-5) § W.

Veith

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

170.07A-B. History and Philosophy of the Health Professions. (1-2, 1-2) SS. Lecture 1 hour. Biweekly readings required for 2 units.

Leake

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


Brieger and Staff

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


Staff

Special reading and discussion on historiographical and historical method with biweekly seminars designed to teach students to do independent medical/historical research and writing.

201. Introduction to the History of Biology. (1-2) § SS.

Leake

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


van der Reis

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


Schiller

Introduction to the history of neurological concepts.

204. History of Non-Western Medical Systems. (1-2) F, W or Sp. Pre-Requisite: History of Health Sciences 170.06 or 201.

Veith

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


Guttentag

Reading and conferences.


Guttentag

Extended reading and conferences.

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

Blanc

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

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

Zimmer

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

209. Medicine in the Victorian Age. (2) § Sp. Pre-Requisite: Graduate standing.

Blanc

The course investigates medical facilities in London from 1830 to 1860 along with modes of practice, social setting, and levels of scientific knowledge in the mid-19th century.

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

Brieger

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

211. Theories of Human Nature. (3) § Sp. Pre-Requisite: Graduate standing.

Jonsen

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


Staff

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


Staff

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


Staff

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


Staff

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


Staff

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

Hospital Dentistry

170. Emergency Medical Care Seminar. (1) W. Seminar 2 hours. Pre-Requisite: Post-doctoral or fourth year standing.

Lim

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

171. Physical Diagnosis. (2) Su. Pre-Requisite: Enrollment in a medical specialty program or consent of instructor.

Klein

Designed to prepare the oral surgeon to conduct a physical examination 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.

172. Oral Biology Conferences. (1) W. Pre-Requisite: Postdoctoral standing.

Silverman, Ware, and Staff

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

Human Biology

200A. Cell Biology. (3) § F. Pre-Requisite: Biochemistry 100A or equivalent, or consent of instructor.

Stoeckenius

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

200B. Cell Biology. (3) § W. Pre-Requisite: Biochemistry 100A or equivalent, or consent of instructor.

Stoeckenius

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

201. Seminar in Neurobiology. (1) § F, W. Pre-Requisite: Consent of instructor.

Dennis

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

202A. Basic Concepts of Neurosciences. (6-8) § F. Sp. Pre-Requisite: Admission to Neuroscience program or consent of instructor.

Steinberg and Staff

An in-depth interdisciplinary introduction to fundamental aspects of nervous system function: membrane structure and function, biochemistry, ion transport mechanisms, cellular neuroanatomy, synaptic transmission, and development of synaptic connections, invertebrate and vertebrate sensory and motor systems, autonomic and neuroendocrine regulatory mechanisms, higher functions.
Human Development

204A-B-C. Interdisciplinary Seminar in Human Development. (3-3-3) F, W, Sp. Prerequisite: Consent of instructor.
Kiefer, Lowenthal, Rosow
Theory and research covering adulthood to old age from sociological, psychological, anthropological perspectives. Topics include stress, personality and cognitive change, time perspective, values, calculation processes and adaptation. Reading and paper required. Students enroll for all three quarters.

204A-B-C. Seminar in Analytic Methods. (3-3-3) F, W, Sp. Prerequisite: Consent of instructor.
Chiriboga, Pierce, Kiefer, Suuman
One quarter on quantitative methods, including longitudinal; one quarter on the qualitative and quantitative manipulation of open-ended data; and one quarter on methods of survey research. Student research materials will be used where appropriate.

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

206. Scientific and Literary Approaches to Personal Development. (2) S. Prerequisite: Consent of instructor.
Kiefer, Lowenthal, Rosow
Prerequisite: works from behavioral science literature and world poetry and prose are brought together in the study of personal development in adulthood. Topics are selected from the insights of the two fields on how the development of persons copes with social, historical, and psychological changes.

206. Seminar on Data Analysis. (3) F, W, Sp. Prerequisite: Consent of instructor.
Rosow
Students either provide their own or use accessible data from ongoing research projects. Focus is on training in data organization, analysis, and research report writing.

202A-B-C. Advanced Seminar on Stress. (2-2-2) F, W, Sp. Prerequisite: Consent of instructor.
Lowenthal, Horowitz, Chiriboga
This pro-research seminar, for advanced students with a strong background in the stress research literature, is devoted to elaboration of stress theory and concepts, and refinement of methodologies addressed to specific research projects.

207. Social Change and Implications for a Theory of Adult Socialization. (2-4) F, W, Sp. Prerequisite: Consent of instructor.
Kiefer
Review of approaches to studying social change at the social system level and consideration of the implications for individual socialization of changes which have occurred in the United States over the last few decades.

210. Socialization to Old Age. (3) F, W, Sp. Prerequisite: Consent of instructor.
Rosow
A seminar on adult socialization theory, with prospective socialization to an aged role as a special concern. Major norms for older people, the structure of socialization situations, and the pressure of variables normally affecting socialization in earlier status transitions.

214. Developments in Social Science Philosophy. (2) F. Prerequisite: Consent of instructor.
Kiefer
Exploration of important new developments in the philosophy of social science; emphasis is on works of Jürgen Habermas and Anthony Wilden.

220. General Seminar. (1) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours given in alternate weeks.
Staff
Students, staff, or guest lecturers present selected topics based on their current research.

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

225. Seminar on Data Analysis. (3) F, W, Sp. Prerequisite: Consent of instructor.
Rosow
Introduction to the use of the computer in the analysis of social science research data, with emphasis on facilities and programs available at the UCSF information Systems and Computer Center.

227. Biological Aspects of Aging and Old Age. (2-3) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Independent study 3-4 hours.
Elliott
Physiological, biochemical, neurological, and anatomical changes occurring with aging are discussed. Important questions include the possible relationships to pro-social behavior of these changes in humans and the relevance of internal changes to psychological states.

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

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

234. Ego Development. (2-4) F, W, Sp. Prerequisite: Consent of instructor.
White
Ego development is often described as the master trait of adult development. An in-depth look at the theories in research in this area, such as that of Erikson and Levinson.

236. Social Aspects of Death and Bereavement. (3) F, W, Sp. Prerequisite: Consent of instructor.
Kalish
An analysis of the social milieu in which dying persons and those facing the dying person himself, his survivors, and those professionals who attend him.

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

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


International Health

Day, Vandervoort
Social, behavioral, and clinical aspects of human sexuality are covered in a series of lectures and seminars. Lectures present didactic material and seminars focus on problems related to human sexuality.

Interdepartmental Studies

100. Medical Parasitology. (2) W, Sp. Prerequisite: Microbiology 100 (without parasitology) or equivalent, or concurrent enrollment.
Heyneman
An introduction to protozoa and helminths and human diseases they produce, with emphasis on host-parasite interactions. Parasite epidemiology and life cycles, clinical and diagnostic aspects are considered. Films, lectures, index, and kodachrome showings. Laboratory demonstrations displayed throughout week.

140.01. Clinical Clerkships Abroad. (1½ per week) F, W, Sp. Prerequisite: Six months of clinical work.
R. Goldsmith
Clinical clerkships in developing countries, generally in a hospital or rural health clinic. Placement depends upon the Dean and the chairman of the clinical department.

140.02. Nutrition Clerkship. (1½ per week) Sp.
C. S. Wilson
Four-week block elective with three-hour lectures-discussions on nutritional requirements, clinical and laboratory procedures and experience in various Bay Area clinics. Emphasis on training to do useful work in dietary and clinical evaluation and training in absence of trained nutritionist.

140.03. Leprosy and Other Communicable Diseases. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Gelber, Fasal
As part of the consultative team, students work up and follow community cases problems on the medical and surgical services. Participation on the inpatient and outpatient leprosy service and attendance regularly at PHS conferences.
150.01. Medicine in Developing Countries. (1½ per week) § Prerequisite: International Health 100 or consent of instructor. R. Goldsmith

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

150.02. Field and Laboratory Research in UC-ICMR Overseas Program. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Dunn and Staff

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

160.01. Tropical Medicine Staff Conferences. (1) F, W, Sp. R. Goldsmith, Frierson

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. Heyneman

Lectures and discussions to review the patterns of host-parasite interactions involving protozoan and helminth infective agents of man. The course will explore current views of immune and other types of response and their 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. Dunn and Staff

Lecture and discussions introducing the field of international health from an ecological and global 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. R. Goldsmith and Staff

Course covers principles of medical geography and landscape epidemiology including changing patterns of human health and disease in the context of physical, biotic, and sociocultural 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. Geber

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

180. World Population Pressures and Family Planning Perspectives. (2-3) W. Lecture 1 hour, plus project for 2 units. Emster

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

180.01. Tropical Medicine Clinic. (1-2) § Su, F, W, Sp. Prerequisite: International Health 100 and six months of clinical experience. Clinic 3-6 hours.

R. Goldsmith, Develing, 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. (3) § W. Prerequisite: International Health 100 or equivalent. R. Goldsmith

Lecture is followed by seminars on pharmacology and use of antiparasitic drugs.

180.03. Introductory Statistical Treatment of Clinical and Laboratory Problems. (1½ per week) Lecture 2 hours, Lab optional 0-3 hours. Zippin

Basic concepts and techniques for the planning and analysis of clinical and laboratory 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.

182.01. Concepts in Human Nutrition. (2) Sp. Anthony

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

186. Tropical Medicine Lectures. (1) § Sp. R. Goldsmith

Presentation of case histories and films emphasizing diagnosis and treatment of tropical diseases including malaria, malnutrition, cholera, typhoid, schistosomiasis, and smallpox; opportunities for clinical clerkships abroad.

188. Supervised Study in International Health. (1-3) F, W, Sp. Prerequisite: Consent of instructor.

Pollycove, Heyneman, R. Goldsmith

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 International Health. (1-6) F, W, Sp. Prerequisite: Consent of instructor.

Heyneman, R. Goldsmith, Petrikas, Schachter

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

Laboratory Medicine

140.01. Diagnostic Use of Radioisotopes. (1½ per week) Su, F, W, Sp. Prerequisite: One year of medical school. Laboratory 1 hour, Clinic 4 hours.

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

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

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

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


Review of current laboratory procedures and problems in hematology, microbiology, immunology, blood banking, chemistry, and application of isotopes. Library research and occasional formal reports are required.
Medical Illustration/ 107

202. Principles of Anatomic Illustration II (4) § W. Prerequisite: Medical Illustration 201 and Anatomy 100A. Concurrent enrollment in Anatomy 100B. Lecture 1 hour, Lab 9 hours.

203. Graphics for Print Media. (3) § Sp. Prerequisite: Medical Illustration 201 and 202. Lecture 1 hour, Lab 6 hours.

204. Sketching and Illustration of Pathology and Animal Surgery. (3) § F. Prerequisite: Medical Illustration 201; 202, 203; Anatomy 100A, 100B, 115, and 119. Concurrent enrollment in Pathology 198. Lecture 1 hour, Lab 6 hours. Wakerlin, Stoelting, Quan, Wright, Feduska

Sketching, illustration and photography of pathologic tissue; regular autopsy observation; observation, photographing and illustration of procedures in animal surgery; study of normal colors and textures of tissue; illustration of instruments and their interaction with various tissues.

205. Introduction to Surgical Illustration. (5) § W. Prerequisite: Medical Illustration 201, 202, 203 and 204. Lecture 2 hours, Lab 9 hours. Wakerlin, Stoelting, Schaubert, Johnston, deLorimer

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

206. Advanced Surgical Illustration. (5) § Sp. Prerequisite: Medical Illustration 201, 202, 203, 204 and 205. Lecture 2 hours, Lab 9 hours.

207. Specialty Surgical Illustration: Otolaryngologic and Ophthalmologic. (3) § F. Prerequisite: Medical Illustration 201, 202, 203, 204, 205 and 206. Lecture 1 hour, Lab 9 hours. Wakerlin, Stoelting, Johnston, Koelting, Kimura

Review of anatomy and observation including the ear and the eye through otoscope, ophthalmoscope and slit lamp.

220. Seminar in Instructional Design. (5) § F. Prerequisite: Medical Illustration 411 recommended. Lecture 2 hours. Pascoe, Merrill, Wakerlin and Staff

Readings and seminars in aspects of instructional design, including communication theory, psychology of learning, behavior modification, educational instruction, systems design and methods for evaluation. Participant by guest lecture.

411. Introduction to Instructional Design and Communications Theory. (1) § W. Prerequisite: Medical Illustration Pascoe, Pascoe, Wakerlin

Overview of theory basic to the development of instructional media.

417. Introduction to Media. (2) F. Prerequisite: Concurrent enrollment in Medical Illustration 411. Lecture 1 hour, Lab 3 hours. Pascoe, Merrill, Wakerlin, Banks, Wakerlin

Theories of media: perception, light, composition, color, contrast, emphasis, impact; similarities and differences among media, including appropriateness for different tasks; study of examples; camera use and darkroom techniques in still photography; laboratory, photography as illustration tool.

418. Media Design. (4) W. Prerequisite: Medical Illustration 411 and 417. Lecture 2 hours, Lab 9 hours. Beindorf, Pascoe, Stoelting, Cole

Script design and storyboarding for slide tapes. Bases for media selection in instructional design: sound recording; color photography on location and for copying artwork; graphic techniques for media: tilting, cel art, background, cuts-out and airbrush. Still photography lab work included.

419. Media—Slide-Tape Production. (5) Sp. Prerequisite: Medical Illustration 411 and 417. Lecture 2 hours, Lab 9 hours. Beindorf, Kaye, Stoelting, Cole

Production of instructional slide-tape including: developing regular content, format and timing graph and photography, sound recording, assembly, editor, completion on schedule. Students act as producers, learning first hand complexities of coordinating and producing media for instruction.

421. Introduction to Motion in Film and TV Design. (4) F. Prerequisite: Medical Illustration 417, 418 and 419. Lecture 2 hours, Lab 6 hours. Beindorf, Banks, Kaye, Wakerlin

Theories of motion, dynamics of balance, subjective and camera motion, color costs; sound: special effects, graphics. Production of fifteen minute video tape using film insert, and sharing of production roles.

423. Graphics for Print Media. (4) F. Prerequisite: Medical Illustration 203. Lecture 2 hours, Lab 6 hours. Giovannelli, Wakerlin, Stoelting

Calligraphy, brochure design, photography in graphic design, layout, copy fitting, camera-ready mechanicals, typography, printing, photoengraving, specifications for printing, paper stocks, inks, etc. Production of a brochure for use on campus.

425. Three Dimensional Illustration and Maxillofacial Prosthetic Reconstructions. (1-4) F, W or Sp. Prerequisite: Consent of instructor and approval of director. Wakerlin, Koelting, Humbeaugh

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

426. Introduction to Film Animation I. (5) W. Prerequisite: Medical Illustration 411, 417, 418 and 421. Lecture 2 hours, Lab 9 hours. Beindorf, Wakerlin, Stoelting

Humbeaugh

Course introduces medical techniques of motion picture animation, illustration and animation in various techniques, and the mechanics of production. Students will develop experimental film loops, working in various techniques. Field trips and guest lectures will be arranged.

428. Display Design and Production. (1-4) F, W or Sp. Prerequisite: Consent of instructor and approval of director. Wakerlin, Giovannelli, Gloege

Analysis of advantages and disadvantages of displays as teaching instruments. Aspects of design and construction: planning, design, materials, scale models, construction, logistics, cost effectiveness and use of ancillary staff. Students act as producers, learning first hand complexities of coordinating and producing media for instruction.
Final presentation of work in curriculum- or portfolio.-oriented projects.

438. Biological Illustration. (2) F, W, or Sp. Prerequisite: Consent of instructor. Lab 6 hours.

439. Forensic Illustration. (1-3) F, W or Sp. Prerequisite: Consent of instructors and approval of director. Wright, Wakerlin, Stoelting, Biendorf

440. Museum Methods. (3) F, W or Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 6 hours.

441. Programming Concepts and Information Structures. (4) F, W. Prerequisite: Bachelor's degree or consent of instructor. Lecture 4 hours, Lab 4 hours.

442. Nature of Medical Information. (2) F. Prerequisite: Medical Information Science 202. Consent of instructor.

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

201. The Medical Environment. (2) W

210. Biostatistics. (4) Prerequisite: Consent of instructor. Lab 6 hours.

A survey of the professions, institutions, organizations, and populations involved in the health care process. Included are the aims, expectations, and viewpoints inherent in the health care process. Course provides a framework for students without previous medical history to develop a framework in relationship to processes and functions.

211. Introduction to Operations Research. (3) F, W

212. Linear Models and Experimental Design. (2) W. Prerequisite: Medical Information Science 109 or equivalent or consent of instructor.

213. Discrete Analysis and Statistical Classification. (2) Sp. Prerequisite: Introductory statistics and one year of calculus.

An introduction to mathematical programming, including linear programming, sensitivity analysis, and duality. Queuing processes and other selected topics. Use of computer simulation of operational research models is included.

220. Systems Analysis of Medical Care. (3) F, W

221. Design of Medical Information Systems. (2) F. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours.

A survey of the processes of systems analysis as aids to design, management and evaluation of health care services. Application of operations research techniques and computer software to the design of health care systems.

222. Programming Concepts and Information Structures. (4) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

223. Design of Medical Information Systems. (4) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

224. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

The the design of medical information system is examined. Successful components of the system will be presented with respect to cost, performance, and acceptability. Field trips to existing systems will be made.

225. Design of Medical Information Systems. (4) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

226. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

The design of medical information systems is examined. The systems will be studied with respect to cost, performance, and acceptability. Laboratory sessions involving analysis and design for computer implementation are a continuation of the studies in Medical Information Science 225B.

227. Design of Medical Information Systems. (4) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

228. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

229. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

The design of medical information systems is examined. The systems will be studied with respect to cost, performance, and acceptability. Laboratory sessions involving analysis and design for computer implementation are a continuation of the studies in Medical Information Science 225B.

230. Linear Models and Experimental Design. (2) W. Prerequisite: Medical Information Science 210A or equivalent or consent of instructor.

231. Discrete Analysis and Statistical Classification. (2) Sp. Prerequisite: Introductory statistics and one year of calculus.

232. Linear Models and Experimental Design. (2) Sp. Prerequisite: Medical Information Science 210A or equivalent or consent of instructor.

240. Design of Medical Information Systems. (4) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

241. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

242. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

243. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

244. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

245. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

246. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

247. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

248. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

249. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

250. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

251. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

252. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

253. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

254. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

255. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

256. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

257. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

258. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

259. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

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261. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

262. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

263. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

264. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

265. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

266. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

267. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

268. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

269. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.

270. Design of Medical Information Systems. (4) Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 6 hours.
Lecture 1½ hours, Lab 1½ hours. Heilbron
Introduction to modern methods for analysis of data. Statistical classification
and other quantitative methods relevant to computer-assisted diagnosis and
treatment planning.

240. Data Base Management. (3) § W
Prerequisite: Medical Information Science
230B or equivalent, or consent of instructor.
Wasserman
Course covers techniques for logical and
data base organization, data inde­
pendence, models of data, approaches to
large scale data base management; security
and privacy, data description languages,
and query languages.

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

Prereq­
usite: Advancement to candidacy and per­
mission of the graduate adviser.
Staff
For students engaged in writing the dis­
sertation 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 mi­
crobiology and serology. Introduction to lit­
ature of field. Fundamentals of statistics
and evaluation of data as applied to microbio­
logic analysis and laboratory quality control.

101A-B-C. Clinical Bacteriology. (3-3-8)
Su, F, W, Sp. Lecture A-B: 3 hours, Lab C: 24 hours.
Hadley, S. N. Cohen, Senyk
Instruction and laboratory practice in the
isolation and identification of bacteria from
clinical specimens and the evaluation of
pathogenic significance of bacteria.

102A-B. Environmental Microbiology
and Epidemiology. (2-4) Su, F, W, Sp. Lecture A: 2 hours, Lab B: 12 hours.
Hadley, Seman, S. N. Cohen, Senyk
Instruction and laboratory observation of
the indigenous bacteria of the body, fungo, and
protozoa of the human. Microbiology of water, milk,
food, and the hospital environment. Steriliza­
tion and disinfection. Epidemiology of hospi­
tal associated infections. Laboratory proce­
dures useful in the investigation of an
epidemic.

Hadley, Seman
Instruction and laboratory practice in the
isolation and identification of mycobacteria
from clinical specimens; evaluation of patho­
genic 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.

Heyneman, Loudenmil
Instruction and laboratory practice in the
isolation and identification of fungi asso­
ciated with the more important mycotic in­
fec tions of man.

Drew, Hadley
Instruction, demonstrations, and labora­
tory practice in viral isolation and identifica­
tion procedures. The rapid detection of specif­
ic viral infections.

118. Introduction to Clinical Immunolo­
gy. (2) F, W.
Semeny
Introduction to the mechanism of immu­
ity: cellular and humoral immunity, host-parasite associations, immuno­
genetic structure of im­
munoglobulins, and antigen-antibody inter­
actions.

120A-B. Clinical Serology. (2-4) Su, F, W, Sp. Lecture A: 2 hours, Lab B: 12 hours.
Semeny, Sugai
Instruction and laboratory practice in serological
methods used in diagnosis and
the study of disease.

Hadley, Seman
The mode of action and assay of anti­
microbial agents. Instruction and laboratory
practice in testing microorganisms for sus­
cceptibility to antimicrobial agents.

135. Clinical Laboratory Instrumenta­
Hadley, Seman, Senyk
Instruction and practice in microc yscope,
including fluorescent and electron micros­
copy, spectrophotometry, Coulter counters,
immu ne electrophoresis. Practical experi­
cences with data processing equipment and
computers utilized in a clinical microbiology
laboratory.

Medicine

110. Basic Clerkship in Medicine at MZ and VA. (1½ per week) Su, F, W, Sp.
Prereq­
usite: Medicine 131A-B-C and 132A-B-C.
L. H. Smith, Williams
Clinical practice with the instructor.

120. Clinical Pathology. (2-4) Su, F, W, Sp. Prereq­
usite: Medicine 110 and approval of third and fourth
cardiology and staff.

140.02 Clinical Clerkship Off-Campus. (1½ per week) Su, F, W, Sp. Prereq­
usite: Medicine 110 and approval of third and fourth
cardiology and staff.

140.03 Acting Intern in the Cancer Re­
search Institute. (1½ per week) Su, F, W, Sp. Prereq­
usite: Medicine 110 and 131A-B-C.
Friedman and Staff
On Clinical Cancer Chemotherapy Ser­
vice, students work up patients, present
them to attending staff and at conferences, do
daily procedures, and write orders under supervi­
sion.

140.04. Senior Internal Medicine Clinical
Clerkship at NRMC. (1½ per week) Su, F, W, Sp.
Prereq­
usite: Medicine 110. Karney
Clinical medicine. Student functions as intern in ward medicine under supervision of residents and staff,
and acts as consultant in selected specialty under supervision of board certified staff.

140.05. Cardiology at PMC. (1½ per week) Su, F, W, Sp. Prereq­
usite: Medicine 110 and consent of instructor.
Students participate actively in rounds,
conferences, and informal teaching sessions,
with emphasis on reading electrocardio­
grams.

140.06 Cardiology at UC. (1½ per week) Su, F, W, Sp. Prereq­
usite: Medicine 110 and 131A-B-C.
Wolfe, Parmley
Students work up cardiac patients in the
clinic and on wards; they attend conferences
and seminars; receive instruction in special­
ized studies and do assigned reading.

140.07 Clinical and Physiological As­
psects of Pulmonary Disease at SFGH. (1½ per week) Su, F, W, Sp. Prereq­
usite: Medicine 110. Hopewell, J. Murray, Costa­
ello
Students observe as acting interns in care
of patients admitted to chest ward and re­
spiratory care unit at SFGH. Participate
fully in teaching activities of the service in­
140.08. Gastroenterology at UC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

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

140.09 Cardiology Service at MZ. (½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

Students work up patients, follow through diagnostic program phonocardiograms, echocardiograms, stress electrocardiograms, cardiac catheterization, angiographic studies. Instruction provided in cardiovascular diagnosis, physiology of heart disease, heart sounds. Attendance at conferences and seminars. Reading assigned.

140.11. Renal-Electrolyte Service at PHS. (1½ per week) F, W, Sp. Prerequisite: Medicine 110 and 131A-B/C.

Hutter

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

140.13. Clinical Clerkship at PHS. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110 and 131A-B/C.

Mason

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


Students work up and follow patients in endocrine-metabolic disease. They are responsible for the care of patients attending the Endocrine-Metabolic Service.

140.15. Inpatient Medicine at K. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students. Janin

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

140.16. Hematology at SFGH. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

R. O. Wailerstein, Kan Schmid

Students work up and present pertinent clinical laboratory data of problems presented; attend slide rounds; assist in performing sessions; attend hematology rounds.

140.17. Clinical Pharmacology at UC. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Morell, Meimon, Bourne, Shiner, Brater

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

140.18. Gastroenterology at VA. (1½ per week) Su, 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. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110 and consent of instructor.

Hollenberg

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 monitoring; interpret EKG's and vectorcardiograms; attend all regular teaching conferences.

140.20. Infectious Disease Clerkship at UC. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110.

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.


L. H. Smith, Carbone

Working experience with an internist on the clinical faculty as house staff: follows rounds in various private hospitals and at UC; sees patients in private office and on house calls; follows up studies, and reads electrocardiograms.

140.22. Pathophysiology of Disease. (1½ per week) F, Sp. Prerequisite: Medicine 110 or Pediatrics 110 or Surgery 110.

Siperstein

A course designed to present major basic science concepts which govern the practice of medicine and surgery. Students devote four weeks to the study of a specialty area such as cardiovascular, hematology, renal, immunology-infectious disease, oncology, neurology, endocrine-metabolic, pulmonary, gastroenterology.

140.24. Clinical Immunology-Rheumat­ic Diseases at UC. (1½ per week) F, W, Sp. Prerequisite: Medicine 110 and consent of instructor.

Engleman, W. V. Epstein

Combination of outpatient clinics, inpa­tient hospital rounds, and laboratory experi­ences will be used to teach interpretation of clinical findings and laboratory observations in immunologically mediated rheumatic dis­orders. Practical experience together with selected readings will develop familiarity with this group of disorders.

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

Humphreys

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


Uhtley

Primary emphasis is on the treatment of acute myocardial infarction in a coronary care unit. Includes teaching in the use of monitoring and related electronic equipment, cardiover­sion, and related aspects of electrophysi­ology.

140.27. Clinical Clerkship Stressing Cardiopulmonary Disorders at C. (1½ per week) F, W, Sp. Prerequisite: Medicine 110.

Griffeth

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

140.28. Infectious Disease Clerkship at SFGH. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Brewin

Course includes active consultation ser­vice averaging three new cases per day; daily patient rounds; weekly TB and pediatric rounds; introduction to clinical mi­crobiology laboratory; two infectious disease clinics per week; and parasitology clinic. Reading and library research.

140.29. Hematology at UC. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Shohet

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

140.30 Clerkship in Endocrinology-Me­tabolism at SFGH. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Birger, Schambelan, H. Williams

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


Burdge

Students function as clinical clerks, working up patients under supervision of in­ternists. They assist in the diagnostic and related specialized procedures as sigmoidoscopies per oral endoscopies. They attend radiology and pathology conferences and seminars with visiting consultants.

140.32. Coronary Care Unit at SFGH. (1½ per week) Su, W, Sp. Prerequisite: Medicine 110.

Scheinman, Peters

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

140.33. Infectious Diseases at PMC. (1½ per week) Su, Sp. Prerequisite: Medicine 110.

Valentine

Students may elect clinical clerkship in infectious diseases. Activities include work­ing up patients, relating laboratory data to...
140.34. Clerkship in Renal Disease. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110.

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

J. Abbott, Cheitlin, Rapaport, Scheinman

Students see patients in consultation and wards and clinic, read electrocardiograms, review with a cardiology consultant, and attend all seminars and conferences.

140.36. Emergency Service Clerkship at UC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students.

Conte

A student serves as an intern working with medical interns and residents and sharing similar responsibilities in Moffitt Emergency. Daily participation in attending rounds and biweekly meetings with faculty required.

140.37. Coronary Care Unit at PMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students. Langston

Student will 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 rounds, conferences, and personnel rotation as time permits.

140.38. Office Practice of Clinical Rheumatology at K. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor. Medicine 140.05 recommended. Fessel

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


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

140.40. Clinical and Physiological Aspects of Pulmonary Diseases at A. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Lifshay

Students examine patients in the outpatient office, on wards, 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 at SFGH. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students. Admired

Students are responsible for evaluation of gastrointestinal patients on medical and surgical wards. Student work-ups are thoroughly discussed with gastroenterology staff. Students observe GI techniques including sigmoidoscopy, colonoscopy, endoscopy, liver biopsy. Daily conferences are held at three affiliated hospitals.

140.42. Clinical Pharmacology at SFGH. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Becker

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

140.43. Basic Rheumatology and Immunology. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and consent of instructor. Talal

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

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

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

140.45. Endocrine Metabolism Clerkship at A. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Siperstein

An introduction to the diagnosis and treatment of endocrinometabolism diseases. Areas covered will be those endocrinopathies involving the major endocrine glands, as well as metabolic syndromes and hyperemias. Patients will be examined and treated in both the inpatient and outpatient service.

140.46. Chest, Thyroid, and Gastroenterology clinics at UC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. W. Gold, D. Watts, Greenspan

Students follow outpatients in Chest, Thyroid and Gastrointestinal subspecialty clinics; may be responsible for new patient work-ups. Clinical work will be combined with directed library reading.

140.47. Arthritis, Cardiology, Diabetes, Hematology, and Oncology Subspecialty Clinics at UC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Emgelon, Gershengorn, Cane, Ries, M. Friedman

Students follow outpatients in Arthritis, Cardiology, Diabetes, Hematology, Oncology, and Gastroenterology subspecialty clinics; may be responsible for new patient work-ups. Clinical work will be combined with directed library reading.


Students follow outpatients in Cardiology, Chest, Gastrointestinal, Renal, and Tropical Medicine subspecialty clinics; may be responsible for new patient work-ups. Clinical work will be combined with directed library reading.

140.49.. Acute Care Units at MZ. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Blumenthal

Students participate in the management of inpatient and outpatient care and take part in didactic and related electronic equipment; and attend rounds, conferences and teaching sessions.

140.50. Hematology Oncology at MZ. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. R. Cohen

An intensive clinical course with emphasis on diagnostic and therapeutic principles of commonly used drugs in the treatment of the patient with blood disease or cancer. The latest techniques in therapy are studied and students read in hematology and laboratory test interpretation.

140.51. Gastroenterology at MZ. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Aron

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

140.52. Clinical Renal Elective at VA. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Arief


140.53. Infectious Disease at MZ. (1½ per week) F, W, Sp, Prerequisite: Medicine 110. Drew

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

140.54. Nephrology at A. (1½ per week) F, W, Sp. Prerequisite: Medicine 110. Glise, L. Gold

Rounds with directors of renal service on inpatients with a variety of renal diseases, fluid, electrolyte, acid and base disorders; outpatients on chronic hemodialysis exposure to acute hemodialysis, and related problems. Didactic sessions in clinical renal pharmacology.

140.55. Acting Internship at C. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110. Limited to fourth year students. Griffith

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

150.01. Research in Cardiovascular Physiology at A/Y. (1½ per week) Su, F, W, Sp. Prerequisite: Physiology 100 and 101. Biochemistry 100A-B and consent of instructor.

The elective is designed to provide ex-
experience with routine physiological mea-
surements, the handling and monitoring of
radioisotopes, techniques of tissue culture and
various biochemical techniques. Pre-
rently, the laboratory is engaged in problems
of myocardial hypertrophy, cell growth, and
protein synthesis.

150.02. Research in Medicine. (1½ per
week) Su, F, W, Sp. L. H. Smith, Carbone
Students continue previously initiated research projects under the guidance of fac-
ulty members. Programs must be approved
by the instructors in charge and the third
and fourth year coordinator.

150.03. Cancer Viruses. (1½ per week)
Su, F, W, Sp. Prerequisite: Basic course in
microbiology.

Levy 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 Correlation Seminar. (1
per week) Su, F, W, Sp. Fitzgerald
A seminar directed toward a holistic view
of a patient’s problem involving students, basic
scientists, and clinicians. Students will
select from multiple small groups and will see
the interplay between basic scientists and
clinicians in the immediate pertinence of
theoretical science.

Prerequisite: Microbiology 100-A and Phar-
macology at UC.) Su, F, W, Sp. Mustard
Seminar course on basic aspects of al-
lergy supplemented by discussion of as-
signed clinical material and demonstration of
selected diagnostic and therapeutic proce-
dures.

170.04. Fundamentals of Electrocardi-
ography. (2) F, W, Sp. Su, F, W, Sp. Prerequisite:
Medicine 131A-B-C. Goldman
Instruction in basic electrophysiologic prin-
ciples and interpretation of electrocar-
diograms.

170.05. Fundamentals of Electrocardi-
ography Interpretation at SFGH. (1) W, Sp.
Prerequisite: Medicine 131A-B-C. Rapaport
Review of physical principles of elec-
trocardiography and clinical application of
electrocardiographic interpretation.

170.07. Non-Invasive Laboratory Car-
diology. (1) Sp. Prerequisite: Medicine
131A-B-C. Rapaport
Fundamentals of non-invasive laboratory
cardiologic procedures will be discussed.

Techniques and role of echocardiography,
stress electrocardiography, Holter monitor-
ing, phonocardiography, systolic time inter-
vals, vectorcardiography, apexcardiography and
other areas will be covered.

170.08. Introduction to Cancer Medi-
cine. (2) F, W, Sp. L. H. Smith
This course provides a humanistic orienta-
tion to cancer that will form a framework for
better understanding and integration of the
information on cancer presented in other
health science courses. Biomedical, clinical, and
psychosocial aspects will be explored.

177. Research in Medicine. (1½ per
week) Su, F, W, Sp. L. H. Smith
A one-year research project approved by
the Dean and the chairman of the department.

188. Supervised Thesis. (1½ per
week) Su, F, W, Sp. Prerequisite: Consent of
instructor preceptor and approval of third
and fourth year coordinator.

L. H. Smith, Carbone
Research serves as a model system for studying similar disorders in
man.

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

Prerequisite: Microbiology 100-A and Phar-
macology at UC.) Su, F, W, Sp. Mustard
Seminar course on basic aspects of al-
lergy supplemented by discussion of as-
signed clinical material and demonstration of
selected diagnostic and therapeutic proce-
dures.

170.04. Fundamentals of Electrocardi-
ography. (2) F, W, Sp. Su, F, W, Sp. Prerequisite:
Medicine 131A-B-C. Goldman
Instruction in basic electrophysiologic prin-
ciples and interpretation of electrocar-
diograms.

170.05. Fundamentals of Electrocardi-
ography Interpretation at SFGH. (1) W, Sp.
Prerequisite: Medicine 131A-B-C. Rapaport
Review of physical principles of elec-
trocardiography and clinical application of
electrocardiographic interpretation.

170.07. Non-Invasive Laboratory Car-
diology. (1) Sp. Prerequisite: Medicine
131A-B-C. Rapaport
Fundamentals of non-invasive laboratory
cardiologic procedures will be discussed.

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

Prerequisite: Microbiology 100-A and Phar-
macology at UC.) Su, F, W, Sp. Mustard
Seminar course on basic aspects of al-
lergy supplemented by discussion of as-
signed clinical material and demonstration of
selected diagnostic and therapeutic proce-
dures.

170.04. Fundamentals of Electrocardi-
ography. (2) F, W, Sp. Su, F, W, Sp. Prerequisite:
Medicine 131A-B-C. Goldman
Instruction in basic electrophysiologic prin-
ciples and interpretation of electrocar-
diograms.

170.05. Fundamentals of Electrocardi-
ography Interpretation at SFGH. (1) W, Sp.
Prerequisite: Medicine 131A-B-C. Rapaport
Review of physical principles of elec-
trocardiography and clinical application of
electrocardiographic interpretation.

170.07. Non-Invasive Laboratory Car-
diology. (1) Sp. Prerequisite: Medicine
131A-B-C. Rapaport
Fundamentals of non-invasive laboratory
cardiologic procedures will be discussed.

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

Prerequisite: Microbiology 100-A and Phar-
macology at UC.) Su, F, W, Sp. Mustard
Seminar course on basic aspects of al-
lergy supplemented by discussion of as-
signed clinical material and demonstration of
selected diagnostic and therapeutic proce-
dures.

170.04. Fundamentals of Electrocardi-
ography. (2) F, W, Sp. Su, F, W, Sp. Prerequisite:
Medicine 131A-B-C. Goldman
Instruction in basic electrophysiologic prin-
ciples and interpretation of electrocar-
diograms.

170.05. Fundamentals of Electrocardi-
ography Interpretation at SFGH. (1) W, Sp.
Prerequisite: Medicine 131A-B-C. Rapaport
Review of physical principles of elec-
trocardiography and clinical application of
electrocardiographic interpretation.

170.07. Non-Invasive Laboratory Car-
diology. (1) Sp. Prerequisite: Medicine
131A-B-C. Rapaport
Fundamentals of non-invasive laboratory
cardiologic procedures will be discussed.

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

Prerequisite: Microbiology 100-A and Phar-
macology at UC.) Su, F, W, Sp. Mustard
Seminar course on basic aspects of al-
lergy supplemented by discussion of as-
signed clinical material and demonstration of
selected diagnostic and therapeutic proce-
dures.

170.04. Fundamentals of Electrocardi-
ography. (2) F, W, Sp. Su, F, W, Sp. Prerequisite:
Medicine 131A-B-C. Goldman
Instruction in basic electrophysiologic prin-
ciples and interpretation of electrocar-
diograms.

170.05. Fundamentals of Electrocardi-
ography Interpretation at SFGH. (1) W, Sp.
Prerequisite: Medicine 131A-B-C. Rapaport
Review of physical principles of elec-
trocardiography and clinical application of
electrocardiographic interpretation.

170.07. Non-Invasive Laboratory Car-
diology. (1) Sp. Prerequisite: Medicine
131A-B-C. Rapaport
Fundamentals of non-invasive laboratory
cardiologic procedures will be discussed.
Microbiology

100A-B. Biologic Agents of Disease. (3-5) ¶ Su, F. Prerequisite: Biochemistry 100A-B. Lecture 3 hours; Lab 4 hours. Lab 3 hours. Levine


125. Microbiology. (6) ¶ Lecture 4 hours, Lab and Conference 6 hours. Holtz and Staff

Morphology and physiology of microorganisms including bacteria, molds, yeasts, and viruses and techniques to study them. Emphasis on their biological importance; experimental and practical laboratory procedures.

190A. Medical Microbiology for Graduate Students. (3) ¶ Su. Prerequisite: Microbiology 100A-B and consent of instructor. Staff

Research in microbiology; block elective for fourth year students. Jawetz and Staff

190A. Medical Microbiology for Graduate Students. (3) ¶ Su. Prerequisite: Biochemistry 100A-B or equivalent. Staff

Same as Microbiology 100A. Lecture and conferences in the fundamentals of immunology and virology. Small group seminars on patient-related problems in these fields. Jawetz and Staff

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 with emphasis on human disease.

196. Supervised Study in Microbiology. (1-5) ¶ Su, F, W. 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 Research Project in Microbiology. (1-5) ¶ F, W, Su. Staff

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

202. Molecular and Cellular Immunology. (3) ¶ F. Prerequisite: Biochemistry 100A-B and Microbiology 100A-B or equivalents. Offered in alternate years. Not offered 1976-1977. Goodman

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

203. Immunobiology. (3) ¶ W. Prerequisite: Microbiology 100A-B or equivalent instruction in basic immunology. Offered in alternate years. Not offered 1976-1977. Uscott

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

204. Pathogenic Fungi. (2) ¶ F. Prerequisite: Microbiology 100A-B. Halide

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

208. Molecular Biology of Animal Viruses. (3) ¶ W. Prerequisite: General knowledge of molecular biology and biochemistry and multiplication of viruses. Offered in alternate years. Offered 1976-77.

Bishop, Levinson, Levintow, Varmus

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

209. Research Problems in Immunobiology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of immunological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.


A discussion of recent research on the DNA, RNA, proteins, membranes, and control of avian and mammalian cells. In addition, differentiation, contact behavior, communication, virus infection and carcinogenesis in these cells will be covered.

220. Seminar (0) ¶ F, W, Su. Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

250. Research in Microbiology. (0) ¶ F, W. Prerequisite: Consent of instructor. For advanced graduate students, in consultation with the graduate adviser.

251. Pathology and Epidemiology. (0) ¶ F. Prerequisite: Microbiology 203 or equivalent. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

252. Research in Virology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

253. Research in Mycology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

254. Research in Parasitology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

255. Research in Bacteriology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

256. Research in Virology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

257. Research in Mycology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

258. Research in Parasitology. (0) ¶ F. Prerequisite: Consent of instructor. Staff

Internal medicine and public health. University hospital experience (neuroscience) associations. Research training in the use and application of laboratory procedures.

259. Research Problems in Virology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of virological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.

260. Research Problems in Mycology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of mycological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.

261. Research Problems in Parasitology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of parasitological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.

262. Research Problems in Bacteriology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of bacteriological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.

263. Research Problems in Immunobiology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of immunological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.

264. Research Problems in Virology. (1-7) ¶ F, W. Prerequisite: Microbiology 203 or equivalent and consent of instructor. Offered in alternate years. Offered 1976-1977. Goodman

Training in the use and application of virological methods to research problems. Methods include quantitative precipitin and hapten inhibition techniques, gel electrophoresis and immunoelectrophoresis, paper and column chromatography, zone electrophoresis, isotope labeling and radiotagging of proteins, electron microscopy, and analytical ultracentrifugation.
120 / Neurology

...衘at is accredited by the Board of Qualifica-
...sents of neurophysiology. Specific subjects of re-
...s in Electroencephalog-

150.01. Research in Neurology. (1½ per week) 
Su, F, W, Sp. Prerequisite: Neurology 103

Opportunities for research in one of the de-

150.02. Neuropathology. (1½ per week) 
F, W, Sp. Prerequisite: Anatomy 103 and 
Pathology 102. Hoff, Weinstein

Tissue pathology of diseases of the nerv-
ous system will be explored in greater depth 
in the lecture room and by gross and 
microscopic techniques.

189. Supervised Study in Neurology. 
(1½ per week) Su, F, W, Sp. Prerequisite: Consent 
of instructor.

Library research and directed reading 
under supervision of a member of the fac-

199. Laboratory Project in Neurology. 
(1½ per week) Su, F, W, Sp. Prerequisite: Consent 
of instructor.

A laboratory research project under di-

400. Neurology 110. (1½ per week) Su, F, W, 
Sp. Prerequisite: Medicine 131 A-B-C.

Fishman, C. B. Wilson

Students are assigned patients for study 
under supervision of attending and resident 
staffs at UC, SFGH and VA hospitals. They 
attend ward rounds, attend clinics, and 
 participate in gross autopsies on 
patients from the Neuropathology Laboratory 
at SFGH and VA.
111A. Health Assessment in Nursing. (F, W, Sp.) Prerequisite: Nursing 110 or concurrent enrollment. Lecture 2 hours, Lab 15 hours. Staff
Explores the components of health, theoretical basis of health assessment, and identification of patient problems. Introduces the role of the nurse as a health assessor in ingpatient and outpatient settings, on an aged continuum from infancy to senescence.

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

112. Small Groups: Theories and Issues. (3) F, W, Sp. Prerequisite: Concurrent enrollment or prerequisite to Nursing 117. Lecture 2 hours, Lab 3 hours.
Dye
The course is designed to provide a sound theoretical basis in the principles and issues involved in the study, establishment, and functioning of small groups. Focus is on an application of theory to relevant nursing experiences.

113A. Communication: Theory and Practice in Nursing. (2) F, W, Sp. Prerequisite: Concurrent enrollment in Nursing 111A or consent of instructor. Lecture 1 hour, Lab 3 hours. Staff
Communication theory and principles in laboratory and clinical settings. Development and utilization of communication skills in nursing practice. Application of these skills with clients in the delivery of health care.

113B. Communication: Theory and Practice in Nursing. (F, W, Sp.) Prerequisite: Concurrent enrollment in Nursing 111B. Lecture 1 hour, Lab 3 hours. Staff
Communications theory and principles in laboratory and clinical settings. Development and utilization of communication skills in nursing practice. Application of these skills with clients in the delivery of health care.

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

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

115. Family and Community Patterns in Health and Illness. (3) F, W, Sp. Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, 114A and Psychology 113A-B. Lecture 2 hours, Lab 9 hours. Staff
Course deals with theory and practice essential to identifying, understanding, and intervening in forms of adaptive behavior in a variety of settings. In laboratory, focus is on working with psychiatric patients and the nurse-patient relationship as a therapeutic tool.

116. The Communication Process. (3) F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Staff
A lecture-discussion course exploring language as a symbolic system and as an instrument in describing emotional experiences. Emphasis on general theoretical considerations of language, emphasis is placed on descriptive communication as depicted in schizophrenia.

117. Psychological Adaptations in Health and Illness. (F, W, Sp.) Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, 114A and Psychology 113A-B. Lecture 2 hours, Lab 9 hours. Staff
Course presents a theoretical framework from which patient care and health delivery systems can be analyzed, approached, and influenced by the professional nurse.

118. Family and Community Patterns in Health and Illness. (F, W, Sp.) Prerequisite: Concurrent enrollment in Nursing 110, 111A and 111B, 113A and 113B, 114A-B. Lecture 2 hours, Lab 12 hours. Staff
Course explores the components of health, theoretical basis of health assessment, and identification of patient problems. Introduces the role of the nurse as a health assessor in inpatient and outpatient settings, on an aged continuum from infancy to senescence.

119. Pathophysiological Adaptation. (F, W, Sp.) Prerequisite: Nursing 110, 111A and 111B, 113A and 113B, 114A and 114B. Lecture 2 hours, Lab 18 hours. Staff
Course presents a theoretical framework from which patient care and health delivery systems can be analyzed, approached, and influenced by the professional nurse.
the role of the nurse therein. Correlated experience under supervision in public schools.

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

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


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

156. Creative Uses of Play with Young Children. (4) W. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 6 hours. Hardgrove

Course is 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 and techniques.

157. Management of Common Childhood Illnesses. (3) W, Sp. Prerequisite: Consent of instructor. Dunbar and Staff

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

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

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

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

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

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

Emphasis is on broad issues of child health supervision and the pediatric nurse practitioner’s primary care role in management, with parents, of common developmental stresses in the child. 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.

161. Physiological Concepts in Health and Illness. (3) W. Prerequisite: Nursing 170. Lecture 2 hours. Lab 3 hours. Carrieri

Current physiological concepts in illness are discussed and related to specific knowledge necessary for professional nurses beginning to function as pediatric nurse practitioners. Emphasis is on most common illnesses of infancy and childhood.

162. Hypothyroidism. (2) F, W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Terry

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

163. Contemporary Issues and Trends in Health Care Services. (3) F. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. Resnik

For nurses in primary care training. Examines major health issues, controversies, trends in health services, and the role that nurses have in emerging patterns in primary care delivery.

164A. Contemporary Issues and Trends in Health Care Services. (2) W. Prerequisite: Consent of instructor. Lecture 2 hours. Lab 3 hours. Resnik

For nurses in adult primary care training. Examines those issues and trends which have direct implications for nurses practicing in adult health settings. Included are questions of legalization, legal issues, organizational and medical practices, certification, and planning change in health institutions.

165. Literature and Science: Self, World and the Two. (2) F, W, Sp. E. Clarke, Fixed

An interdisciplinary seminar focused on the relationship between literature and science. Students are required to read the traditional raw materials of literature.

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

Groups of two or more collaborate in clinical investigation and studies of special problems under the direction of faculty, health sciences, and the relationship between literature and science. Students may select study topics related to their area of interest.
207. Research in Teaching. (2-4) § F, W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-6 hours. Critical inspection and analysis of research in student, patient, and staff teaching. Opportunity is provided to incorporate the findings of research in supervised practice teaching sessions.

208. Emerging Roles in Professional Nursing. (3) § Lecture 2 hours, Lab 3 hours. Examines from historical, sociological, economic, and nursing perspectives, the phenomenon surrounding emerging professional nurse 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 3 hours. Lecture/seminar that examines family dynamics and scientific concepts useful in assessment of families. The family as a system wherein roles, cultural values, and interpersonal communications is emphasized is considered. Selected research included.

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

211A. Introduction to Research: Perspectives and Strategies of Research and Researchers. (3) § F, Prerequisite: Elementary statistics or equivalent. Lecture 2 hours, Lab 3 hours. 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, 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) § Prerequisite: Nursing 211A or consent of instructor. Intensive study and critique of experimental and quasi-experimental research designs.

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

211OB2. Critique of Studies in Maternal-Child Nursing. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. 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.

211OB3. Critique of Research in Loss and Grief. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. 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.

211OB4. Critique of Research in Death in Childhood. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Critique of studies in death in childhood with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211OB5. Critique of Studies in the Field of Aging. (3) § Prerequisite: Consent of instructor. E. Nichols, L. Reynolds. Critique of studies in the field of aging with the intent to develop research consumerism. Emphasis on attitudes, insights, and abilities crucial to the appreciation, appraisal, and utilization of research in the health sciences.

211OB6. Critical Analysis of Clinical Interventions with Young Retarded Children. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Poither. 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.

211OB7. Methods of Research in Nonverbal Behavior. (3) § Prerequisites. Consent of instructor. Lecture 2 hours, Lab 3 hours. Halcomb. 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.

212A. Critique of Cardiopulmonary Research. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Critique of studies in 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.

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

213A. Nursing Measurements and Patient Monitoring. (2-3) § W. Prerequisite: Nursing 212A and consent of instructor. Lecture 2 hours, Lab 0-3 hours. Goldstein. Fundamental's of electronics, transducers, and instrumentation directly applicable to the modes of obtaining physiological data from patients.

213B. Nursing Measurements and Patient Monitoring. (2-3) § W. Prerequisite: Nursing 212A and consent of instructor. Lecture 2 hours, Lab 0-3 hours. Goldstein. Fundamental's of electronics, transducers, and instrumentation directly applicable to the modes of obtaining physiological data from patients.

214. Early Postpartum: High Risk Parenting. (3) § Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Course focuses on the puerperium, early maternal/paternal newborn relationships and the nurse's role in infant-acquaintances and attachment. Exploration of impact of premature infant or infant with defects on parents, family. Practicum available through Nursing 407.

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

215B. Health Care Planning in Communities. (3) § F, W. Prerequisite: Consent of instructor. Seminar 2 hours, Lab 3 hours. Archer. Exploration of analysis 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. Archer. Exploration of community health issues previously identified in community health nursing. Opportunities to develop community health nursing.
Students employ the problem-oriented framework to assess and manage theoretical patient problems. Practicum optional.

219B. Nursing Care of the Acutely Ill Child. (3) § Sp. Prerequisite: consent of instructor.

Ward Focus is on exploration of immediate physiological and pathophysiologic 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.

220. Advanced Seminar in Nursing Research. (3) § F, W, Sp. Prerequisite: Nursing 211A and 211B or equivalent and consent of instructor.

A seminar intended for doctoral students to discuss methods and problems in current nursing research. Course may be repeated for credit.

221A. Role Development: Specialized Nursing Roles. (2-3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-3 hours.

Role change, as dramatized by maternal identity, is used to examine transition as a lifelong developmental construct. Patient data is utilized to examine theoretical concepts and generate new theory.

221B. Role Development: Specialized Nursing Roles. (2-3) § W. Prerequisite: Nursing 211A or equivalent and consent of instructor. Lecture 2 hours, Lab 0-3 hours.

Lecture/seminar focusing on the critical analysis of specialized nursing role developments. Role research approach and methodology are emphasized. Includes traditional, existing, expanded, and emerging roles relating to specialization. Optional laboratory for theory testing and systematic observations is required for research credit.

222A. A Survey of Modern Psychiatric Thought. (3) § W. Prerequisite: Consent of instructor.

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 selected theoretical models is explored.

222B. A Survey of Modern Psychiatric Thought. (2-4) § W. Sp. Prerequisite: Consent of instructor.

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 selected theoretical models is explored.

224. Current Trends in Group Psychotherapy. (3) § F. Prerequisite: Nursing 244 or consent of instructor.

Seminar focusing in depth on the theoretical bases and implementation of role playing, psychodrama, and gestalt psychotherapy in the group setting by the psychiatric nurse. Designed for nurses desiring advanced specialization in group psychotherapy.

225. Psychotherapeutic Process in Nursing. (3) § F. W, Sp. Prerequisite: Consent of instructor.

Lecture/seminar on the psychotherapeutic process in nursing. Material drawn from recent research in social science, psychiatry, and psychiatric nursing.

226. Nursing in Long-Term Illness. (3) § Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 2 hours.

Intensive study of problems related to long-term illness. Examinations of the interrelationship of various cultural, psychological, and pathophysiological factors involved in continuing health problems. Field experience included.

228. Communications — Theoretical and Philosophical. (2-4) § F, W. Sp. Prerequisite: Consent of instructor.

A seminar to discuss innovative uses of communications in group psychotherapy in the group setting by the psychiatric nurse. Includes communication and applied to clinical material. Intrapsychic, interpersonal, and social frameworks are reviewed. Research related to selected theoretical models is explored.

229. Crisis Intervention. (2-4) § F. Sp. Seminar 2 hours, Lab 0-6 hours.

A seminar to discuss innovative uses of crisis intervention in selected nursing areas.

Focus is on underlying theory drawn from Lindeman, Erickson, Harris, Lazarus, and Caplan. Special emphasis is on application in the community.

231A. Nursing Administration. (4) § W. Prerequisite: Consent of instructor.

An advanced course designed to apply major concepts in organizational theory and management to nursing administrative practice. Emphasis on systems approach and relevant analytical techniques that will enable students to conceptualize and analyze problems in health care settings.

231B. Nursing Administration. (4) § Sp. Prerequisite: Nursing 231A and consent of instructor.

An advanced course designed to apply major concepts in organizational theory and management to nursing administration practice. Emphasis on systems approach and relevant analytical techniques that will enable students to conceptualize and analyze problems in health care settings.

232A. Dimensions of Leadership. (2-4) § F. Consent of instructor. Lecture 2 hours, Lab 0-6 hours.

Overview of concepts, theories, priciples, and research studies relative to leadership characteristics of the leader, follower, and health-care environmental situations. Focuses on systematic analysis of decisions related to planned change in health care services. Laboratory includes computer simulation.

232B. Dynamics of Leadership. (2-4) § W. Prerequisite: Nursing 232A or consent of instructor. Lecture 2 hours, Lab 0-6 hours.

Analysis of interactive variables and functional relationships of leadership characteristics of the leader, follower, and health-care environmental situations. Focuses on leadership behavior, styles, and strategies. Laboratory includes computer simulated problems.

232C. Problems in Leadership. (2-4) § Sp. Prerequisite: Nursing 232B and consent of instructor. Lecture 2 hours, Lab 0-6 hours.

Seminar focuses on the selection of problems and case studies and on the development of proposed solutions for problems in health services. Application and testing of ideas, principles, models, and theories related to leadership behaviors, decision making, and planned change.
233. Coping Styles of Children. (3) § F, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.


236. Expectant Parent Group Education. (2) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

237. Individual Study with Emphasis on Special Problems in Nursing. (1-5) § F, W, Sp. Prerequisite: Nursing 211A and consent of instructor. Lecture 3 hours, Lab 0-3 hours.

238A. Development of the Infant and Preschool Child. (3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

238B. Development in Middle Childhood. (3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

239A. Care of Patients with Pulmonary Problems. (3) § F. Prerequisite: Consent of instructor. E. Clarke, Flood

239B. Care of Patients with Pulmonary Problems. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

240. Clinical Decision Making. (3) § F. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

241. Cardiovascular Nursing: A Theoretical Basis. (3) § W. Prerequisite: Consent of instructor. C. A. Pike, Hutchings

241.02. Renal Nursing: A Physiological Basis. (2) § Sp. Markowitz, E. Clarke


243. Care of Patients with Pulmonary Problems. (3) § Sp. Prerequisite: Consent of instructor. E. Clarke, Flood

244. Theories of Group Psychotherapy. (2) § W, Sp. Prerequisite: Nursing 112 or consent of instructor. Lecture 2 hours, Lab 1 1/2 hours.


246. Deterrents to Parenting. (3) § F. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

247. 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.

248. Group Independent Study. (1-6) § W, Sp. Prerequisite: Consent of instructor. Groups of two or more collaborate in clinical investigations and other studies of special problems in nursing and health science under the direction of faculty. Students may select areas related to their long-term interests and future research or clinical program.

249. Aspects of Aging in Long Term Health Care. (3) § F, W, Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.

250. Research. (1-4) § F, W, Sp. Prerequisite: Admission to doctoral study and consent of instructor.

251. Professional Nurses in Bureaucracies. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.

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.

253. Research in Small Group Behavior. (3) § Sp. Prerequisite: Nursing 211A and consent of instructor. Dye

254.01. Maternal Physiology and Clinical Assessment. (2-4) § W. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours.

254.02. Fetal-Newborn Development. (2) § F, Sp. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours.

255. Professional Nurses in Bureaucracies. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.

256. Process of Aging: Implications for Nursing Care. (2-4) § F, W, Lecture 2 hours, Lab 0-4 hours.

257. Process of Aging: Implications for Nursing Care. (2) § F, W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.


259. Process of Aging: Implications for Nursing Care. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.

260. Process of Aging: Implications for Nursing Care. (2-4) § F, W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 0-4 hours.

261. Process of Aging: Implications for Nursing Care. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.

262. Process of Aging: Implications for Nursing Care. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.

263. Process of Aging: Implications for Nursing Care. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.

264. Process of Aging: Implications for Nursing Care. (3-4) § W. Prerequisite: Work experience as RN or consent of instructor. Lecture 3 hours, Lab 0-3 hours.
254.03. Nursing Care of High Risk Pregnancy (4-4) F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Rees

Explanation of pathophysiological events affecting the maternal-fetal unit in high risk pregnancies. Clinical experience will be provided focusing on nursing theory.

254.04. Nursing Care of High Risk Newborn. (2-4) F. Prerequisite: Consent of instructor. Lecture 2-3 hours, Lab 0-3 hours. Durand

In-depth theory exploration of the physiological and pathophysiological events affecting low birth weight newborn. Current medical and nursing research findings will be incorporated.

254.05. Developmental Pharmacology. (2) F. Prerequisite: Consent of instructor. Dulock, Ree, Burkhalter

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

255.1. 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 intervention. Emphasis on parents as participants in assessment, decision-making and management of common health problems and normal developmental stresses in infancy and childhood.

256. Therapeutic Use of Play. (2) W. Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours. Hardgrove

Practical experience using play materials, techniques, and methods, 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. Prerequisite optional.

257A. Children at Risk. (3) W. Prerequisite: Nursing 238A, 238B or consent of instructor. Psychology 220 or equivalent and/or consent of instructor: Lecture 2 hours, Lab 3 hours. Millor

Introduction to assessment of temperament and constitutional factors in child development and early identification of vulnerability for developmental deviations; assessment of child rearing styles and environmental impact on quality of life. Emphasis on designing a conceptual framework for individual assessments.

257B. Children at Risk. (3) W. Prerequisite: Nursing 257A. Lecture 2 hours, Lab 3 hours. Millor


258. Intrapartal Nursing. (3) W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Mercer

Exploration of theories of pain perception and clinical course of 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 407.

259. Sex Education and Counseling (3) W. Sp. Prerequisite: Nursing 210 or Psychology 180 or equivalent. Consent of instructor. Lecture 2 hours, Lab 3 hours. Adams

Theories and principles of sex counseling and intervention for common problems are analyzed to facilitate health professionals work with individuals and families relative to human sexuality, personal and societal attitudes, and values are explored. Nursing 406 required.

260. Research in Human Communica­tion. (3) W. Sp. Prerequisite: Nursing 211A or equivalent. A. Davis

Seminar examines selected research focusing on human communication. Research topics vary and include social context, and language are explored to understand problems occurred in human communication research.

261. Introduction to Computer Instruc­tion. (2) W. Prerequisite: Lecture 1 hour, Lab 3 hours. J. Nielsen, Bailey, Kamp

Concepts, principles, and methods of computerized instruction; preparation of experiences provide opportunity to design and write interactive teaching programs.

263A. Nursing Evaluation of the Aged Hospitalized Clients. (2) F. W. Prerequisite: Consent of instructor. Davidow

Selected frameworks in nursing care, analysis, decision-making, and presentation of diagnostic approaches related to the aged hospitalized clients. Data bases and methodologies for assessing/facilitating client information are studied. Concurrent practicum required.

263B. Restorative Nursing with Aged Hospitalized Clients. (2) W. Prerequisite: Consent of instructor. Davidow

Examination of restorative nursing strategies appropriate to major nursing diagnoses seen in care of aged hospitalized clients. Exploration of methods of implementation of prescribed nursing care and evaluation of outcomes of applied strategies toward clients’ goals are analyzed. Concurrent practicum required.

263C. Quality Assurance in Health Care. (3) W. Prerequisite: Lecture 2 hours, Lab 3 hours. Davidow

Focuses upon dimensions of quality assurance in health care and community. Impact of value judgments and components of quality assurance such as peer utilization. Emphasis on methods of improving care received and institutional control, and vested interests, examined on basis of outcomes in long-term care.

264A. Social Context of Nursing Practice. (3) W. F. W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. E. Nichols

Focus is on the exploration of social processes and how they impinge on nursing practice. Interventions based on empirical data are considered. Particular emphasis is on the work setting.

266A. Research Conceptualization. (3) W. Sp. Prerequisite: Nursing 211A or consent of instructor. Lecture 2 hours, Lab 3-9 hours. M. Kramer

Discussions and practice in research formulation and design selection for professional research. Co-classes or small group sessions are organized around students’ interests.

268B. Research Implementation. (3-5) Sp. Prerequisite: Nursing 264A. Consent of instructor. Lecture 2 hours, Lab 3-9 hours.

Data collection, analysis, and reporting of research data, or some problem of a research project, such as tool construction, validity, or reliability studies.

270. Thesis or Comprehensive Examina­tion. (1) W. F. W. Prerequisite: Advance­ment to candidacy and permission of the graduate adviser. Staff

For graduate students engaged in writing the thesis for the master’s degree or taking a comprehensive examination required for the master’s degree.

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

For graduate students engaged in writing the dissertation for the Doctor of Nursing Science (DNS) program.

401. Teaching Residence. (4-12) W. Sp. Prerequisite: Consent of instructor. Lab 12-36 hours.

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor.

402. Administration Residence. (4-12) W. Sp. Prerequisite: Consent of instructor. Lab 12-36 hours.

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor.

403. Consultation Residence. (4-12) F. W. Sp. Prerequisite: Consent of instructor. Lab 12-36 hours.

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor.

404. Clinical Residence. (4-12) F. W. Sp. Prerequisite: Consent of instructor. Lab 12-36 hours.

Opportunity to apply and evaluate theories, concepts, and skills in the work setting under the supervision of a preceptor.

406A. Clinical Residency-Pediatric Nurse Associate. (4-12) F. Sp. Prerequisite: Consent of instructor. Lab 12 hours. Durand
Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory health care.

404.DEB. Clinical Residency-Pediatric Nurse Associate. (4) Sp. Prerequisite: Nursing 404 D&A and consent of instructor. Lab 12 hours.

Durand

Course offers opportunity to apply and evaluate theories, concepts, and skills in the work setting under supervision of a preceptor. Focus is on development of the pediatric clinical specialist role in ambulatory health care.

405. Practicum in Mental Health and Community Nursing. (1-8) F, W, Sp. Prerequisite: Consent of instructor. Lab 3-24 hours.

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical expertise in selected aspects of mental health and community nursing. Guided clinical laboratory experience is designed to develop mastery of advanced skills.


Staff

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical expertise in selected aspects of family health care nursing. Guided clinical laboratory experience is designed to develop mastery of advanced skills.


Staff

Opportunity to apply theory in clinical practice to further develop skills and to extend clinical expertise in selected aspects of physiological nursing. Guided clinical laboratory experience is designed to develop mastery of advanced skills.

408A. Nursing Internship Seminar. (2) Su. Prerequisite: Admission to Biodysfunction Veterans Administration Internship Program

Conahan

Seminar designed to develop ability of participant to use sociopsychological theory in dealing with the setting of the UC-VA internship. To be taken concurrently with internship which includes individual and small group instruction in clinical management skills


Staff

Supervised practice in selected components of the teaching role in nursing.

Nutrition

132. Principles of Diet as Therapy in Nursing Interventions. (2) W, Sp. Prerequisite: Nursing 110 or instructor consent.

Gutierrez

Concepts of dietary modifications are required in the prevention and treatment of major disease entities. Emphasis is on clinical approaches useful in nursing practice.

160. Foods and Nutrition. (2) F. Lecture 1 hour, Lab 3 hours.

Vinson

Practical aspects of nutrition including diet evaluation, obtaining diet histories, and nutrition education. Panel discussions of pertinent topics in nutrition are included.

181. Nutrition Counseling for Families. (2) F Prerequisite: Consent of instructor.

Gutierrez

Course provides theory and practice in the interpretation of current concepts and principles of nutrition for family counseling with an emphasis on cultural dietary patterns.

Obstetrics & Gynecology


McKay, Hill

Advanced clinical clerkships. Senior clerkships are available, at various hospitals by arrangement: MZ, L, KP and others in the United States or abroad.


Margolis

Daily participation in the general and sub-specialties of obstetrics and gynecology.

140.07. Gynecologic Clerkship at UC. (1½ per week) Su, W, F, W. Prerequisite: Obstetrics and Gynecology 110.

Braga, R. Glass

For clerk functions in the role of an act inter on the gynecology service. Responsibilities are predominantly in the inpatient service and will include both surgical and non-surgical aspects of gynecologic oncology, endocrinology, infertility, and general gynecology.

150.01. Research in Obstetrics and Gynecology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor and chairman of the department.

Jaffe and Staff

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


Jaffe and Staff

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

159. Laboratory Project in Obstetrics and Gynecology. (1-5 Su, F, W, Sp. Prerequisite: Consent of instructor.

Jaffe and Staff

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

400. Staff Conferences. (1) F, W, Sp. Prerequisite: Consent of instructor.

Jaffe

Conferences comprised of formal discussions by staff, faculty, and visiting lecturers.

401. Surgical Pathology Seminar. (1) F, W, Sp. Prerequisite: Consent of instructor.

Jaffe

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

500. Staff Conferences. (1) F, W, Sp. Prerequisite: Consent of instructor.

Jaffe

Conferences comprised of formal discussions by staff, faculty, and visiting lecturers.

402. House Staff Seminars. (1) Su, W, F, Sp. Prerequisite: Consent of instructor.

Laros

Seminars include presentations of special topics, literature reviews, and discussions. Discussion of resident staff functions also held.


UC Laros, SFGH Jaffe, C Webb

Residents are responsible for the care of patients in the hospital and outpatient clinic. Formal and individual instruction is conducted.


Jaffe

Interns rotate through gynecology wards and clinics. They are responsible for the care of patients under the direction of the attending staff, including history-taking, physical examination, laboratory tests, and consultation.

Oclusion

120. Applied Dental Morphology and Physiology of Occlusion. (1) Sp. Prerequisite: Concurrent enrollment in Oral Diagnosis.

Tueller and Staff

A joint lecture and discussion series on emphasis on preclinical to the clinical phases of dentistry.


Pavone

The etiology of functional disturbances, analysis of occlusal relationships of the opposing arches, and a rationale of therapy are presented. The principles of occlusion as they apply primarily to adult clinical dentistry are also discussed.

Operative Dentistry


Watkins

Beginning techniques in operative dentistry. Practical experience in operative dentistry is taken concurrently with instruction in the principles and objectives of operative dentistry. Cavity design and preparation are included in the spring quarter.


Watkins

Continuing techniques in operative den-
136 / Ophthalmology

198. Advanced Operative Dentistry Theory. (1) F. Prerequisite: Operative Dentistry 130A-B-C. Schuchard and Staff

This course must be taken concurrently with Operative Dentistry 100.

199. Laboratory Project in Operative Dentistry. (1-5) F, W. Prerequisite: 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.

Ophthalmology

First-Year Coordinated Instruction—Medicine 131 A-B-C. Lecture-demonstrations by faculty in addition to work in the supervised examination of patients.

Core Clerkship—Surgery 110 and 111 includes lectures and clinical experience in the diagnosis and care of eye and ear cases in wards, and surgery. Seminars on ophthalmic pathology, microbiology, and optics.

140.01. General Clinical Ophthalmology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor.

Clinical observations of patients in clinic, wards, and surgery. Seminars on ophthalmic pathology, microbiology, and optics.

140.02. General Clinical Ophthalmology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. S. Kramer and Staff

Clinical clerkship in approved hospitals under special arrangement and approval by the Dean and the chairman of the department. In San Francisco, electives offered at SFGH and L.

150.01. Ophthalmic Pathology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Crawford

Schuchard and Staff

Techniques and procedures for Class III restorations using the conservative approach, as well as wedge and matrix. Work also includes on Class V direct gold restorations. Students learn to use various materials including fibrous gold, goldfoil, and cements.

199.01. Advanced Clinical Operative Dentistry. (0-5) F, W, Sp. Prerequisite: All previous courses in operative dentistry curriculum sequence. Clinic: Variable. Schuchard and Staff

Continuation of clinical experience at level of Operative Dentistry 109.

199.02. Advanced Clinical Operative Dentistry. (0-4) F, W. Prerequisite. Approval of the chairman of the division. Clinic 0-12 hours. Schuchard and Staff

Advanced instruction in the field of clinical operative dentistry, utilizing procedures different from those presented at the level of Operative Dentistry 109 such as quadrants and plastics.

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 faculty members.

401. Conferences at SFGH and VA. (1) F, W, Sp. Prerequisite: First and third year residents.

Conferences include grand rounds and case presentations of hospital patients, review of section work devoted to the supervised examination of patients.

402. Specialty Seminars at SFGH and VA. (6) F, W, Sp. Prerequisite: Approval of the chairman of the department. Schuchard and Staff

Seminars include didactic lectures in practical work covering pathology, neuro-ophthalmology, uveitis, physiological optics, retinal and macular diseases, glaucoma, and microsurgery.

403. Basic Ophthalmologic Science Course. (6) Required for first year residents. UC Hogan

Didactic lectures and demonstrations covering the basic sciences as applied to opthalmology. These include anatomy, histology, biochemistry, physiology, and pharmacology.

450. Clinical Ophthalmology at UC. (1½ per week) Su, F, W, Sp. UC Kimura

Residents, under supervision, are responsible for patients in the Eye Clinic. First year residents assist in eye surgery and the Eye Bank program. Specialty clinics include external diseases, extracocular muscles, medical ophthalmology, ophthalmoscopY, refract., cataract, glaucoma, neuro-ophthalmology. Students may participate in the Eye Bank program.


Residents, under supervision, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases.


Residents, under supervision, are responsible for patient care including diagnostic studies and treatment of medical eye care, diagnosis, surgery, and follow-up treatment of surgical eye cases. Residents consult for other hospital services.

455. Fourth Year Residency. (1½ per week) Su, F, W, Sp. UC Hogan

Fourth year residency tenacy at UC or any approved institution subject to the approval of the chairman of the department and the Dean.


Residents or fellows, under supervision, are responsible for patient care, including diagnostic studies and treatment of medical eye care, diagnosis, and surgery-eye care.

Residents and fellows consult for other hospital services.

490. Clinical Ophthalmology at SFGH. (1½ per week) Su, F, W, Sp. SF Goodner

Interns, under supervision of the attending staff, are responsible for patient care on wards and in the follow-up clinic, including diagnostic studies and consultation. This rotation is combined with patient care assignments in the Otolaryngology Service.

Oral Biology

120. Oral Medicine. (3) Prerequisite: Oral Biology 126 and 127.

Handling of patients is introduced by emphasizing history-taking, differential diagnosis, medical implications, clinical pathology, laboratory in dental practice, and fundamentals of treatment. Classification, etiology, pathogenesis, diagnosis, and management of some benign lesions occurring in the oral cavity are covered.

126. Oral Biology. (5) Prerequisite: Anatomy 118, Lecture 4 hours. Christie and Staff

Introduction to oral biology correlating morphology, chemistry, functions of oral and paranasal tissues. Topics include head and neck embryology, enamel, dentin, cementum, pulpa and pulpal disease, dental caries, dental anomalies, tooth eruption, periodontium and periodontal disease, and oral mucous membranes.

127. Introduction to Oral Pathology. (3) Prerequisite: Oral Biology 126. W. Lecture 2 hours. Lab 3 hours. Greenspan, T. E. Daniels, Merrell

Course correlates clinical oral pathology with histologic changes. Emphasis is placed on the microscopic and laboratory interpretation of cellular, tissue, and chemical alterations.

128. Dental Caries, Plaque and Fluorides. (3) Prerequisite: Biochemistry 110 A-B, Oral Biology 126, Microbiology 126 and Pharmacology 126 A-B. Lecture 3 hours. Rotating seminar 8 hours. Newbun
178A-B-C. Oral Pathology Seminar. (2-2-2) F, W. Lecture and Seminar 3 hours. Hansen
Lectures and seminars on diseases of the oral regions. Disease entities are studied from a clinical and histomorphological standpoint with emphasis on etiology and pathogenesis.


S. Silverman and Staff
Clinical pathology course; biology, diagnosis, and treatment of various oral lesions and associated patient problems. Some oral lesions are critically reevaluated in the light of current research advances. Specific medical knowledge is related to patient care.

181. Forensic Odontology. (1) W. Prerequisite: Oral Biology 126 and consent of instructor.
Hansen and Staff
Identification by means of dental evidence, known as forensic odontology. Course includes discussions of identification procedures in single and disasters, including homicides and mass disasters, forensic dental radiology, bite injury and bite marks, the medicolegal autopsy, fire research, and forensic anthropology.

185. Diagnostic Oral Pathology. (1) F, W. Prerequisite: Fourth year standing and consent of instructor.
Goodson
The advanced dental student participates in lecture-seminars, in which emphasis is placed on diagnostic procedures relating to diagnosis and critical evaluation of the data.

186. Introduction to the Biological Sciences. (1 SS) Lecture, Laboratory, Demonstration. 3 hours for 3 weeks. Christie
Introduction to the biological sciences taught in the first year of dental anatomy: anatomy, biochemistry, and physiology. Course includes one-half day per week orientation to the campus community.

Ware, S. Silverman and Staff
Participation in the Oral Medicine Clinic applying knowledge of history-taking and differential diagnosis; utilize various diagnostic techniques such as biopsy, cytology and color, and certain clinical pathology laboratory tests; interpret results, prescribe treatment and follow-up, record patient information, and weekly seminar.

189.03. Advanced Clinical Clerkship in General Dentistry at UC. (1½ per week) F, W, Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee. S. Silverman, Ware Students provide comprehensive dental care to patients assigned to them under supervision of staff in the medical and hospital environment. Students attend seminars and conferences.


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

192. Experimental Techniques in Oral Biology. (3) F, W. Prerequisite: Oral Biology 126 and 204 or equivalents. Lecture 1 hour. Lab 5 hours. Principles and methods employed in studying oral tissues such as histochemistry, autoradiography, decalcification procedures, crostat sectioning, and enzyme histochemistry will be presented.

194. Seminar. (1-4) F, W, Spring Semester 1 hour. S. Silverman and Staff
A wide spectrum of selected topics related to oral biology are presented with emphasis on basic and applied research methodology, pertinent problems, significance of findings, and critical evaluation of data.

195A-B-C. Oral Pathology. (2-2-2) F, W. Prerequisite: Seminar and Lecture 2 hours. Hansen
Lectures and seminars on diseases of the oral regions. Disease entities are studied from a clinical and histomorphological standpoint with emphasis on etiology and pathogenesis. 

Ware, S. Silverman and Staff
Participation in the Oral Medicine Clinic applying knowledge of history-taking and differential diagnosis; utilize various diagnostic techniques such as biopsy, cytology and color, and certain clinical pathology laboratory tests; interpret results, prescribe treatment and follow-up, record patient information, and weekly seminar.

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195A-B-C. Oral Pathology. (2-2-2) F, W. Prerequisite: Seminar and Lecture 2 hours. Hansen
Lectures and seminars on diseases of the oral regions. Disease entities are studied from a clinical and histomorphological standpoint with emphasis on etiology and pathogenesis. 

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138A-B-C. Oral Biology. (0-0-0) F, W, Sp. Prerequisite: Oral Biology 120, 126, and 127. Lecture and Clinic 2 hours. Chin, Caswell and Staff
Group rotation through two five-week sections: clinical diagnosis—patient presentation, history-taking, examination, diagnosis, treatment, and follow-up; and medicine—introduction to internal medicine and physical diagnosis.

180. Oral Medicine. (1) Sp. Prerequisite: Oral Biology 120. Chin Clinical oral pathology for the dental hygienist. Diagnosis and management of some common oral disorders are covered. Use of diagnostic aids and methods of treatment are emphasized.

187. Temporomandibular Joint Seminar. (1) F, W. Prerequisite: D.D.S. degree. With consent of instructor, fourth year students may take this course as an elective. R.Taylor
Seminar series covering differential diagnostic techniques and treatment approach to temporomandibular joint disease.

Advanced study of the oral tissues, with emphasis on their histophysiologic aspects.

187. Current Oral Pathology. (2) Sp. Hansen and Staff
A seminar designed to acquaint post-doctoral students with current advances, techniques, trends, and developments in the field of oral pathology.

187. Dental Therapeutics. (2) W. Seminar: 2 hours. Prerequisite: Pharmacology 1266B-C or equivalent. Goodson, Bhatnagar, Hansen Advanced study of the oral tissues, with emphasis on their histophysiologic aspects.

187. Dental Therapeutics. (2) W. Seminar: 2 hours. Prerequisite: Pharmacology 1266B-C or equivalent. Goodson, Bhatnagar, Hansen Advanced study of the oral tissues, with emphasis on their histophysiologic aspects.
apply knowledge of history-taking and differential diagnosis; utilize various diagnostic procedures such as biopsy, cytology, and certain clinical pathology laboratory tests, interpret results; prescribe treatment and follow-up; hospital rounds; and weekly seminars.


Ware, R. Taylor and Staff Participation in the Temporomandibular Joint Clinic applying knowledge of history-taking and differential diagnosis; utilizes such diagnostic techniques as laminographic X rays, occlusal analysis, and other specific joint tests; interprets results; prescribes treatment; and follows-up with patient reviews.

Oral Diagnosis


Braly and Staff Case is designed on a point basis for independent case work-ups and case presentations.

109.01. Oral Diagnosis and Roentgenology Rotation. (O-1½) F, W, Sp. Prerequisite: Third year standing. Clinic and Seminar Block rotation 60 hours.

Braly and Staff Clinical experience and small group instruction provided in diagnosis and treatment planning, emergency dental care, clinical aspects of facial deformities, and roentgenology.


G. Hall The provision of dental emergency care in the UC clinic for students in their fourth year. Instruction will be provided on a one to one basis with credit assigned according to hours spent.

116A-B-C. Clinical Dentistry (0-4-4, 1½) F, W, Sp. Lecture 1 hour F, W, Clinic 3 hours F, W, 4 hours Sp. Brady An introduction to concepts of dental health and disease, and a recognition of these through the inter-disciplinary clinical orientation program.

129. Diagnosis and Treatment Planning. (2) Sp. Prerequisite: Oral Diagnosis 116A-B-C. Clinic and Seminar 6 hours.

Maxwell Small group instruction is provided in comprehensive case work-up of dental patients. Student completes a case history, clinical examination, study cast analysis, and diagnosis and treatment plan, meeting the patient's total dental needs.

189. Oral Diagnosis and Treatment Planning. (1) F, W. Prerequisite: Oral Diagnosis 129 and fourth year standing. Clinic-Seminar 3 hours.

J. Schmidt Students receive experience in advanced treatment planning of a multidisciplinary nature, through examination, case work-up, and treatment planning of patients presenting complex oral problems. Students work with the oral diagnosis staff and the faculty consultant panel.

Oral Radiology

121. Radiographic Interpretation. (1) Sp. Parks An introduction to the fundamentals of radiographic interpretation, some of the basic physics of X ray generation, and radiation biology.

131. Oral Radiology. (1) Sp. Prerequisite: Oral Radiology 121 Parks Course is a continuation of Oral Radiology 121 and is intended to broaden the scope of radiographic interpretation. Additional aspects concerning radiation biology are also included.

135. Oral Radiology. (0-1) SS. F. Prerequisite: Oral Radiology 121. Lab rotation 24 hours.

Parks A course in intraoral X ray technique including instruction in the long cone paralleling method, and practice on skulls and mannequins. Objective is to prepare the student for clinical experience during the oral diagnosis course rotation.

160B-C. Oral Radiology for Dental Hygienists. (1-1½) W, Sp. Parks Course covers essentially the same material as Oral Radiology 121, but is modified to meet the special needs of the dental hygienist.


Parks A course in intraoral X ray technique including instruction in the long cone paralleling method and practice on skulls and mannequins. After basic instruction, clinical experience is gained.


Maxwell Continuation of Oral Radiology 121 and 131 in a seminar teaching format.

199. Laboratory Project in Oral Radiology. (1-5) F, W, Sp. Prerequisite: Oral Radiology 121. Research project under direction of a member of the faculty with the approval of the chairman of the department.

Oral Surgery


120. Local Anesthesia. (1½) Sp. Khosla Course covers local anesthesia technique as it pertains to the dentition and oral cavity.

130A-B-C. Oral Surgery. (1-1½) SS, F, W. Prerequisite: Anatomy 117A-B and Microbiology 126. Lecture 1 hour F, W; 2 hours SS. Gordon, R. A. Smith

Procedural skills and academic knowledge that every dental student should be familiar with: includes the treatment of cysts, infection, developmental deformities of the jaws and salivary glands, duct diseases, and procedures.


170. Surgical Orthodontics. (2) W. Prerequisite: Enrollment in postdoctoral specialty program in orthodontics or oral surgery. Seminar 2 hours.

Ware The course explores the various facial and orthodontic deformities that justify a combination of surgical and orthodontic treatment. The student is assigned a topic, does the necessary library review, and presents a seminar under direction of the instructor.

171. Applied Surgical Anatomy. (1½) F, W, Sp. Prerequisite: Limited to interns and residents. Clinic 1 hour. Courage Relationships of gross anatomical structures of the head and neck are studied during laboratory dissection. Emphasis is placed on the correlation of cadaver dissection findings to diagnosis and operating room surgery.

175. Oral Surgery. (13) Su. Prerequisite: Limited to oral surgery residents. Hospital and Clinic 40 hours.

Huebsch and Staff Principles of surgery and local anesthesia as related to the mouth and clinical operations on patients.

175.01A-B. Oral Surgery. (2, 2-7) F, W. Prerequisite: Limited to interns and residents. Lecture-seminar 2 hours. Clinic 15 hours.

Huebsch and Staff Continuation of Oral Surgery 175.

175.02. Oral Surgery. (15) Su. Prerequisite: Limited to oral surgery residents. Seminar 2 hours, Hospital and Clinic 40 hours.

Huebsch and Staff Continuation of Oral Surgery 175.01A-B.

175.03. Oral Surgery. (13) F. Prerequisite: Limited to oral surgery residents. Hospital and Clinic 40 hours.

Huebsch and Staff Hospital procedures, ward rounds, and clinical practice in several hospitals; treatment of jaw fractures, osteomyelitis, cellulitis, and other complicated conditions. Attendance is required at the tumor clinic and in the experimental surgery training program.

175.04B-C. Oral Surgery. (10-19) W, Sp. Prerequisite: Limited to oral surgery residents. Lecture 5 hours, Hospital and Clinic 24 hours.

Huebsch and Staff Continuation of Oral Surgery 175.03 with the addition of surgery of the jaws for correction of such facial deformities as prognathism, hypergnathia, and temporomandibular joint surgery is taught.

175.05. Oral Surgery. (13) Su. Prerequisite: Oral Surgery 175.04B-C. Limited to oral surgery residents. Hospital and Clinic 40 hours.

Huebsch and Staff Continuation of clinical oral surgery. Certain periods each week devoted to supervised instruction of undergraduate students.


Huebsch and Staff Continuation of Oral Surgery 175.05.

175.07. Office Anesthesia for the Ambulatory Oral Surgery Patient. (2) F, W. Prerequisite: Limited to second and third year oral surgery residents. Lecture 1 hour, Clinic 30 hours.

Huebsch and Staff Continuation of Oral Surgery 175.07.
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residents will be responsible for care and management of the ambulatory patient who is to undergo an oral surgery procedure under ambulatory anesthesia.

An elective didactic and demonstration course with practice sessions to insure the student's knowledge and capability of managing the psychomotor skills of cardiopulmonary resuscitation.

189.01. Advanced Oral Surgery Clinic. (0-9) Su. Prerequisite: Fourth year standing and consent of instructor, Clinic Variable. Huebsch and Staff
Additional clinical experience in oral surgery.

189.03. Hospital Oral Surgery. (0-3) F, W, Sp. Prerequisite: Oral Surgery 109 and consent of instructor and Clinic Review Committee. Clinic and Seminar at SFGH. Huebsch and Staff
Limited experience in hospital oral surgery to include assisting and performing oral surgery procedures. Aspects of premedication as related to the ambulatory patient. Orientation in hospital decorum and operating rooms.

189.04. Advanced Clinical Clerkship in Oral Surgery at UC and SFGH. (1½ per week) F, W, Sp. Prerequisite: Fourth year standing and approval of Clinic Review Committee. Huebsch, Courage, Khosla
Students participate in oral surgery care of hospitalized patients 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 to perform oral surgery procedures under close supervision in the oral surgery clinic. The trainee takes responsibility for care of the oral surgery patient including preoperative evaluation, surgery planning, and postoperative care.

Orofacial Anomalies

Lawson
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.
Chierici, Harvold, Chierici, Harvold
Diagnosis, preventive, and corrective methods relative to patients with congenital malformations of the orofacial region are discussed.

Harvold
Diagnosis of orofacial malformations. Emphasis on interrelationship of morphology and physiology.

180.01. Speech Habilitation. (1) Seminar 1 hour.
Lawson
Normal development of speech. Introduction to the acoustic and linguistic elements. Consideration of the speech patterns, habits, and defects related to dental and orofacial problems.

180.01. 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 congenital malformation are discussed. Instruction in diagnosis and preventive and corrective treatment methods is given in the clinic.

181. Special Study for Advanced Undergraduates. (1) F, W, Sp. Prerequisite: Fourth year standing and consent of instructor and Clinic Review Committee. Seminar and Clinic 3 hours.
Harvold
Instruction in biometric technique and methodology is given in connection with a selected research project.

182. Diagnosis and Treatment Planning in Orofacial Malformations. (1) W. Prerequisite: Orofacial Anomalies 187.01 Seminar and Clinic 3 hours.
Sadowski
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.

Chierici, Harvold and Staff
Diagnosis of orofacial malformations and current preventive and corrective measures. Emphasis is placed on the interrelationships of morphology and physiology and the coordination of treatment by the various disciplines involved.

407. Orofacial Prosthetics. (1-3) W. 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.

Lawson and Staff
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

Mathews
Course describes the mode of growth of the craniofacial complex, and outward 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. Orthodontists in General Practice. (0-2, 0-2) F, W, Sp. Prerequisite: Orthodontics 121
Scholz
Recognition and treatment of the problems most commonly seen by the general practitioner.

132. Principles of Orthodontic Treatment. (1) Seminar 2 hours.
Scholz
Discussion of diagnostic techniques evaluated in orthodontics, limitations of orthodontic treatment, and principles of treatment with edgewise appliance.

160. Principles of Orthodontics. (1) Sp. West and Staff
This is a discussion of recognition, etiology, and principles of orthodontics for the dental hygienist.

970A-B. Fundamentals of Orthodontics. (4-2) F, W, Seminar 4 hours F; 2 hours W.
Classification, etiology, and diagnosis of malocclusion. Study of the dentition and the relationships of dental and cranial structures.

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

Continuation of Orthodontics 170B-A.

171B-C. Orthodontics in Periodontic Practice. (1-1) W, Sp. Prerequisite: Consent of instructor and enrolment in a postdoctoral specialty program.
Staff
This course includes orthodontic principles and techniques that are applicable in a periodontic practice.

Mathews
Research methods in the study of growth with findings relative to sites of growth, serial development of pattern, and factors influencing facial growth.

Mathews
Embryology of the face and palate, biology of cartilage and bone as applied to dento-facial development of newborn babies, and physiology of tooth movement.

Mathews
Consent of instructor and enrollment in a postdoctoral specialty program.

This course includes orthodontic principles and techniques that are applicable in a pedodontics practice.

171.04A-B-C. Orthodontics in Pedodontic Practice. (1-1) F, W, Sp. Prerequisite: Orthodontics 171.03 A-B-C.
West and Staff
Continuation of Orthodontics 171.03A-B-C.

172A. Cephalometrics. (2) F, Seminar 2 hours.
Poulton
Use of lateral headfilms; realiability of landmarks, applications in dentistry. Techniques of tracing, evaluation of reconstructions and techniques of superimposition are discussed and illustrated.

172B. Cephalometrics. (2) W. Poulton
Evaluation of various analyses used in orthodontic diagnosis including growth changes in serial studies.
146 / Otolaryngology

147


CHMC Barer, H. T. Smith, WM J. Jackson

Seminars are held in rotation at each of these hospitals with residents from all three hospitals attending. They include literature review and demonstrations related to surgical approaches, anatomy, dissections, diagnosis and treatment.

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

UC W. Murray

Residents prepare and present case histories of inpatients and selected outpatients. Course includes discussions on diagnostic procedures, indications for surgery, immediate postoperative follow-up, and problem cases (consultations).


RDMC Maeck, PMC Niebauer, KA Johnston, MZ R. Gordon, OL Larsen, RLA 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.


CL Larsen, CHMC Barer, SSF L. Larsen, SH L. 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.


SFGH Bovill, WM J. Jackson, VA Maurer, H. T. Smith

Residents are responsible for patient care in the wards and outpatient clinic including history-taking, physical examinations, laboratory tests, elective surgery, fracture treatment, plaster techniques, and consultations.


R. Schindler, UC W. Murray

Under faculty supervision, the chief resident organizes care and referral of staff patients. The chief resident supervises a weekly follow-up clinic, administers the teaching-bed fund, independently performs operative procedures in selected cases, advises interns, residents, and fourth year medical students; participates in paramedical teaching.


Gluck and Staff

Clinical instruction in the care and management of orthopaedic problems in athletic injuries. Course consists of clinical practice under supervision as well as didactic lectures every third week.


SFGH Bovill

Interns rotate through orthopaedic wards and follow-up clinics. They are responsible for patient care under the direction of the attending staff, including history-taking, physical examinations, X-ray conferences, and written reports.

Otolaryngology

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

Core Clerkship—Surgery 110 and 111 includes 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 otolaryngological surgical diseases.


Boles

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 USC.


Boles

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

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

Boles

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

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

R. Schindler

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


Crumley

Lectures cover the anatomical, physiological, and clinical aspects of otolaryngology.


Crumley

A formal course in the anatomy of the head and neck.


Cadaver dissection and demonstrations given by members of the staff.

403. Ear, Nose, and Throat History and Pathology. (1½) W. F. Dekelboum

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 where staff are held with discussion of current problems concerning diagnosis and management of patients with reference to the literature, modern theory, and controversy.

405. Seminar in Audiology and Speech Pathology. (1) F, W. UC Owens

Seminar includes psychophysical background in audiology, basic and advanced hearing, functional hearing loss, hearing aids, testing of children, aural rehabilitation, and speech and hearing problems of children and adults.


UC Dedo

Conference includes presentation of patients, study of histories, and discussion of the treatment of the patient in light of modern progress in the field.


A review of all gross and microscopic pathology conducted by staff members in conjunction with the Department of Pathology.


A laboratory course conducted in the anatomy, physiology, and pathology of the temporal bone.

413. Surgical Anatomy of the Temporal Bone. (1½ per week) F, W, Sp. VA J. Ross

A review of surgical anatomy and dissection of fresh temporal bones conducted by members of the staff.


Boles

A review of all current ear, nose, and throat literature.


J. McCree, J. W. Crumley, UC Boles, VAF Bel, VMC Bell

Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, preoperative and postoperative care, minor surgery, audiology, vestibular testing, and some practical laboratory study including cadaver work.


J. Ross

Residents, under supervision, are responsible for patient care in the wards and outpatient clinics including history-taking, physical examination, laboratory tests, preoperative and postoperative care, minor surgery, audiology, vestibular testing, and some practical laboratory study including cadaver work.


All residents except at VA.

Crumley

A study of the techniques of endoscopy and some practical laboratory study including cadaver work.


Crumley

Resident, in off-campus hospital for surgical training to satisfy Board requirements is responsible, under supervision, for patient care in wards and clinic and assistance at the microscopic anatomy of the temporal bone under formal staff instruction.


Ross

A review of surgical anatomy and dissection of fresh temporal bones conducted by members of the staff.
Mechanisms and language of disease are discussed, with emphasis on the dynamic nature of fundamental disease processes: cell injury, immunopathology, inflammation, repair, regeneration, hemodynamic derangements, genetic disorders, disturbances of cell growth, and neoplasia.

135. General Pathology. (4) F, W, Sp. Prerequisite: Consent of instructor. A laboratory research project under direction of a member of the faculty with approval of the chairman of the department.

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

200. Pathology. (3) F, W. Prerequisite: Microbiology 125 and Pathology 126 or equivalents. A laboratory research project under direction of a member of the faculty with approval of the chairman of the department.

201. Pathology Research. (1-5) F, W, Sp. Prerequisite: Introduction to pathology and the Dean.

202. Seminar. (1) F, W. Prerequisite: Consent of instructor. A seminar of the chairman of the department.

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


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

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

401. Special Pathology Seminars. (Units to be arranged) F, W, Sp. Interns and residents. UC Rambo Seminars focusing upon the pathology of special areas of the body are conducted by specialists in the area under discussion. Course emphasizes correlation between the clinical manifestations of the disease and the gross and microscopic findings.

Clinical clerkship in off-campus hospital approved by the chairman of the department and the Dean.


Working with a pediatric house staff and pediatric nurse practitioner team and under the supervision of the attending, the student will have direct primary care and health supervision responsibilities for selected well and acutely ill children in ambulatory Pediatrics 110.


Rudolph

Experience in cardiovascular care and treatment including clinical work-up in the ward and clinic, cardiac catherization, angiography, children's electrocardiography, surgical management, and postoperative care.


S. Robinson

Experience in clinical evaluation of children with cardiac abnormalities in a private office. Setting includes history, physical examination, X-ray, electrocardiography, and any other procedures necessary for diagnosis.

140.05. Pediatric Private 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, group or sub-specialty practice, or a combination of these.


Gareis

Clinical clerkship in adolescent medicine with emphasis on outpatient clinical experience in a wide range of health problems of the adolescent.


Granoff

Combined experience in pediatrics and internal medicine with emphasis on evaluation and treatment of usual and unusual infections occurring in a high-risk rural population. Daily conferences and rounds are held with hospital-based infectious disease consultants. Work in the clinical microbiology laboratory may also be arranged.

140.08. Ambulatory Pediatric Clerkship at MC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

R. Ballard

Experience in ambulatory pediatrics in pediatric outpatient clinic at MC.


Berg

Supervised participation in clinical activities including evaluation and outpatient, and all regularly scheduled conferences of the Child Neurology Division. Study of the developing nervous system and the mechanisms involved in the pathogenesis and transmission of these conditions.


Higashino

Students participate in patient care in clinical association with the house staff attending students in wards caring for sick children and in Newborn Intensive Care Unit, and in rounds and conferences conducted by senior staff.

140.11. Pediatric Cardiology at CHMC. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Pediatrics 110.

Holliday, Piel, Potter

Experience in patient care in the clinic and on the ward. Morphologic study of blood cells and participation in the hematology and oncology conferences. Selected cases are studied and discussed in depth.


Holdiday, 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 TPN Research Project may be arranged with instructors.


C. Epstein

Evaluation and management of children and adults with hereditary (including cytogenetic) diseases, with particular emphasis on genetic counseling, patterns of human malformation, and the biochemical and genetic mechanisms involved in the pathogenesis and transmission of these conditions.


Giammona

Students participate in patient care in close association with the house staff attending students in wards caring for sick children and in Newborn Intensive Care Unit, and in rounds and conferences conducted by senior staff.


Deamer

Diagnosis and treatment of asthma, allergic rhinitis, and hay fever. Attendance at Pediatric Allergy Clinic daily. Participation in activities of allergy training.


Brady

Students participate in the care of infants in the intensive care nursery in close association with the house staff, fellows, and senior staff and in conferences conducted by senior staff.


Roberts

Experience in normal newborn and intensive care nursery, and in the evaluation of patients in all areas of pediatrics, including intensive care of neonates, newborns, and in the diagnosis and treatment of all cases of newborn infants.


Clinical Correlation in Pediatrics. (3) Su, F, W. Grumbach Students prepare case presentations weekly from patients in the pediatric wards. Course correlates patients’ problems with work in the required curriculum. Experience on the ward in the clinical setting.

150.05. Supervised Study in Pediatrics. (1-5) F, W, Sp. Prerequisite: Consent of instructor. Grumbach and Staff Supervised study and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

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

401. Pediatric-Roentgenology Conferences. (1½) Su, F, W, Sp. Interns and residents. UC Gooding Conferences include house staff preparation and presentation of patient case histories with reference to the literature, laboratory work, and special studies. Faculty members and consultants from other departments as well as other universities discuss recent developments in their respective fields.

402. Pediatric Clinical Seminar. (1½ per week) Su, F, W, Sp. UC Grumbach Seminar includes review of history-taking, physical and laboratory examination, laboratory tests, diagnosis, treatment, and administration of selected cases of usual interest, reports on special topics with review of recent literature, and clinicopathological conferences on pediatric cases.

450. Clinical Pediatrics. (1½ per week) Su, F, W. Grumbach Residents, under supervision, are responsible for patient care in the wards and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment. In addition, the chief resident is responsible for the care of patients in the ward in the clinical setting.

455. Clinical Pediatrics. (1½ per week) Su, F, W. Residents. SFGH M. Grossman Residents, under supervision, are responsible for patient care in the wards, comprehensive disease section, and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment. Emphasis is on the prevention and management of infection, trauma, and pediatric emergencies.

462. Clinical Primary Care. (1½ per week) Su, F, W, Sp. Prerequisite: Refer to Ambulatory and Community Medicine 462. Grumbach, Dower Interns in the Primary Care Track of Pediatrics are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Pediatrics Residency Program as well as related clinical services such as Dermatology, Otolaryngology.

463. Clinical Primary Care. (1½ per week) Su, F, W, Sp. Prerequisite: Refer to Ambulatory and Community Medicine 462. Grumbach, Dower Residents in the Primary Care Track of Pediatrics are responsible for patient care in a multispecialty primary care clinic. Other rotations include those common to the regular Pediatrics Residency Program as well as related clinical services such as Dermatology, Otolaryngology.

495. Clinical Pediatrics. (1½ per week) Su, F, W. Grumbach Interns, under supervision, are responsible for the care of patients in the wards and outpatient clinic including history-taking, physical examination, laboratory tests, diagnosis, and treatment.

Pedodontics

109. Clinical Pedodontics. (0-1) F, W. Prerequisite: Third year standing. Clinic Variable. M. Morris and Staff Clinical diagnosis, plan of treatment, dietary analysis and counseling, fabrication of appliances for and treatment of children requiring tooth guidance, space management, and preventive orthodontics. Units must be completed upon completion of clinic requirements.

109.01. Clinical Pedodontics Rotation. (0-2) F, W, Sp. Prerequisite: Concurrent enrollment in Dental Auxiliary Utilization 109.01. Clinical rotation. M. Morris and Staff Pediatric restorative procedures are performed during a two-week block rotation. The present concepts of four-handed dentistry are applied while rendering comprehensive care for children. Units are assigned upon completion of clinic requirements.

130A-B-C. Pedodontics. (1-1-1) F, W, Sp. Prerequisite: Operative Dentistry 130A-B-C. M. Morris and Staff Clinical experience in treating chronically ill patients.

170A-B-C. Pedodontics. (2-3, 2-3) F, W, Sp. Prerequisite: Pedodontics 171.01A-B-C. M. Morris and Staff Lecture course presenting dental procedures unique to, or modified to meet, the needs of the child. Examination, diagnosis, treatment planning, pain control and management, restorative procedures, preventive orthodontics, diet analysis, and caries control are stressed.

Pediatric Staff Conference. (1½) Su, F, W, Sp. Interns and residents. UC Grumbach Conference includes house staff preparation and presentation of patient case histories with reference to the literature, laboratory work, and special studies. Faculty members and consultants from other departments as well as other universities discuss recent developments in their respective fields.

Pediatric General Anesthesia. (0-3) F, CHMC 90 hours. K. Schroeder and Staff An introductory course in general anesthesia to familiarize the student with the techniques of 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, Weiss

Students are assigned to an interdisci- 

180.01B-C. Pedodontic Seminar. (1) W. Sp. Prerequisite: Completion of third year 

180.02. Community Pedodontics. (0-4) F, W. Sp. Prerequisite: Completion of clinical pedodontics and all third year clinical and didactic courses in operative dentistry. Approval of Clinic Review Committee. M. Morris and Staff

Course provides additional clinical experience in pedodontics.

180.04. Elective Clinic in pedodontics. M. Morris, Stark and Staff

Elective clinic course in pedodontics. Students provide care for children at selected migrant farm labor camps. Course includes preventive education, comprehensive operative procedures including pulp therapy and necessary preventive dental surgery, taking and processing needed radiographs.

Periodontology

109. Clinical Periodontics. (0-6) F, W. Sp. Prerequisite: Periodontology 121. Parr and Staff

Treatment of periodontal diseases.


Introduction to the recognition and diag- 

111. Periodontal Therapy (Introduction). (1) Sp. Clinic five 4-hour periods. Madsen

Introduction to the techniques of supra- 

121. Peridental Therapy (Introduction). (1) F. Prerequisite: Periodontology 110. Parr

Armitage

Introduction to the rationale and objec- 


Madsen, S. Miller

Introduction to clinical techniques in oral 

131. Periodontics. (1) F. Prerequisite: Periodontology 121. Parr

The demonstration and rationale of sur- 

150. Periodontics. (2) Sp. Lecture and Demonstration 2 hours. K. Horowitz

Introduction to the oral hygiene prob- 

173.02A-B-C. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 171A-B-C. Clinic 60 hours.

Shibata and Staff

Shibata and Staff

Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive den- 

173.02B-C. Periodontal Therapy. (4-4-4) F, W. Sp. Prerequisite: Periodontology 171A-B-C. Clinic 12 hours.

Shibata, Green and Staff

Advanced clinical procedures in peri- 

173.03. Periodontal Therapy. (2) Sp. Prerequisite: Periodontology 172 D. Clinic and Seminar 60 hours.

Shibata, Green and Staff

Advanced surgical techniques in manage- 

174. Periodontics. (1) SS. Prerequisite: D.D.S. degree. Parr

A seminar to discuss and evaluate the problems common to the specialties of orthodontics and periodontics.

175. Treatment and Planning. (0-3-0, 0-3-1) F, W, Sp. Seminar 1 hour. Shibata and Staff

Students present and discuss manage- 

176. Original Investigation in the Field of Periodontology. (1) Sp. Prerequisite: Enrollment in postgraduate specialty program or consent of instructor. Lab 3-15 hours.

Goodson, Research.


Study in depth with literature review and 

180. Periodontics. (1) W. Parr

Implementation of the skills and knowl- 

180.02A-B-C. Advanced Periodontics. (1-1-1) F, W. Sp. Prerequisite: Periodontology 151 and consent of instructor. Seminar 45 hours.

McGill

Study in depth, with literature review and 

180.03. Periodontal Surgical Tech- 

181. Seminar on Connective Tissue. (1) W. Prerequisite: Biochemistry 110A-B and 

W. Prerequisite: Biochemistry 110A-B and 111 or concurrent enrollment. Bhatnagar and Staff

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. Bhatnagar and Staff

Surgical techniques are presented which may be used to treat lesions occurring in the hard and soft tissues of the periodontium.

172. Examination and Treatment Plan- 

172.01. Hospital Anesthesiology. (6) SS. Prerequisite: Consent of instructor. Lecture 24 hours, Seminar 10 hours. Chang

Practical course in operating room anes- 

172.02. Hospital Periodontics. (2) F, W. Sp. Prerequisite: Periodontology 171A-B-C. Shibata

Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive den- tistry, and concept of total health care. Stu- 

173.01. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 171A-B-C. Clinic 60 hours.

Shibata and Staff

Shibata and Staff

Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive den- tistry, and concept of total health care. Stu- 

175.01A-B-C. Advanced Treatment Planning and Surgery. Seminar. (1-1-1) F, W, Sp. SS. Seminar 1 hour.

Shibata and Staff

Periodontology / 155

Students present and discuss manage- 

176. Original Investigation in the Field of Periodontology. (1) Sp. Prerequisite: 

Enrollment in postgraduate specialty program or consent of instructor. Lab 3-15 hours.

Goodson, Research.


Study in depth with literature review and 

180. Periodontics. (1) W. Parr

Implementation of the skills and knowl- 

180.02A-B-C. Advanced Periodontics. (1-1-1) F, W. Sp. Prerequisite: Periodontology 151 and consent of instructor. Seminar 45 hours.

McGill

Study in depth, with literature review and 

180.03. Periodontal Surgical Tech- 

181. Seminar on Connective Tissue. (1) W. Prerequisite: Biochemistry 110A-B and 

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173.01. Periodontal Therapy. (2) SS. Prerequisite: Periodontology 171A-B-C. Clinic 60 hours.

Shibata and Staff

Shibata and Staff

Clinical periodontics integrated into the regular medical and rehabilitative activities of MZ. Course provides patients with quality dental care, appreciation for preventive den- 

173.02A-B-C. Periodontal Therapy. (4-4-4) F, W. Sp. Prerequisite: Periodontology 171A-B-C. Clinic 12 hours.

Shibata, Green and Staff

Advanced clinical procedures in peri- 

173.03. Periodontal Therapy. (2) Sp. Prerequisite: Periodontology 172 D. Clinic and Seminar 60 hours.

Shibata, Green and Staff

Advanced surgical techniques in manage- 

174. Periodontics. (1) SS. Prerequisite: D.D.S. degree. Parr

A seminar to discuss and evaluate the problems common to the specialties of orthodontics and periodontics.

175. Treatment and Planning. (0-3-0, 0-3-1) F, W, Sp. Seminar 1 hour. Shibata and Staff

Students present and discuss manage- 

176. Original Investigation in the Field of Periodontology. (1) Sp. Prerequisite: 

Enrollment in postgraduate specialty program or consent of instructor. Lab 3-15 hours.

Goodson, Research.


Study in depth with literature review and 

180. Periodontics. (1) W. Parr

Implementation of the skills and knowl- 

180.02A-B-C. Advanced Periodontics. (1-1-1) F, W. Sp. Prerequisite: Periodontology 151 and consent of instructor. Seminar 45 hours.

McGill

Study in depth, with literature review and 

180.03. Periodontal Surgical Tech- 

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W. Prerequisite: Biochemistry 110A-B and 111 or concurrent enrollment. Bhatnagar and Staff

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. Bhatnagar and Staff

Surgical techniques are presented which may be used to treat lesions occurring in the hard and soft tissues of the periodontium.


Pharmaceutical Chemistry

120. Principles of Pharmaceutical Chemistry. (3) F. Prerequisite: Chemistry 113. Jorgensen, Castagnoli
A study of physical, chemical and biological factors which contribute to drug action; in vivo and in vitro biotransformations of drugs and related compounds.

121. Principles of Pharmaceutical Chemistry. (2) W. Prerequisite: Pharmaceutical Chemistry 120 and concurrent enrollment in Pharmaceutical Chemistry 121. Jorgensen, Wolff
A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the 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 autonomic nervous and cardiovascular systems as well as renal function.

A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on drugs affecting the central nervous system.

A systematic survey of the chemical features of synthetic drugs, including correlations between chemical structure and biological activity. Emphasis on anti-infective and anti-neoplastic drugs.

151. Pharmaceutical Analysis. (3) W. Prerequisite: Chemistry 113 and 115. Brochmann-Hanssen
Principles of pharmaceutical analysis used for evaluation of drugs and dosage forms, with special emphasis on modern separation techniques and instrumental methods of analysis.

152. Radioisotopes. (1) F. W. Sp. Peng, Hoffer
Discussion on radioisotopes in frequent use in biology and medicine. The course is oriented toward topics of broad interest.

153. Radioisotopes. (1) W. Prerequisite: Pharmaceutical Chemistry 152 or 160. Price
A study of radioisotopes used in nuclear medicine as pharmaceuticals. Dosage form design and related aspects are discussed.

154. Pharmaceutical Quality Control. (2) W. Prerequisite: Pharmacy 165, Pharmacy 166 or concurrent enrollment. Brochmann-Hanssen
General principles of total quality control applied to the manufacture of pharmaceuticals and to quality control of biological products.

Experiments in pharmaceutical analysis applied to drug entities, dosage forms, and samples of biological origin.

156. Pharmaceutical Analysis. (2) F. Prerequisite: Consent of instructor. Jorgensen
Basic principles of medicinal chemistry and a survey of the relationships between structure and biological action for major drug classes.

157. Bioanalytical Theory and Techniques. (3) W. Lecture 2 hours, Lab 3 hours. Sadee
Analytical theory and techniques for determining drugs and metabolites in biological fluids.

158. Radiopharmaceuticals. (1) W. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Lab 3 hours. Price
Detection and measurement of radioisotopes commonly used in biology and medicine.

206. Fundamentals in Radioactivity. (2) F. Perez-Mendez
This course will treat the principles in physical decay of radionuclides, characteristics of nuclear emissions, interaction with matter, and related aspects in radioactivity.

207. Radiopharmaceuticals. (1) W. Prerequisite: Pharmaceutical Chemistry 153 or consent of instructor. Price
This course will treat the theory and methodology in the application of radioisotopes to organ imaging in nuclear medicine.

210. Laboratory Project in Pharmaceutical Chemistry. (1-5) F, W, Sp. Staff
Lecture and conference dealing with structure-function relationships of drugs and hormones at the molecular level. Special emphasis is given to steroids and peptide hormones.

204. Modern Techniques in Pharmaceutical Chemistry. (2) W. Prerequisite: Consent of instructor. Wolff, Jorgensen
Lectures and conferences dealing with structure-function relationships of drugs and hormones at the molecular level. Special emphasis is given to steroids and peptide hormones.

205. Modern Techniques in Pharmaceutical Chemistry. (2) W. Prerequisite: Consent of instructor. Wolff, Jorgensen
Lectures and conferences dealing with structure-function relationships of drugs and hormones at the molecular level. Special emphasis is given to steroids and peptide hormones.
214. Advanced Aspects of the Kinetics of Drug Disposition and Elimination. (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 intrinsic 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.

Genetic mechanism and drug action, cell division and antimetabolites, adaptive phenomena in relation to control mechanisms, and the uncoupling agents.

217. Physical Pharmacy of Solid Dosage Forms. (3) § W. Prerequisite: Pharmaceutical Chemistry 160 or consent of instructor.
Staff
Properties of solids, solid-solid interactions, solid dosage forms, and stability of solid dosage forms are discussed.

218. Pharmaceutical Chemistry of Liquid Systems. (3) § Sp. Prerequisite: Pharmaceutical Chemistry 217
Staff

Selected topics on enzyme mechanisms. General role of enzymes in metabolic reactions. Specific enzymes and their catalytic properties. The mechanism of enzyme action and the effects of changing conditions on enzymatic activity.

220. Graduate Seminar Program. (1-4) § F, W, Sp. Staff
A program involving the presentation of core material in pharmaceutical chemistry in the medicinal chemistry and pharmacodynamics pathways. The presentations are made by graduate students and examination is by a series of cumulative examinations.

221. Research Conference in Pharmaceutical Chemistry. (1) § F, W, Sp. Prerequisite: Graduate standing in the Department of Pharmaceutical Chemistry. Staff
A series of weekly research conferences given by visiting lecturers, faculty, and advanced graduate students.

222. Seminar in Physical Chemistry. (1) § F, W, Sp. Prerequisite: Consent of instructor.
Kuntz and Staff
Topics of current research interest in physical and biophysical chemistry.

230A. Spectroscopy. (4) § W. Prerequisite: Chemistry 162 or equivalent. Lecture 3 hours, Lab 2 hours. Offered in alternate years.
Kuntz
The theory and application of molecular electronic and vibrational spectroscopy, optical rotatory dispersion and circular dichroism.

230B. Spectroscopy. (3) § Sp. Prerequisite: Chemistry 162 recommended. James
Theory and application of nuclear magnetic resonance and electron-spin resonance; mass spectrometry.

230C. Spectroscopy. (1-4) § W. Lab 3 hours.
James
Laboratory work in nuclear magnetic resonance and electron-spin resonance; mass spectrometry.

231. Spectroscopy. (1-4) § W. Prerequisite: Pharmaceutical Chemistry 230B.
Shafar
Selected topics in spectroscopy and related areas. Content of the course changes, as in the case of seminars. Course may be repeated for credit.

232. Radiochemical Synthesis. (1-2) § F. W, Sp. Prerequisite: Consent of instructor. Lab 3-6 hours. Peng
Theory and techniques related to the synthesis of isotopically labeled organic compounds. Course may be repeated for credit.

233. Radiobiological Analysis. (1) § W. Prerequisite: Consent of instructor. Lab 3 hours. Peng
Experimental techniques related to various aspects of radioactivity of biological specimens, biochemical compounds, and drugs isotopically labeled with tritium and/or radioisotopes.

240. Radiotracer Methodology. (1) § W. Prerequisite: Pharmaceutical Chemistry 152 or 160, or consent of instructor.
Peng and Benet
Discussions on the theory and principles of the use of radionuclides as tracers in biological systems. Emphasis on experimental 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.
J. W. Harris, Painter, Peng
Effects of ionizing radiation on chemical and biological systems will be discussed.

244. Seminar in Physical Chemistry. (1) § F, W, Sp. Prerequisite: Consent of instructor.
Kuntz and Staff
Topics of current research interest in physical and biophysical chemistry.

258-C. Dental Pharmacology. (2-4) § W. Sp. Prerequisite: Philosophy 101. Lecture 2 hours, Lab 3 hours.
Staff
Objective of the course is to acquaint dental and dental hygiene students with the fundamental of pharmacology. Various classes of drugs are examined in regard to actions, absorption, fate, excretion, and toxicity. Agents useful in dentistry are emphasized.

110. Toxicology. (2) § W. Prerequisite: Pharmacology 125 and 136.
Hine, Hodge, Mavros, Piper, Vore
The occurrence, mode, action, recognition, and treatment of poisoning by environmental chemicals and therapeutic agents.

134. Pharmacology and Toxicology. (1) § W. Prerequisite: Concurrent enrollment in Pharmaceutical Chemistry 154.
Trevor, Apple
Systematic survey of action and uses of anti-infective and antineoplastic drugs.

138. Pharmacology and Toxicology. (4) § F. W. 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.

150.1. Pharmacology Research. (1½-2 per week) 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.
A detailed examination of the field of toxicology as it relates to agricultural, environmental, forensic, industrial, military, regulatory, and therapeutic problems. Emphasis placed on mechanism of action of toxic substances. Current advances and classical concepts of toxicology are discussed. Prerequisites: Consent of instructor. 220. Seminar. (0-1-1) F, W, Sp. Staff Seminars to discuss present methods and problems in current teaching and research in pharmacology and toxicology.

250. Research. (1-2-1) F, W, Sp. Staff Research to be selected and pursued under the guidance of the faculty. 299. Dissertation. For graduate students engaged in writing the dissertation for the master's degree. Prerequisite: Consent of the graduate adviser. 298. Thesis. Conference 1-2 hours. Prerequisite: Consent of the graduate adviser. 296. Laboratory Techniques in Toxicology. (1-3) F, W, Sp. Staff Emphasis is on the study of cardiovascular and autonomic agents. 295. Chemical Data. (2) Sp. Lab 6 hours. Gibson, Cooper and Staff. A study of the properties and ingredients of drug substances, including drugs and cosmetics. The course deals with the properties and ingredients of such products.


170.01. Experimental Techniques in Pharmacology. (1-5) SS. Prerequisite: Consent of instructor and completion of biochemistry, physiology, and pharmacology courses.

Pharmacy 101. Lecture 2 hours; Conference 3 hours. Hoine, Hodge, Meyers, Piper, Vore.

160. Supervised Study in Pharmacology. (1-3) F, W, Sp. Staff Library research and directed reading under supervision of a member of the faculty with approval of the chairman of the department.

119. Laboratory Project in Pharmacology. (1-3) 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. 206A. Lecture 2 hours, Lab 6 hours. Hine, Loh, Burkhalter. A laboratory course in biochemical techniques as commonly applied to investigations of drug action.

118. Pharamceutics. (1-2) F, W, Sp. Staff A course designed to familiarize the student with the common ailments of domestic animals and livestock, products used for the prevention and treatment of disease, the interrelationship of the pharmacist, veterinarian, and animal owner, and legal limitations on veterinary dispensing.

130. Biologic Products. (3) Sp. Prerequisite: Pharmacy 166. 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.

131. Pharmaceutical Technology. (3) F. Prerequisite: Pharmacy 165. Lecture 1 hour, Lab 6 hours. Gibson, Cooper and Staff.

167. Pharmaceutical Technology. (3) F. 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.

168. Seminar in Clinical Pharmacokinetics. (3) F. Prerequisite: Pharmacy 166. Lecture 1 hour, Lab 6 hours. Gibson, Cooper and Staff. An advanced study of the relationship of the art and science of pharmaceutical technology to solid dosage forms.

166. Seminar in Clinical Pharmacokinetics. (3) F. Prerequisite: Fourth year standing or consent of instructor. Course 6 hours. Enrollment limited.

111. Biologic Products. (2) W. Prerequisite: Third year standing. K. H. Lee. A discussion of the pharmaceutical aspects and evaluations of the therapeutic values of biologic preparations in current clinical use, including enzymes and their derivatives, plasma substitutes, hematologic, and biologic preparations.

164. Veterinary Pharmacy. (3) Sp. Prerequisite: Microbiology 125, Pathology 135, Pharmacology 136 and Pharmacy 116. Staff.
162 / Pharmacy Administration

170.01. Listening and Talking to Patients. (3) F, W, 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-physician conversations with small group discussion of the problems and responses.

180. Drugs and Society. (3) W. Prerequisite: Basic course sequence in pharmacology and consent of instructor. Enrollment limited. 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 of new drugs. Emphasis on the use of statistics, efficacy, quality, advertising, prescribing, and pricing of selected drugs.

186.27. Pediatric Specialty Clerkship at SFGH. (8) F, W, Sp. Prerequisite: Clinical Pharmacy 130, 131, 132, and 148 or 149. Consent of instructor. Enrollment limited. Tong

Students participate with the pediatric staff and work with problems frequently encountered in general pediatric medicine and those of the prevalent children of low income, overcrowded and substandard conditions. Activities include rounds, conferences, and participation in special projects.

195.55. Medical Specialties Clerkship at SFGH. (8) F, W, Sp. Prerequisite: Clinical Pharmacy 148 and consent of instructor. Enrollment limited. Tong

Students rotate through the Coronary Care, Chronic Dialysis and Communicable Disease Specialties. They participate in conferences, work rounds and seminars, monitor drug therapy, provide therapeutic consults and drug information and retrieval and analysis.

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.

Pharmacy Administration

111. Pharmacy Laws. (2) F
J. R. Nielsen

Introduction to court systems and administration boards and their relation to the health professions. Discussion of basic principles of criminal law, negligence, and business law with particular emphasis on the legal relationship and responsibility of the practitioner to the patient.

112. Pharmacy Laws. (2) W
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 work.

150. Marketing. (4) W. Prerequisite: Staff

An analysis of the marketing functions that facilitate the flow of pharmaceutical products from production to consumption and of the decision-making process used by marketing institutions. Emphasis is given to the environmental factors affecting marketing decisions.

154. Community Pharmacy Management. (4) Sp. Prerequisite: Pharmacy Administration 150 and 155. Staff

Principles of management, specialized techniques directed toward developing familiarity with current pharmacy problems particularly peculiar to community pharmacy. Emphasis is given to the elements in locating, organizing, operating, and adapting a pharmacy.

155. Accounting. (3) F. Staff

Lecture 1 hour, discussion 2 hours.

Consideration of the fundamental concepts of accounting and its applied uses, with emphasis on the accounting elements of the community pharmacy. Problem cases and demonstrations are presented.

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

Group studies of selected topics in pharmacy administration.

180A-C. Legal Problems Related to Health Care. (2-2-2) F, W, Sp. Prerequisite: Third year standing. Pharmacy Administration 180A is prerequisite to 180B, and 180B to 180C, but completion of entire sequence is not required.

Conducted in cooperation with law students who are teamed with students from professional schools on cases resulting from patient grievances or from professional standards. Legal implications and problems in regulated activities are considered.

196. 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. Nordschow

This course is designed to present the foundation of the structure and function of the human body with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Dissection of the upper limb, neck, and trunk are emphasized.

100B. Anatomy. (2) W. Prerequisite: Physical Therapy 100A. Lecture 1 hour, Lab 3 hours. Nordschow

This course is designed to present the foundation of the structure and function of the human body, with emphasis in lecture and laboratory on topographical, skeletal, vascular, and neuromuscular aspects. Review plus dissection of the lower limb is stressed.

101A. Pathology. (3) F. M. L. Goldberg

A general summary of the fundamentals of human pathology with special emphasis on the correlation between pathological processes and the clinical signs, symptoms, and course of diseases. Pathology is demonstrated and autopsy material is available.

102A. Physiology. (3) F. Prerequisite: General human biology or equivalent. L. Lukin

A review of certain aspects of human physiology, with special emphasis on the cardiovascular system and metabolism. Specific aspects of pathological physiology are considered, especially in relation to stroke and heart disease. Applications of physical principles to physiology are discussed.

103A. Neuroanatomy. (2) F. Lecture 1 hour, Lab 3 hours. Garroust

The development of the human nervous system with special reference to structure and functional relationships. Laboratory and clinical work.

104A. Physical Therapy Procedures I. (6) F. Prerequisite: Introductory physics. Lecture 3 hours, Lab 9 hours. Ahrens

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. Ahrens

Lectures, demonstrations, and laboratory practice in hydrotherapy, manual, and therapeutic exercise. Emphasized are therapeutic uses of water and massage techniques applied to various pathologic problems and techniques of administration of exercises commonly used in orthopaedic, medical, and neurological conditions.

104C. Physical Therapy Procedures III. (6) Sp. Prerequisite: Physical Therapy 104A and 104B. Lecture 3 hours, Lab 9 hours. Roach

Lectures and laboratory practice in therapeutic measures, concepts, and methods of evaluating the patient and planning his program, use and care of assistive devices in rehabilitation of the handicapped, use of 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 operation, emphasis on problems of the lower extremities, muscular dystrophy, spinal cord injury, cerebrovascular accidents, the brain damaged child, neck pain, and back pain.

106B. Clinical Medicine I. (5) W. F. Schiller, T. Rodgers

Lectures and clinical presentations of medical and neurological patients are designed to increase the student's understanding of the basic interrelationships of structure and function of the body systems. Conditions requiring physical therapy treatment are fully discussed.

106C. Clinical Medicine II. (5) Sp. Prerequisite: Abnormal psychology or equivalent. E. Andrews

Lectures in orthopedic surgery, pediatrics, psychiatry, surgery, obstetrics, gynecology, geriatrics, and dermatology are presented by physicians in these specialties.
107B. Neuro muscular Physiology. (2) W.
Rallston
A study of the physiology of striated muscle and peripheral nerve in relationship to controlling mechanisms within the central nervous system. Special emphasis is given to the physiological disturbances which occur in various types of human motor disability.

108C. Basic Medical Procedures. (2) Sp. Lecture 1 hour, lab 3 hours.
Nordschow
The study of procedures necessary for the total care of patients.

Gilbert
A study of professional attitudes and obligations and the organization and administration of the Department of Physical Therapy. Laboratory work includes observation in outpatient offices and a clerkship in an approved hospital by a clinical arrangement of the clinical supervisor.

170.02. Survey of Congenital Defects. (2) F. Prerequisite: Gross anatomy course and consent of instructor. Monie
This elective course is designed to provide physicians with information on the more common human congenital defects. Environmental and genetic factors that produce malformations are considered and possible mechanisms discussed.

410D. Clinical Clerkship. (14) Su. Prerequisite: Completion of all physical therapy courses in curriculum sequence. Gilbert and Staff
Clinical clerkships consisting of one-month assignments in three different institutions or agencies. Under supervision, students participate actively in clinical evaluation and care of patients. Clinical clerkship lectures are also included.

Physiology
100. Organ System Physiology. (6) W. Prerequisite: Anatomy 100 and 102, and concurrent enrollment in Biochemistry 100A-B, or consent of instructor. Lecture 4 hours, Conference 2 hours, Lab 4 hours.
Kellogg and Staff
Normal function of the cardiovascular, respiratory, renal, and gastrointestinal systems and the metabolic functions of the body as a whole are studied in lectures, conferences, laboratory exercises, demonstrations, and clinical electives.

101. Endocrinology. (4) 1 Sp. Prerequisite: Anatomy 100 and Biochemistry 100A-B, or consent of instructor. Lecture 3 hours, Lab 3 hours.
Ganong
The structure and function of the endocrine glands and selected aspects of endocrine pathology are studied in lectures, demonstrations, and clinical conferences.

110. Integrative and Nutritive Systems. (6) F. Sp. Prerequisite: College-level biology, physics, and chemistry, or consent of instructor. Lecture 5 hours. Conference 3 hours.
Rothman and Staff
Introduction to organ systems with emphasis on nervous, endocrine, circulatory, respiratory, and alimentary function in vertebrates. Importance of organ systems for the success of multicellular forms serves as focus. Fundamental cell processes are also discussed, emphasizing differentiated function.

120. Mammalian Physiology. (3) w. F. Prerequisite: Physiology 125 required for students in School of Pharmacy; may be taken separately by graduate students with consent of instructor. Mines
Study of the integrative systems of the mammalian organism, particularly the nervous and endocrine systems.

125. Mammalian Physiology. (7) F. Lecture 5 hours, Conference 2 hours, Lab 6 hours.
Mines
Introduction to mechanisms by which mammals, especially man, function. The interaction of internal and external environments and their relationship to the functions of cells and muscular, circulatory, excretory, gastrointestinal, and excretory systems.

150.01. Research in Physiology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Mangini
Individual research in endocrinology, respiratory physiology, neurophysiology, cardiovascular physiology, toxicology or other areas offered by individual staff members.

150.02. Research in Endocrinology. (1½ per week) Su, F, W, Sp. Prerequisite: Consent of instructor. Mangini
Research in endocrinology carried out in the Department of Physiology.

170.02. Electronic Instrumentation. (3) F. Prerequisite: College physics. Winston
Basic information on electricity and electronics. Circuity and operating principles of a wide range of electronic instruments used in physiological and biochemical investigations.

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

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

200. Tutorial in Physiology. (0) F, W, Sp. Prerequisite: Consent of instructor. Ganong and Staff
Directed reading organized in seminar or tutorial fashion to review aspects of physiology under supervision of a member of the faculty.

201. Physiology of Vision. (2) F, W. Prerequisite: Anatomy 103 or equivalent, or consent of instructor.
Brown
Study of mechanisms underlying vision. Consideration is given to chemistry and anatomy of the visual system, but the emphasis is on neurophysiology, with coverage of the visual system from the photoreceptors to the visual cortex.

Corderidge, Comroe
Seminars on cardiovascular and pulmonary systems. Sessions on experimental methods and ways of solving cardiopulmonary problems. Work presented is discussed and evaluated by the faculty and fellows. Students present a critical evaluation of one of the seminars.

204. Seminar: Topics in Physiology. (1) F, W, Sp. Prerequisite: Minimum of six units of introductory physiology. Rothman
This seminar discusses selected topics in cellular and molecular physiology. Readings are drawn from primary and secondary sources.

220. Advanced Cardiovascular, Renal, and Pulmonary Physiology. (2) F, W, Sp. Prerequisite: Physiology 100 or equivalent.
Corderidge and Staff
This course includes critical review of topics of current importance, presentation of unsolved problems by staff, and critical evaluation of published articles to which the total program is presented over six successive quarters.

Guest lectures alternating with reports of research in progress by members of the campus graduate group in endocrinology. A different topic of endocrinological interest is the subject of guest presentations each course. Course may be repeated for credit.

255. Functional Neuroanatomy Projects. (4) Sp. Prerequisite: Consent of instructor. Lecture 3 hours, Lab 3 hours.
Heusser
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.

270. Neuroendocrinology. (1-3) F, W, Sp. Prerequisite: Endocrinology and neural sciences or consent of instructor. M. Daliman
Mechanisms for regulation of endocrine function by the central nervous system and the influence of hormones on the nervous system are considered in the context of anatomic, biochemical, physiological and behavioral data in the literature. Course may be repeated for credit.

279. Physiology of the Auditory, Vestibular, and Other Sensory Systems. (2) F. Prerequisite: Anatomy 103 or equivalent.
Mercenier
Lectures and demonstrations provide basic information the physiology of the auditory system, vestibular system, visual system, somatosensory system, and somatosensory system. Material includes historical and current concepts derived from relevant psychophysics, neuroanatomy, and neurophysiology.

210. Cellular Mechanisms of Hormone Secretion. (2) F. Prerequisite: Physiology 101 or consent of instructor. J. A. Williams
Discussion of current literature pertaining to the mechanisms of hormone synthesis, packaging, and release.

220. Seminar. (1) F, W, Sp. Prerequisite: Consent of instructor. Ganong
Seminar presentations by guest speakers, alternating with discussion by physiology staff members of their current research. Each quarter a different topic of current interest is the subject of guest presentations. Course may be repeated for credit.

221. Advanced Cardiovascular, Renal, and Pulmonary Physiology. (2) F, W, Sp. Prerequisite: Physiology 100 or equivalent.
Corderidge and Staff
This course includes critical review of topics of current importance, presentation of unsolved problems by staff, and critical evaluation of published articles to which the total program is presented over six successive quarters.

Guest lectures alternating with reports of research in progress by members of the campus graduate group in endocrinology. A different topic of endocrinological interest is the subject of guest presentations each course. Course may be repeated for credit.

250. Research. (1-8) F, W, Sp. Prerequisite: Consent of instructor. Ganong and Staff

Ganong and Staff
Research in endocrinology carried out in the Department of Physiology.

268. Thesis. (0) F, W, Sp. Prerequisite: Advancement to candidacy and permission of the graduate adviser.
Ganong
The thesis for the master's degree.

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

300. Scientific Writing in Teaching Physiology. (0) F, W, Sp. Prerequisite: Previous training in physiology and consent of instructor.
Ganong and Staff
Practice in teaching physiology under faculty supervision. Students supervise laboratory work, conduct conferences, deliver lectures, and assist in preparing and grading examinations. Responsibilities are assigned according to the individual's stage of development.

301. Scientific Writing. (0) F, W, Sp. Prerequisite: Consent of instructor. Lecture 3 hours.
A seminar workshop designed to show the pre-or post-doctoral fellow how to best put into words tables and figures used in the laboratory, and how to do so in a concise, precise, and logical form.

Staub, Comroe
A course in teaching techniques. Students present short lectures, and video tapes of these presentations are analyzed by self- and group-criticism.

Preventive Dentistry and Community Health

Wycoff
Survey course to acquaint the student with current social and professional problems in dentistry; includes identifying the patient community, national and professional needs, and how they are met.

This course is an introduction to the basic concepts, theories and findings of the social sciences. The application of these concepts and modes of reasoning to pressing social problems and the delivery of health services is the dominant theme.

121. Research Design. (1) F. Wycoff
A course which presents basic principles of biostatistics. Introduces the concept of experimental design, the interpretation of sampling techniques, selection of data, and variability. The student practices, develops, and writes a research protocol.

138. Community Health Problems and Practice. (0-1) W. Clinic Seminar 30 minutes, 30 minutes.
Dental students work in community clinics which serve deprived areas. Both seminars and supervised clinical experience will be designed to provide the student with the opportunity to relate economic, social, and cultural theory to the people they will be treating.

166. Community Health Methods. (2) F. Silverstein and Staff
Dental hygiene students work in the North Oakland community with the Children and Youth Project staff. Students are assigned to area schools where dental work 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, Sp. Prerequisite: Consent of instructor.
Wycoff, Silverstein
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

Psychiatry

110. Core Clerkship in Psychiatry. (1½ per week) F, W, Sp. Prerequisite: Psychiatry 130 and 131A-B and Medicine 131A-B-C.
Boatman
A four-week assignment to an outpatient or inpatient psychiatric service. Students, under supervision, are responsible for patient evaluation, participate in treatment planning and implementation, attend seminars related to clinical work, and make field visits to other types of psychiatric facilities.

130. Basic Clerkship—Communication Skills. (2) F, W, Lecture 1 hour, Seminar 1½ hours, Independent study 2 hours.
C. Brodsky
Course provides students examples of different interviewing techniques and history taking. Students will be assigned as interviewers with patients of different ages, illnesses, and sociocultural backgrounds. Students interview patients directly, and use a medium of video tapes engage in supervisory and self-evaluative sessions.

I. Glick and Staff
Introduction to psychiatry as a clinical discipline. Basic behavioral science data is presented. Focus is on interviewing techniques, normal psychological development, description and treatment of psychopathological syndromes, and discussion of the interface between psychiatry and medicine. Videotaped interviews, patient interview, small group seminars.

140.01. Clinical Psychiatry. (1½ per week) F, W, Sp. Prerequisite: Consent of instructor.
Boatman
Participation under close supervision in keeping with students' level of experience and special interests, in clinical psychiatric treatment of adult or child inpatients or outpatients.

140.02. Clinical Clerkship. (1½ per week) F, W, Sp. Prerequisite: Consent of instructor.
Boatman
Clinical clerkship in inpatient psychiatric service. Students, under supervision, are responsible for patient evaluation, participate in treatment planning and implementation, attend seminars related to clinical work, and make field visits to other types of psychiatric facilities.

160.01. Psychopathology of Speech and Language. (2) F, W, Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours.
A clinical course focusing on speech and language disorders. Students are introduced to the clinical aspects of speech disorders with previous experience with psychiatric patients and interest in specific problems of communication. Patients with neurodevelopmental syndromes will be interviewed and suitable treatment procedures performed under supervision.

Berlinger
Psychiatric inpatients are interviewed, and their characteristics and case histories used as the basis for discussions of psychiatric-diagnostic. A seminar format allows free discussion between students and instructors.

160.03. Demonstration of Psychotherapy with Outpatients. (2) F, W, Sp. Prerequisite: Psychiatry 131A-B or consent of instructor.
Berlinger
Students observe psychotherapeutic sessions with outpatients who are under intensive treatment. The observation session is followed by a seminar discussion. The purpose of the course is audio-visual participation in and viewing of models of intensive psychiatric treatment.

160.04. Personality Assessment in Clinical Psychiatry: Theory and Practice. (1) W. Prerequisite: Psychiatry 130.
C. Brodsky
Tutorial participation with a senior psychiatrist in studies of outpatients in the...
160.05. Clinical Problems, (1) W. C. Brodsky. Tutorial with a senior psychiatrist in studying the problems of outpatients in the Ambulatory Psychiatric Service. Participation in weekly group sessions is designed to increase awareness of interpersonal dynamics. Directed reading, seminar discussions and demonstrations are included.

160.06. Introduction to Interviewing and Evaluating Patients, (2) F, W, Sp. Prerequisite: Psychiatry 130. Seminar 2½ hours. Enrollment limited. C. Brodsky. Opportunity to observe and audit diagnostic and psychiatric interviews conducted between a member of the faculty and one patient. Students may follow the interviews.

160.07. Psychotherapy for Outpatients, (3-7) F, W, Sp. Prerequisite: Psychiatry 130 and consent of instructor. Lecture 3 hours, Lab 0-12 hours. C. Brodsky. Practical experience in psychotherapeutic work with outpatients to increase students' understanding of psychopathology, psychodynamics, and psychopharmacotherapeutics. Students are assigned patients under supervision of a member of the faculty. Assigned reading, seminars, and chart writing.

160.08. Psychosomatic Case Conference, (1-2) F, W, Sp. Prerequisite: Consent of instructor. Murphy. Cases are presented in 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.

160.09. Advanced Psychotherapy, (2-4) F, W. Prerequisite: One year of full-time experience in the conduct of out-patient psychotherapy or equivalent. Lecture 2 hours. C. Brodsky. The course covers psychotherapy of selected cases with recordings of the process, supervision during the treatment, and group seminars in which the therapy is reviewed in retrospect using microanalytic and macroanalytic levels of abstraction.

160.10. Clinical Sociology of Medicine, (21) F, W, Sp. Lennard, L. J. Epstein. Medical practice is concerned with patients who suffer from chronic diseases; such patients face the problem of living with disability. Their diseases require profound changes in their lives. This course focuses on the personal and social experience of chronic patients.

161.11. Psychotherapeutic Interview Techniques, (4-5) F, W, Sp. Ostwald. Individual and group supervision of clinical work with patients; development of rapport, obtaining relevant information, and establishing a satisfactory therapist-patient relationship. Psychotherapy reading assignments may be assigned.


161.13. Hysteria, (2) F, W, Sp. Prerequisite: Consent of instructor. Berlinger. Seminar course designed for students who intend to enter primary care and nonpsychiatric specialties. Emphasis is on the diagnosis and management of the hysterical personality in clinical practice. Clinical case material will serve as a basis for assigned reading.

161.14. Health Aspects of Human Sexuality, (2) Su, F, W, Sp. Prerequisite: Consent of instructor. Murphy. This elective seminar explores in depth the behavioral, social, and ethical problems related to sex and sexuality, and the overlapping of vari- ous theoretical views. Discussion is encouraged, and ranges widely.

170.01. Introduction to the Study of Suicide, (2) F. Prerequisite: Consent of instructor. Motto. Suicide is surveyed from a multidisciplinary approach in seminars led by persons working in the field.

170.02. Basic Science Aspects of Psychiatry, (2) F, W, Sp. Prerequisite: Consent of instructor. Feinberg. This elective seminar explores in depth psychopathology, diagnosis, and treatment 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. Prerequisite: Consent of instructor. Motto. 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, Prerequisite: Consent of instructor. Bradman. Six-month rotation in the Pediatric Psychiatry Unit involving presentations, case conferences, and supervised counseling experience with couples and individuals presenting sexual dysfunctions.
Consent of instructor.

therapeutic Inquiry.

disturbance.
psychotherapeutic intervention in emotional
approval of the chairman of the department.

Emotional Expression. (2-3) W. Prerequisite: Consent of instructor. Hartog
A series of seminars discussing transcultural
psychiatry from entering the alien commu-
nity and xenopsychology to folk healing. The
relevance to American urban and ethnic is-

Consent of instructor.

and possibility for research are also pre-

Expression. (2-3) W. Prerequisite: Consent of instructor. L. Epstein
An emotional experience of patients' faces, and what
their own facial expressions may reveal to patients.

The Social Organization of the Hospital. (1-2) F, W, Sp. Prerequisite: Consent of

Analysis of work organization in large hospital with special emphasis on structural
impediments to effective performance; con-
duct of the relationships among health work-
er and patients, and impact of hospital or-

Supervised Study in Psychiatry. (1-2) F, W. Prerequisite: Consent of instruc-

L. Epstein and Staff

Library research and directed reading under supervision of a member of the faculty
with the approval of the chairman of the de-

Laboratory Project in Psychiatry. (1-5) W, Sp. Prerequisite: Consent of in-

L. Epstein and Staff

A laboratory research project under di-
rection of a member of the faculty with the
approval of the chairman of the department.

Theoretical Bases of Psychother-
Aqapeut Inquiry. (1-3) F, W, Sp. Prerequisite: Consent of instruc-

L. Epstein, Weinshel

Directed reading and small group semi-
nars regarding models of understanding and
psychotherapeutic intervention in emotional

Mental Health Consultation. (1-2) F, W, Sp. Prerequisite: Consent of instructor.

M. R. Harris

course will focus on history, classifica-
tion, concepts and theory as well as practice
considerations relating to mental health con-
sultation. In addition to seminar participation, students may, where appropriate,

400. Personality Assessment. (1-2) F, W. Prerequisite: Consent of instructor. L. Epstein

Seminar presents techniques of assessing
personality and intellectual functions in	
relation to psychodiagnostic evaluations and
test of progress with psychotherapy. Dis-
ussion of development, design, and theory.


Course consists of supervised clinical and basic research in behavioral abnor-
malities, psychopathology, and experimental psychiatry. Specific subjects for research are
chosen in conjunction with members of the staff.

Discussion of the neuropathology of
neurological and psychiatric disorders with
illustrations from gross and microscopic ma-
terial.

Brief review of the various fields of con-
temporary behavioral science and their rele-
cance to health sciences and impact on hospital or-

403. Therapeutic Process. (1-1) Su, F, W, Sp. Prerequisite: Consent of in-

Ostwald

Individual consultation with psychiatric residents and other advanced trainees concern-
ing treatment and management prob-
lems. Diagnostic questions, indications for
somatic and psychological interventions, the
course of therapy, and research issues are
emphasized.

404. Theories of Personality. (1-2) F, W. Prerequisite: Consent of instructor.

L. Epstein, J. Fisher, Burke

Focus is on personality theories other than
Freudian, e.g., Piagetian personality theo-
yes to the analysis of human communication.

Child Development and Personality. (1-2) Su. Prerequisite: Consent of instruc-

M. R. Harris

Seminar is focused on the most common
and prevalentally used methods of assessing
intelligence, perceptual-motor integration
and personality in children. Actual testing
materials as well as supporting research are
covved. Participation is required.

Research on Human Response to Stress. (4) Su, F, W, Sp. Prerequisite:
Graduate or advanced resident standing. One
year of advanced psychological or psychiatric
work.

Guided research using experimental,
field, and clinical modes of investigation into
the typical and ideosyncratic human re-

Mental Health Consultation. (1-2) F, W. Prerequisite: Consent of instructor.

M. R. Harris

Course will focus on history, classifica-
tion, concepts and theory as well as practice
considerations relating to mental health con-
sultation. In addition to seminar participation,
students may, where appropriate, arrange a
supervised field experience in mental health con-

Advanced Mental Health Consultation. (1-2) F, W, Sp. Prerequisite: Psychiatry
425

M. R. Harris

Participants in this seminar have current

405. Personality Assessment

406. Supervised Teaching of Medical

407. Research in Behavioral Sciences

408. Supervised Teaching of Medical

409. Neuropathology

410. Review of Social Psychiatry

411. Jungian Psychoanalytic Theory

412. Literature in Child Psychiatry

413. Introduction to the Computer

414. Colloquium

Mental Health Consultation. (1-2) F, W. Prerequisite: Consent of instructor.

M. R. Harris

Participants in this seminar have current
or recent responsibility for a mental health
consultation. Focus is on the theory and prac-
tical technique of mental health consultation.
Consultation experiences provide the major
content for discussion.

Clinical Psychiatry. (1-3) F, W, Sp. LPN, SFGH, and UC. Elective for all others.

L. Epstein, Motto, C. Brodsky

Residents are responsible for the study
and treatment of psychiatric patients, and
consultation of non-psychiatric patients
under the supervision of senior staff mem-
bers of the faculty. Parallel reading is re-
quired.


Residents in child psychiatry are responsible for the diagnosis and treatment of children with psychiatric problems and for therapeutic work with parents under the supervision of the senior staff.


In addition to clinical work, the residents in child psychiatry are required to supervise the work of others and to preside over treatment conferences and interagency conferences.

454. Clinical Research. (1-10) Su, F, W. Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 0-27. LPNI Ruesch

Case presentations of hospitalized and ambulatory patients. The selection of patients, the particular treatment program, and the follow-up may be part of a previously planned research design.


Lecture offers introduction to the theory and practice of mental health consultation, program evaluation and administration, and preventive services. Emphasis on related field experiences by senior faculty in seminar setting. Interdisciplinary interaction emphasized. Review of relevant literature.


Introduction to the basic psychiatric syndromes required for first-year psychiatric residents.

464. Basic Psychiatry II. (1) F, W. Sp. Prerequisite: Psychiatry 463. I. Glick, Braff

Introduction to the theory and practice of family dynamics and behavior therapy; required for second-year psychiatric residents.


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. Lowenthal and Staff

Theory and research covering adolescence to old age from human biological, psychological, psychoanalytical, and anthropological perspectives. Topics include stress, personality and cognitive change, time perspective values, socialization processes and adaptation. Reading and paper required.


Oral diagnosis and treatment of psychiatric problems associated with speech, hearing, or language difficulty. Supervised clinical work with selected patients according to resident's level of experience. Instruction with such alternative audiovisual communication systems as manual signing and voice printing.


Problems in psychotherapy conducted within a psychodynamic framework. Topics include: treatment indications, goals, motivation and treatability, resistance and defense, transference and countertransference, dreams in psychotherapy, third party involvements, emergency and hospitalization, and adjuvant drug management, including recording, transfer and termination.


Instructor's psychotherapeutic interactions with the patient are videotaped and immediately played back and discussed with other members of the staff. The material is objective and repeatable; the therapist is frank and self-critical; various theoretical views are taken.

Psychology

113A-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. Exploration of human behavior and maturation with a view to the influences affecting the human condition through the life span. Various theoretical bases are explored in conjunction with biological and psychosocial concepts.

170. Patient Compliance. (2) F, W. G. Stone

Patients' cooperation with health regimens significantly to outcomes of health care. This course reviews factors that affect degree of compliance achieved and teaches skills to improve compliance. Stress is placed on tailoring methods to specific clinical circumstances.

180. Psychological Aspects of Terminal Patient Care. (2) F. Garfield

Course examines approaches to understanding the psychosocial issues in terminal illness. Focus is on the sequence of events encountered by the professional and patient from diagnosis through death.

180.01. Seminar in Psychology. (1) W. Seminar 1 hour.

Weekly discussions in which students' clinical cases are analyzed by dynamic application of behavioral theory.

180.02. Psychological Aspects of Treatment Planning. (1) Sp. Plainfield

This course integrates students' basic training in psychology with courses in dentistry with knowledge of the psychological considerations necessary to individualize treatment. Appropriate treatment may then be planned to the practitioners' awareness of the unique needs of patients.

180.03. Advanced Psychology for Dental Hygienists. (1) Sp. Seminar 1 hour. Plainfield

Seminar discussions on the emotional aspects of transactions among office personnel, therapists, and patients.

183. Emotional Expression. (2-3) W. Prerequisite: Consent of instructor. Psychology 183. Lec­ture 2 hours, Lab 0-3 hours. Ekman

Videotape is used to aid health professionals in becoming aware of the nature of emotional experience, signs of emotional expression in patients' faces, and what their own facial expression may reveal to patients.

185. Nonverbal Communication. (1½) 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.

189. Supervised Study in Psychology. (1-5) F, W, Sp. Prerequisite: Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

201-202. Seminar in Clinical Psychology. (2-2) F. Prerequisite: Consent of instructor.

Seminar discussions of clinical work in clinical psychology and psychiatry, reports of case studies, current literature, techniques, roles and staff, and lectures by faculty. Generally limited to advanced clinical psychology students.

202. Basic Physiological Psychology. (2-3) W. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 0-3 hours. P. Zuckerman

Designed for the student with a background in physiology, anatomy, or physiological psychology. This course emphasizes the role of brain processes in emotion, motivation, attention, learning, and species-typical behavior patterns.

203. Introduction to the Computer. (3) F. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 6 hours. Starkweather

The computer is described as a useful tool for analysis and controlled experiment. Students learn to read and write programs of moderate difficulty.

204B-C. Computer Simulation of Personality and Human Interaction. (3-3) W. Prerequisite: Psychology 204 or equivalent and consent of instructor. Lecture 1 hour, Lab 6 hours. Starkweather

The development and testing of theoretical models of personality explored by means of computer programs for simulation and symbol manipulation.

205. Advanced Seminar on Decision Theory. (2-4) Sp. Seminar 2 hours. Lab 0 hours. C. Claus

Lectures and laboratory studies on psychological aspects of decision behavior. Emphasizes the concepts of mathematical and Bayesian models, objective and subjective probability, utility, settpoint and compensation, and decision structure, and levels of decisions. Applicability to health care systems is stressed.

207. Techniques of Behavior Change. (2) F. Prerequisite: Consent of instructor. G. Stone

Consideration of situational and interac­tional approaches to changing human be­havior and of the change agent's role. Condition­ing, behavior modification, cognitive re­structuring, group therapy, and counterconditioning are compared. Therapeutic educational, or­ganizational, and social settings are examined.
174 / Psychology

208-B. Psychology of Thinking and Information Processing. (3,3-3) F, W. Sp. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Not offered 1970-1977. G. Stone Major approaches to the fields of human perception and cognition, viewed as processes by which humans obtain and use information. Examples will be placed on individual differences. Students will prepare and participate in demonstration experiments.

209-B. Uses of the Computer in Psychology. (3,3-3) F, W. Sp. Prerequisite: Psych 204 or equivalent and consent of instructor. Starkweather Seminar presents a review of digital computing and its applications in psychology. Students explore these concepts through their own programming efforts.

210-B-C. Interdisciplinary Seminar. (2-2-2) § Yr. Prerequisite: Consent of instructor. Callaway, Peeke Visiting scientists present current research in anatomy, biochemistry, pharmacology, physiology, and psychology which contributes to the understanding of the neurobiological basis of human behavior. Students prepare for each visiting lecturer by reading and discussing pertinent publications.

213-B-C. Seminar on Communication Through Nonverbal Behavior. (3-3-3) § Yr. Prerequisite: Consent of instructor. Ekman Research and theories on facial expressions and body movement in relationship to emotion, personality, social interaction, and culture.

214-B-C. Psychophysiology. (2-2-2) § Yr. Prerequisite: Consent of instructor. Kamya Psychophysiology: analysis of the relationships between physiological and behavioral processes, primarily in humans. Special consideration is given the physiological aspects of feelings and emotions and their modifiability.

215. (3,3-3) § Yr. Prerequisite: Consent of instructor. Atkinson, Hargreaves Theories of Personality. (2) F, W, or Sp. Prerequisite: Consent of instructor. J. Fisher, Atkinson Survey of major theories of personality, structure, development of personality and research in personality.


219. Tests and Measurement. (2) § W. Prerequisite: Consent of instructor. O'Sullivan Psychological test construction, including item analysis, standardization, reliability, and validity.

220. Seminar in Growth and Behavior. (4) § W. Prerequisite: Consent of instructor. Schaw An interdisciplinary working seminar to cover the relevant literature from infancy to old age with a theoretical focus on psychosocial ego psychology in the light of related fields such as anthropology, sociology, history, physiology, and genetics.

223. The Special Biography. (2-3) § Sp. Prerequisite: Consent of instructor. Schaw Seminar in historical change as seen in the lives of charismatic leaders. Lives of Gandhi, Luther, Malcolm X, Newton, Bolivar and Freud are examined. Students are expected to present short studies.

224. Clinical Inference and Research Strategies. (2-3) § F, W. Prerequisite: Consent of instructor. Schaw Research proseminar on the use of clinical procedures in research. The staff and ration of projective techniques (TAT) in cultural, historical, and clinical research to serve as focus for participants' presentation of related clinical procedures or techniques.

228. Research on Drug Abuse. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Lecture 1 hour, Lab 3 hours. Directed research on various topics related to drug abuse, its treatment, and prevention.

229. Program Evaluation. (2) § W. Prerequisite: Consent of instructor. Hargreaves, Atkinson Proseminar in program evaluation. Intended for program administrators, program evaluators, and graduate students in health and other human service disciplines. Topics include integrating evaluation into management decision making; needs assessment; management information systems; evaluating results.

231. Brain Hemisphere Specialization. (3,3-3) F, W, or Sp. Prerequisite: Consent of instructor. Davidson, Steinheber Review of evidence from studies of human brain injuries and "split brain" surgery. Localization of cognitive style; analytic vs. synthetic modes of experiencing the world; unity and disunity in consciousness; implications for psychiatry.

232. Clinical Prediction. (3) § W or Sp. Prerequisite: Consent of instructor. R. Young Problems in the validation of clinical psychological procedures: specification of the measurement characteristics of psychological data; contrast of methods of information processing; analysis of criterion behavior; and efficacy of clinical judgment.

235. Research on Drug Abuse. (2) § W, or Sp. Prerequisite: Consent of instructor. Elman Supervised research experience including an introduction to biochemistry and psychological techniques for the study of nervous tissue.

239. Investigation into Human Consciousness. (3) § F, W, or Sp. Prerequisite: Consent of instructor. Ornstein Readings in the psychology and physiology of conscious experience.

245. Readings in Behavioral Neurochemistry. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Elman Readings in chemistry related to psychological phenomena; the biochemical bases of the effects of drugs, hormones, and disease states.

246. Special Studies in Psychology. (1-8) § F, W, or Sp. Prerequisite: Consent of instructor. Staff Students select special problems to investigate on an individual or collaborative basis. These studies may be conducted through reading, the collection and analysis of empirical data, or the development of conceptual analyses or methodologies.

250. Research on Drug Abuse. (1-8) § W, or Sp. Prerequisite: Consent of instructor. Davidson, Steinheber Seminar in Neuropsychology. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Seminar 1 hour, Lab 3 hours. Clinical investigations of human brain behavior functions, emphasizing relationships between biologic cognitive components of behavior and brain disorders. The laboratory consists of supervised neuropsychological evaluation, needs assessment, management, and management information systems; evaluating results.

251. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Hargreaves, Atkinson Review of evidence from studies of human brain injuries and "split brain" surgery. Localization of cognitive style; analytic vs. synthetic modes of experiencing the world; unity and disunity in consciousness; implications for psychiatry.

252. Clinical Prediction. (3) § W or Sp. Prerequisite: Consent of instructor. R. Young Problems in the validation of clinical psychological procedures: specification of the measurement characteristics of psychological data; contrast of methods of information processing; analysis of criterion behavior; and efficacy of clinical judgment.

256. Seminar in Clinical Neuropsychology. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Seminar 1 hour, Lab 3 hours. Davidson, Steinheber Seminar in Clinical Neuropsychology. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Seminar 1 hour, Lab 3 hours. Davidson, Steinheber Review of evidence from studies of human brain injuries and "split brain" surgery. Localization of cognitive style; analytic vs. synthetic modes of experiencing the world; unity and disunity in consciousness; implications for psychiatry.

270. Behavior Change Methods in Public Health Practice. (2) § F, W, or Sp. Prerequisite: Consent of instructor. Schaw Bachelor's degree in nursing, psychology, or consent of instructor.

Discussion and reading in behavior change topics related to public health problems.

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

300. Practicum in Teaching Psychology. (2) § F, W, or Sp. Prerequisite: Consent of instructor.

Staff Supervised classroom or tutorial teaching experience.

Radiation Oncology

210-A. Clinical Clerkship in Radiation Oncology. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. T. Phillips Participation in examination of cancer patients under treatment in radiation oncology, and in rounds, conferences, and clients.

140.06 Clinical Clerkship in Radiation Oncology at MZ. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. J. Castro Participation in examination of cancer patients under treatment in the Claire Zellerback Sarion Tumor Institute at MZ. Students participate in rounds, conferences, and clinics; see demonstrations of the use of newer radiotherapeutic techniques.

140.07 Diagnostic and Therapeutic Radiology. (1 ½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. T. Phillips Clinical clerkship in roentgen diagnosis and therapeutic radiology. Two weeks are spent in roentgen diagnosis and two weeks in therapeutic radiology. Some of the material is presented in roentgen diagnosis and clinical clerkship in radiation therapy is included.

403. Radiation Oncology. Grand Rounds. (1) Su, F, W, Sp. T. Phillips Rounds include presentation of problem cases with discussions of diagnosis and treatment as well as biologic implications. Frequent guest lectures are used to cover important aspects of oncology.

404. Specialty Seminars Concerning Cancer. (3) Su, F, W, Sp. T. Phillips Seminars include discussions of the diagnosis, treatment and results of specialty oncology problems, including head and neck, gynecologic, otolaryngologic, pediatric, lymphomatous and general malignancies.

Radiation Oncology / 175
T. Phillips
Study of principles of radiobiology and their application to radiation therapy. Seminars deal in depth with textbooks, selected readings, and prepared seminars leading to understanding of mechanisms of action of radiation in clinical radiotherapy. Oriented to radiotherapy fellows and residents.

423. Concepts of Treatment Planning and Dosimetry in Therapeutic Radiology, (3) Su. Prerequisite: Residents assigned to therapeutic radiology. V. Smith
A workshop course to provide residents in therapeutic radiology with the elements of treatment planning and dose calculations.

424. Physics of Therapeutic Radiology, (1) F, W, Su. Prerequisite: Residents assigned to therapeutic radiology. V. Smith
A lecture-seminar course with practical sessions to prepare the resident with a basic knowledge of radiological physics with special reference to those aspects relating to therapeutic radiology.

Residents, under supervision, are responsible for treatment of cancer. A two-week rotation is spent in roentgen diagnosis and in therapeutic radiology. Two weeks are spent in roentgen diagnosis and two weeks in therapeutic radiology. Some of the material in the roentgen diagnosis and clinical clerkship in radiation therapy is included.

100. Introduction to Clinical Radiology, (2) F, W, Sp. Prerequisite: Anatomy 100 and 103, Medical Physiology 102, Pathology 102, and Psychiatry 130; concurrent enrollment in Medicine 131A-B-C.
V. Smith
Students serve a clerkship in the Diagnostic Section of the Department of Radiology. They observe performance of radiologic examinations and their interpretation. They participate in conferences and conference presentations.

104. Clinical Clerkship in Nuclear Medicine, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Hoffer
Observation of basic nuclear medicine procedures and participation in diagnostic tests employing radioisotopic tracers. Completion of Radiology 140.04, 140.12, 170.08, and 170.09 meet the special requirements for licensure to use radioactive isotopes in clinical medicine.

105. Roentgen Diagnosis at MZ, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. A. Davidson
Students serve a clerkship in the Diagnostic Division of the Department of Radiology. They observe performance of radiologic procedures and interpretation of films, attend conferences and learning laboratory, on selected aspects of diagnostic procedures and interpretation techniques. Seminars with the approval of the chairman of the department.

107. Diagnostic and Therapeutic Radiology, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Marquis
Clinical clerkship in roentgen diagnosis and therapeutic radiology. Two weeks are spent in roentgen diagnosis and two weeks in therapeutic radiology. Some of the material in roentgen diagnosis and clinical clerkship in radiation therapy is included.

108. Clinical Clerkship in Cardiovascular Radiology, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Carlson
Cardiovascular radiology provides an opportunity to become acquainted with the radiologic studies of the cardiovascular system through active participation in the examinations and their interpretation.

109. Clinical Clerkship in Diagnostic Radiology at SFGM, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Marquis
Students serve a clerkship in the Diagnostic Section of the Department of Radiology. They observe performance of radiologic procedures and interpretation of films, attend conferences and learning laboratory, on selected aspects of diagnostic procedures and interpretation techniques.

110. Radiology Clerkship at C, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Burhene
Course includes all types of radiologic procedures, pediatric radiology, and radiation therapy with emphasis on the radiologist as a consultant to other specialties as related to use and indications for all radiologic techniques.

112. Radiotherapy Laboratory, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. Consent of instructor. Perez-Mendez
Course is designed to teach accurate measurement and calibration techniques for biomedical purposes.

113. Radiology and Medical Diagnosis, (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C. S. Ross
For second year medical students, immediately following Medicine 131A-B-C, to help acquire knowledge and attitudes that ease transition from preclinical studies to clinical medicine. Radiographs with case presentations in the learning laboratory help learn mechanisms of disease and clinical judgment.

114A-B-C. Introduction to Research on Learning, (2-2-2) F, W, Sp. Prerequisite: Consent of instructor. S. Ross
Designed to acquaint students with domains of educational research, specifically that on learning. Students learn vocabulary, recognize valid problems and valid results, and gain insight into the problem of method.

A lecture course limited to small groups, with opportunity for self-instruction in the learning laboratory, on selected aspects of anatomy and its clinical applications. Objective is to show the usefulness of knowing normal anatomy and its variants.

116. Pathology of Internal Organs, (1½ per week) Su, F, W, Sp. Prerequisite: Anatomy 100 or concurrent enrollment. S. Ross
A lecture course limited to small groups, with opportunity for self-instruction in the learning laboratory, on selected aspects of anatomy and its clinical applications. Objective is to show the usefulness of knowing normal anatomy and its variants.

117. Pathology of Internal Organs, (1½ per week) Su, F, W, Sp. Prerequisite: Anatomy 100 or concurrent enrollment. S. Ross
A lecture course limited to small groups, with opportunity for self-instruction in the learning laboratory, on selected aspects of anatomy and its clinical applications. Objective is to show the usefulness of knowing normal anatomy and its variants.

118. Pathology of Internal Organs, (1½ per week) Su, F, W, Sp. Prerequisite: Anatomy 100 or concurrent enrollment. S. Ross
A lecture course limited to small groups, with opportunity for self-instruction in the learning laboratory, on selected aspects of anatomy and its clinical applications. Objective is to show the usefulness of knowing normal anatomy and its variants.

119. Laboratory Project in Radiology, (1-6) F, W, Sp. S. Ross
A laboratory research project under direction of a member of the faculty with the approval of the chairman of the department.

220. Seminars in Radiology for Physicians, (2) F, W, Sp. Prerequisite: Bachelor's or higher degree in the physical sciences.
T. Phillips
Seminars provide physicians with an in-depth knowledge of radiology.

Su, F, W, Sp. Prerequisite: Anatomy 100 and 103, Medical Physiology 102, Pathology 102, and Psychiatry 130; concurrent enrollment in Medicine 131A-B-C.
V. Smith
Faculty from radiology and other departments lecture and discuss various diseases of all systems of the body. Residents present case histories stressing roentgen findings and correlative surgical and laboratory work, special studies, library, and film research.

Films of interesting cases from the daily work are presented and reviewed. Roentgenograms of surgical and pathologically proved cases are correlated with gross and microscopic pathologic findings.

Seminars require preparation and presentation of roentgen findings on patients under discussion at the medical, surgical, pediatric, obstetric and gynecologic departments.

170.09. Introduction to Nuclear Medicine, (2½) Su, F, W, Sp. Prerequisite: Concurrent enrollment in Radiology 170.09.
S. Ross
Introduction to basic nuclear medicine diagnostic procedures, both in vitro, and therapy with radiopharmaceuticals.

170.10. Radiologic Aspects of Surgery at SFGM, (1) Su. S. Ross
Prerequisite: Residents assigned to the surgical services. Third year surgery.

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189 / Radiology

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191 / Radiology

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198 / Radiology

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200 / Radiology

201 / Radiology

202 / Radiology

203 / Radiology

204 / Radiology

205 / Radiology

206 / Radiology

207 / Radiology

208 / Radiology

209 / Radiology

210 / Radiology

Numerous research projects are conducted in the department and facilities are available for new ones. Residents are encouraged to take advantage of these opportunities.


The elements of radiological physics are studied in a series of lectures and problem assignments. The basic phenomena experienced in producing, measuring, and absorbing radiation are treated. Course is designed to give residents in radiology the necessary background to practice radiology.


Interdepartmental seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature is presented. This course includes surgical and medical radiological rounds, consultative tumor boards, diagnostic and clinical pathology conferences, and other departmental grand rounds.


Interdepartmental seminars in which the radiological picture of problem cases either of diagnostic or therapeutic nature is presented. These include medical-surgical, rheumatology, neurology and neurological consultant tumor boards, and consultative tumor conferences, and other departmental grand rounds.

410. Radiobiology: Radiation Effects on Genes and Chromosomes. (2) W. Prerequisite: Consent of instructor. S. Wolff.

Concepts and mathematics of target theory related to dosage 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.


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.


Course includes presentations and pathological material of special interest to radiologists with emphasis on the correlation of diagnostic X-ray and pathological findings and a study of the pathology of patients under radiation treatment.


A seminar course with laboratory experiments designed to acquaint the student with current knowledge of physics applicable to diagnostic radiology. Topics include generation and extraction of radiologic information, image conversion, recording methods, and special purpose equipment.

419. Genetics of Cells, Tissues, and Tumors. (2) Sp. Prerequisite: Consent of instructor. Cleaver, Patt.

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 in nuclear medicine training programs in clinical, diagnostic, nuclear medicine, and radiographic sciences. Critical reviews of available information in limited areas are used to provide a broad review of nuclear medicine for all trainees.


Introduction to physics of radioactive nuclides, quantification, and gamma ray imaging techniques.


Course intended for all first year residents in radiology; provides an introductory survey of radiology, diagnostic X ray physics, radiology, and radiographic instrumentation.


Clinical experience in 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 examinations 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 interpretations and reports, history-taking, and physical examinations. In addition, the chief resident has certain administrative duties relative to the resident training program.


Residents are responsible for the diagnostic and therapeutic activities of the department. Residents on consultant tumor boards, consultative tumor conferences, and other departmental grand rounds.


Residents assigned to nuclear medicine section and consent of instructor. Perez-Mendez, Kaufman.

Patients referred to design of the extension of diagnostic and therapeutic activities of residents assigned to nuclear medicine.


Course designed to teach accurate measurement and evaluation of radiographic examinations for biomedical purposes.

Removable Prosthodontics


Clinical experience in removable partial denture design in relation to clinical dentistry. Removable prosthodontic curriculum includes instruction and training in removable partial denture design, surgical, medical, or prosthetic treatment of edentulous abnormalities, and special clinical procedures not covered in other preclinical courses.

130B. Advanced Removable Partial Denture Design. (1) F, W. Prerequisite: Removable Prosthodontics 130A.

Kroll.

Principles and concepts of partial denture design in relation to clinical dentistry. Treatment planning for removable partial dentures especially related to preventive dentistry will be emphasized. Surgical planning will be designed to the extension base partial denture.

130C. Orofacial Prosthetics. (1) Sp. Prerequisite: Removable Prosthodontics 130B.

Chierici and Staff.

Biologic principles underlying prosthetic treatment of patients with congenital and acquired malformations, defects and dysfunctions. Included is the development of normal and abnormal speech as it relates to prosthodontics. The basis for prosthodontic
171A-B-C. Complete Prosthodontics. (4-4-4) F, W, Sp. Lecture 1 hour, Lab and Clinic 9 hours. M. L. Parker and Staff. Instruction in clinical and laboratory procedures related to complete prosthodontics.

172A-B-C. Partial Prosthodontics. (4-4-4) F, W, Sp. Lecture 1 hour, Lab and Clinic 9 hours. M. L. Parker and Staff. Instruction in clinical and laboratory procedures related to partial prosthodontics.

172.02. Partial Prosthodontics. (5) SS. Lecture 1 hour, Lab and Clinic 12 hours. M. L. Parker and Staff. Instruction in clinical and laboratory procedures related to partial prosthodontics. Continued from Removable Prosthodontics 172.01A-B-C.


174A-B-C. Complete Prosthodontics. (3-3-4) F, W, Sp. Prerequisite: Removable Prosthodontics 171A-B-C. Lecture 1 hour. Lab 6 hours. F, W, 9 hours Sp. M. L. Parker and Staff. Advanced undergraduate instruction in clinical procedures in complete denture prosthodontics. Course will include in-service hospital treatment at VA.

175A-B-C. Partial Dentures. (3-3-4) F, W, Sp. Lecture 1 hour. Lab and Clinic 6 hours. F, W. 9 hours Sp. M. L. Parker and Staff. Course designed to acquaint postdoctoral and senior dental students with the multidisciplinary aspects of maxillofacial prosthodontics. Lectures will be given on maxillofacial prosthetic techniques, oncology, head and neck surgery, plastic surgery, oral surgery, therapeutic radiology, psychology and related oral biology. Consent of instructor and the Dean.


181. Fixed and Removable Methods. (1) F, W. Prerequisite: Fourth year standing. Augsburger, Lum, Plainfield. Course is concerned with saving the patient’s few remaining teeth. Methods for strengthening the abutments and attaching the removable partial dentures encompass implants, crown preparation, systemic, psychological, technical and clinical design problems.

185. Multidisciplinary Approach to Maxillofacial Prosthetics. (1) F, W. Prerequisite: Consent of instructor. T. Curtis. Course designed to acquaint postdoctoral and senior dental students with the multidisciplinary aspects of maxillofacial prosthodontics. Lectures will be given on maxillofacial prosthetic techniques, oncology, head and neck surgery, plastic surgery, oral surgery, therapeutic radiology, psychology and related oral biology.


189.02. Removable Prosthodontics: Treatment Planning. (1) F, W. Prerequisite: Consent of instructor and the Dean. Clinic 3 hours. Enrollment limited. Regli. M. L. Parker, McCormick, Wilde. Instruction in clinical and laboratory procedures related to complete prosthodontics. Course will include in-service hospital treatment at VA.


189.04. Clinical Maxillofacial Prosthetic Techniques. (1) F, W, Sp. Prerequisite: Consent of instructor and Clinical Review Committee. ClinicVariable. Senior dental students will observe and perform maxillofacial prosthetic services for patients in the Maxillofacial Clinic. A detailed case history will be prepared for each quarter. Attendance at related tumor board conferences and field trips to other therapy centers.

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

Sociology

112. American Society and Its Problems. (3) F, W, Sp. Staples. Presentation of prominent sociocultural features 3 hours. M. L. Parker and Staff. Integration and dissonance between and among these systems with emphasis on major social problems such as racism, inequality, youth, disjunction between technology and humanistic values.

122B. Statistical Concepts. (2) Sp. Prerequisite: Second year standing in the School of Nursing or consent of instructor. Staff. An introduction to concepts underlying statistical techniques. Emphasis on selection of statistical procedures. How, when, and when; logic of statistical inference; discussion of probability; dis­cussion of biostatistics.

122. Health and Illness in American Society. (3) F, Staff. Broad survey of features of American society that produce either health or morbid conditions for the quantity and quality of health care services.

124. Marriage and the Family. (3) F. Staples. Examination 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.
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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, Native American and Latins. Emphasis on continuities in the family life of these groups in their native land and the United States.

127. Race and Racism in the Modern World. (3) § F. Lecture 2 hours, Lab 3 hours.
A. Strauss
An exploration of factors that create and maintain subordinate-subordinate relations ordered along racial lines. A cross-cultural analysis with particular emphasis on race relations in the United States.

132. Individual and Change. (3) § F. Prerequisite: Consent of instructor.
Olesen
The relationship of social structures to individuals and their behavior. Emphasis will be on individuals as members of society rather than on individuals or society as such.

134. Perspectives on Women's Roles in Health Care Delivery. (3) § Sp.
Olesen, L. Newman
Analysis of sex roles in general and women's roles in particular in health care receipt and delivery, with particular emphasis on recruitment, training, and roles of health professionals, images of women in therapeutic situations, and cross-cultural features of health care systems.

150. Medical Sociology. (1-5) § W, Sp.
Olesen, A. Strauss and Staff
Library research and directed reading under supervision of a member of the faculty with the approval of the chairman of the department.

156. Contemporary Social Problems. (3) § F.
Davis
The genesis and natural history of social problems and a substantive survey of such leading contemporary problems as relocations, juvenile delinquency, the role of women in American society, and the distribution of health services in the United States.

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

160. Religious Experience in Sociological Perspective. (3-4) Sp. Prerequisite: One upper division course in sociology or psychology or equivalent, and consent of instructor. Lecture 2 hours, Lab 3-4 hours.
Damrell
Current trends in the sociology of religion. Emphasis on factors precipitating religious experience in existing religious groups, societies, subcultures, individuals. In-depth analysis of various religious phenomena, including movements, sects, cults, churches, focusing on the relation between religious explanations and organizational structure.

167. Social Organization of Health Care with Primary Emphasis on Hospitals. (2) § F. Prerequisite: Consent of instructor.
Glaser
An inquiry into the nature of the organizational forms by which health care is delivered, with particular emphasis on hospital organization and the interaction between health care personnel.

168. Contemporary Social Problems. (3) § F.
Davis
The genesis and natural history of social problems and a substantive survey of such leading contemporary problems as relocations, juvenile delinquency, the role of women in American society, and the distribution of health services in the United States.

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

203. Social and Psychological Aspects of Chronic Illness. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Problems faced by chronically ill persons and their families including crisis management, handling symptoms and regimens, social isolation, phases of the disease, temporal difficulties, normalization, dying. Some policy issues, including those concerning health personnel as well as the general public.

204. Sociology of Psychiatry. (3) § Sp.
Schatzman
Psychiatric practices, patient-physician careers, and institutions conceptualized sociologically, as historic, symbolic systems and interactional processes.

205. The Sociology of Health Professions and Occupations. (4) § F.
A. Strauss
The nature of occupations and professions; their constellation in hospitals and clinics, the medical division, Native Americans and Latinos. Emphasis on continuities in the family life of these groups in their native land and the United States.

206. Sociology of Devalued Occupations. (2-4) § W. Prerequisite: Consent of instructor.
Olesen
Review and analysis of occupational theory with special reference to the trends, both social and psychological, involved in occupations customarily considered "dirty" or devalued. Analysis of the organization of such work and the life styles of the persons who pursue it.

207. Microsociology. (2-4) § W. Prerequisite: Consent of instructor.
Olesen
Analysis of social behavior utilizing concepts of territoriality, proxemics, social schema; review of relevant animal studies, as well as such concepts as privacy; consideration of cross-cultural uses of space.

208. Social Psychology of Health and Illness. (3) § W. Prerequisite: Required for graduate students in sociology. F. Davis
The relationship of social identification, group membership, family structure, occupation and life style to health and illness, and the social control of the occupational ideologies, the sociology of work organizations, and the interaction between laymen and health professionals.

212-A. Sociological Theory. (2-2) § F, W. Prerequisite: Sociology 214A is prerequisite. Lecture 2 hours, Lab 212B. Required for graduate students in sociology.
A. Strauss and Staff
An examination and evaluation of classical and recent contributions to sociological theory. The main objective is the generation of a critical capacity with respect to received theory in both its formal and substantive variables.

213. Studies in Participant Observation. (3) § W. Prerequisite: Consent of instructor.
Schatzman
A basic course in the logic and operations of field research. Lectures, readings and discussion on research strategies: entree, watching, listening, data recording, and analyzing.

214. Discovery of Social Reality. (3) § W. Prerequisite: Required for graduate students in sociology. Lecture 1 hour, Lab 3 hours.
Schatzman
Practicum in sociological field observation; course is designed to sensitizes students to demographic and behavioral components of social life in public places. Observation of people aggregates in varied neighborhoods of a metropolis. Instruction in observational techniques and data organization.

214B. Discovery of Social Reality. (3) § W. Lecture 2 hours, Lab 3 hours.
A. Strauss, Glaser
Sociological field observation. Instruct in observational techniques and data organization, emphasis on dimensions and properties exhibited in student presented data.

214C. Qualitative Analysis. (3) § F, Sp.
Prerequisite: Sociology 214A and 214B. Lecture 2 hours, Lab 3 hours.
A. Strauss
Examination of modes of analysis applicable to qualitative data; emphasis on dimensions and properties exhibited in student presented data.

214D. Qualitative Analysis. (3) § W. Prerequisite: Sociology 214A, 214B and 214C. Lecture 2 hours, Lab 3 hours.
A. Strauss
Qualitative analysis; the development of substantial and formal sociological theory. Emphasis on student presented data and their conceptualization.

215. Problems in Microsociology: Urban Life. (2-4) § Sp. Prerequisite: Consent of instructor. Sociology 207 recommended. Olesen
A graduate research seminar on selected problems in microsociology, related to the urban environment, and its bearing on health care settings such as clinics. Application and critique of research and concepts in this area.

216. Comparative Organizations. (3) § W. Prerequisite: Consent of instructor.
A. Strauss and Staff
A critical review of classical and recent contributions to the sociology of formal organizations. A variety of organizational types will be considered, with special emphasis on service organizations.

217. Seminar on the Future of the Family. (3) § Sp. Lecture 2 hours, Lab 3 hours.
Staples
Exploration of changing dating, sexual, sex-role, marital and familial patterns in the United States. Discussion of futuristic models of family life as affected by socio-cultural forces. Special emphasis given to changing sex-role behavior as affecting male-female relationships.

219. Political Sociology of Aging. (3) § W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours.
Staples
Sociology of health personnel as well as the general public.
Major paradigms in the study of community and national power structures examined in terms of theoretical, methodological, empirical, ideological content. Issues of actual and potential power of the aging considered in light of available data and the major paradigms discussed.

220. Seminar in Sociology. (3) F, W, Sp. Prerequisite: Consent of instructor. Staff Doctoral student seminar to discuss methodological problems in current research. Course may be repeated for credit.

222. Politics of Planning in the Human Services. (3) § F, W. Prerequisite: Consent of instructor. Lecture 2 hours, Lab 3 hours. Estes Examination of trends in planning for the human services, including the role of government organizations, professionals and consumers in generating and benefiting from major human services planning reforms. Planning in the fields of health and aging are emphasized.

224. Epistemological Problems in the Social Sciences. (4) F, W, Sp. Prerequisite: Consent of instructor. F. Davis Central epistemological problems in the social sciences and their bearing on issues of the research role, modes of conceptualization, scientific communication, and public information.

230. Analysis of Symbolic Systems. (2-4) § F, W. Prerequisite: Consent of instructor. Olsen Critical inspection and analysis of American symbolic systems, such as educational institutions and mass media of communication with emphasis on the diffusion and alteration of values in specific sections of the society, such as health professions.

232. Advanced Problems in Social Psychology. (2-4) F, W, Sp. Prerequisite: Consent of instructor. Staff An advanced seminar dealing with theoretical and empirical problems in various areas of social psychology. Recent developments in theory and concept will be reviewed.

233. Seminar in Urban Social Relations. (3) § F. Lecture 2 hours, Lab 3 hours. A. Strauss Research seminar on selected topics bearing on the social psychology of urban living and the sociology of cities.

234. Urban Financial Systems. (4) § F. Prerequisite: Consent of instructor. Glaser The sociological problems and processes involved when people deal with banks, lawyers, accountants, savings and loans brokers, finance companies and investment counselors in order to store and use money, obtain credit and loans, and invest money.

249. Studies in Sociology. (1-8) § F, W, Sp. Prerequisite: Consent of instructor. Staff Students select special problems to investigate on an individual or collaborative basis. These studies may be conducted through readings, the construction of theoretical or empirical data, or the development of conceptual analysis or of methodologies.

250. Research. (1-8) § F, W, Sp. Prerequisite: Admission to doctoral study and consent of instructor. Staff For graduate students engaged in writing the thesis for the master’s degree or taking a comprehensive examination required for the master’s degree.

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

Speech and Hearing Science

247. Special Studies in Audiology. (1-3) § F, W. Prerequisite: Consent of instructor. Lecture 1-2 hours, Lab 0-3 hours. Owens Directed reading and laboratory work in the auditory process. Participation in experimental or clinical investigations.

249. Independent Study. (1-5) § F, W, Sp. Prerequisite: Consent of instructor. Flower, Owens and Staff Students and instructor develop jointly a study plan involving tutorials, reading, and laboratory work. Students engage in intensive exploration of specific topics involving the anatomic, physiologic, 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 clerkship 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. 111. Required Core Clinical Clerkship in Advance Core. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 110 and Surgery 110 and 111. Ebert, 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 physiological approach to surgery.

140.01. Advanced General Surgery Clerkship. (1½ per week) Su, F, Sp. Prerequisite: Surgery 110 and 111. T. Hunt Students may participate in clinic, ward, and operating room with direct involvement in postoperative and preoperative care at UC, SFGH, VA, C, and RDMC.

140.02. Vascular Surgery Clinical Clerkship at VA. (1½ per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111. W. Moore Students serve as clinical clerks in the surgery service and participate in clinics, rounds, conferences, and surgery on patients.

140.03. Tissue Transplantation. (1½ per week) Su, F, W, Sp. Prerequisite: Medicine 131A-B-C and consent of instructor. Sheldon Participation in renal homotransplantation operations, ward rounds, transplantation and research conferences. Additional time is spent in the Surgical Research Laboratories, participating in experimental organ transplantation studies.

140.04. Clinical Clerkship. (1½ per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111. Ebert Clinical clerkship in approved hospitals on other universities by special arrangement and approval of the chairman of the department of Surgery.

140.05. Operable Heart Disease. (1½ per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111. UC B. Roe, PMC Gerbode, VA Ulfot Ward rounds and conferences on patients with operable, congenital or acquired heart disease. Details of selection, differential diagnosis, and results of surgery are discussed.

140.06. Mission Emergency 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 Staff Two-weeks participation on the orthopedic surgery Ward at SFGH. Students will work up selected cases, perform minor procedures under supervision, and follow all surgical emergencies as time permits.

140.07. Shock and Trauma Research. (1½ per week) Su, F, W, Sp. Prerequisite: Core curriculum in basic sciences and Medicine 110 or Surgery 110 and 111. Course involves clinical and laboratory investigation and a detailed study of specific patients with trauma and shock.

140.09. Clinical Clerkship in Trauma Surgery. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111 and consent of instructor. Sheldon Clinical clerkship in the trauma service of the Department of Surgery at SFGH. The student will work a 12-hour下班 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. As an integral member of the cardiothoracic team, the student directly and actively shares in preoperative evaluation, operative procedures, and postoperative care. Cardiothoracic conferences and daily ward rounds provide the didactic teaching.

140.11. Burn Care Elective. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110 and 111. Trunkey Clinical rotation on a large Burn Center Service. Pathophysiology of thermal injury including pulmonary aspects will be stressed. Student will act as integral members of the team and participate directly in patient care.

160.03. Clinical Cardiopulmonary Surgery. (2) F. Prerequisite: Third or fourth year standing. Ebert, B. Roe, Hutchinson, N. Fishman Seminars are conducted on a series of subjects relating to cardiopulmonary surgery, which may be attended separately or in conjunction with weekly rounds on the cardiopulmonary patients.

160.05. Advanced Surgery Reading Course. (1½) F, Sp. Trunkey A weekly seminar where previously assigned papers are discussed and critiqued. Papers representing the current concepts in general surgery are covered.
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, SFGH Blaisdell, UC Ebert, VA L. Way
Seminar is held in the surgical wards with discussion of current problems concerning the diagnosis and management of general surgical patients.

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. (½ per week) Su, F, W, Sp. UC Ebert, SFGH Blaisdell, VA L. Way
Course includes experimental investigations of general surgical problems and the development of technical and laboratory methods to be applied in general surgery.

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 general surgery.

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 maximum injuries.

Interns, under supervision, are responsible for the preparation of case records, laboratory work, preoperative patient preparation, assistance at operations, postoperative care, and attendance at follow-up clinic.

Teaching Methodology

Prerequisite: D.O.D. degree. Seminar 2 hours.
Sheldon
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 micro-course, teaching a single skill.

Prerequisite: D.O.D. degree. Clinic 3 hours.
Taxel
Practical teaching experience in selected courses under the supervision of members of the staff.

Prerequisite: Fourth year standing or consent of instructor.
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 186.01A-B-C. 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. (1½ per week) Su, F, W, Sp. Prerequisite: Surgery 110.
Tanagho
Students work as interns on the Urology Service at UC. They also attend rounds and scheduled seminars with residents and visiting staff.

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

140.03. Urology Clinical Clerkship at VA. (2) Su, F, W, Sp. Prerequisite: Surgery 110.
Tanagho
Students work as interns on the Urology Service at VA. They also attend rounds and scheduled seminars with residents and visiting staff.

140.04. Urology Clinical Clerkship at SFGH. (½ per week) Su, F, W, Sp. Prerequisite: Surgery 110.
Ebert
Students work as interns on the Urology service at SFGH. They also attend rounds and scheduled seminars with residents and visiting staff.

Prerequisite: Consent of instructor.
Tanagho
Seminar and library research.

Prerequisite: Consent of instructor.
Tanagho
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
A laboratory research project, under direction of a member of the faculty with the approval of the chairman of the department.

Tanagho
Course involves study of the basic sciences and urologic roentgenology with members of the staff.

Tanagho
Course includes experimental investigations in urologic problems.

Tanagho
Seminar includes discussion of diagnosis and treatment of patients in the urology wards with the attending staff.

Tanagho
Conference includes presentation and discussion of urologic problems by the house staff and faculty.

UC D. R. Smith, SFGH F. Hinman
First year resident care for patients in the wards and outpatient clinic, second and third year residents, under supervision, perform instrumental examinations on clinic patients. Senior residents, under supervision, perform instrumental and surgical procedures.
Intens rotate through urological wards. Under the direction of the attending staff they are responsible for the care of patients, including history-taking, physical examination, laboratory tests, and consultation.