1980

Bulletin of the University of Nebraska: Annual Catalog of the College of Medicine, 1980-1981

University of Nebraska Medical Center

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college of medicine
1980-1981
1980-81

This bulletin includes the criteria for admission, academic progress, retention, certificates, and degrees for the College of Medicine of the University of Nebraska Medical Center.

Bylaws of the Board of Regents of the University of Nebraska state that admission to the University and the privilege of the University student shall not be denied to any person because of age, sex, race, color, national origin, or religious or political beliefs.

It is the policy of the University of Nebraska Medical Center to provide educational and employment opportunities, services, and benefits to students and employees without regard to race, color, national origin, sex, or disability in accordance with Title VI of the Civil Rights Act of 1964, Title IX of the Educational Amendments of 1972, Sections 503 and 504 of the Rehabilitation Act of 1973, and Section 799A and 854 of the Public Health Services Act, where applicable, as enforced by the U.S. Department of Health, Education, and Welfare. A grievance procedure has been established which provides for a prompt and equitable resolution of student or employee complaints relating to sex discrimination.
CONTENTS

Dean's Introduction
Governance of the University Medical Center
and College of Medicine
Emeriti Faculty
Educational Programs—University of Nebraska Medical Center
Academic Calendar
College of Medicine
  History and Standing
  Educational Goals
  Learning Facilities—Clinical, Laboratory, Library
  Office of Educational Research and Services
  Office of Minority Student Affairs
  Curriculum
  Admission Requirements
  Applications for Admission & Procedures
  Registration and Student Records
  Examinations and Grading System
  Special Assistance to Students
  Class Performance and Promotion
  The Student Body and Student Organizations
  Student Research Opportunities
  Leave of Absence or Withdrawal
  Graduation Requirements and Procedures
  Alumni Association
  Fees
  Financial Assistance
  Student Health Service
  Residency Requirements

Departments and Courses
  Anatomy
  Anesthesiology
  Biochemistry
  Dermatology
  Family Practice
  Interdepartmental
  Internal Medicine
  Medical and Educational Administration
  Medical Jurisprudence
  Medical Microbiology
  Medical Social Work
  Neurology
  Neurosurgery
  Obstetrics and Gynecology
  Ophthalmology
  Orthopaedic Surgery and Rehabilitation
  Otolaryngology and Maxillo-Facial Surgery
  Pathology
  Pediatrics
  Pharmacology
  Physiology and Biophysics
  Psychiatry
  Radiology
  Surgery
  Urology

Map of the University of Nebraska Medical Center Campus
To Present and Future Physicians

These are times of great change in our society, of new demands being placed on the universities which have caused them to look at themselves critically and to plan for change to meet their new responsibilities.

Health is the most prized of all human possessions. Without it, the ability to enjoy other aspects of life is dimmed or destroyed. Those who enter the health professions have a responsibility to do all within their power to restore their fellow man to good health and a useful role in society. This commitment must often be accomplished at great cost to the professional person in time and energy. Health care must be rendered without regard to personal likes or dislikes.

The responsibility of the University of Nebraska College of Medicine is to assist in the provision of health care for Nebraska through the education of health professionals.

There is a growing national concern about the need for well-prepared men and women in the health professions and especially in medicine, and the University of Nebraska is dedicated to this. Candidates of moral integrity and willingness to work, who are well-suited for post-collegiate academic work, can apply for admission to the College of Medicine. Reasonable academic competence is necessary and high motivation is of even greater importance.

The purpose of the College of Medicine is to provide an organized high quality program of health education, service and research addressed to the needs of the citizens of the State of Nebraska.

The goals of the College of Medicine are as follows:

1. To provide high quality education in humanistic and scientific medicine for those students who aspire to the health professions in Nebraska, specifically medical students, house officers, allied health professions students, graduate college students, and continuing education students.

2. To encourage the recruitment and retention of qualified health professionals in the State of Nebraska.

3. To develop and maintain a sharing of educational resources with communities and health professionals in the State of Nebraska.

4. To provide high quality primary care programs for the citizens of the State of Nebraska consistent with educational programmatic needs and in concert with other health institutions, agencies and professionals.

5. To provide high quality tertiary care programs relevant to education and research and responsive to the needs of the citizens of the State of Nebraska, consistent with responsible regional and state health planning.

6. To develop and foster both clinical and basic health science research in the pursuit of scientific excellence and human needs.

7. To seek and develop resources that will enable the College of Medicine to respond to current and future educational, service and research needs and opportunities.
8. To provide appropriate financial, professional and intellectual rewards to remain competitive in order to attract and retain highly qualified faculty and staff.

9. To participate in the formulation of health policy at local, state, regional, and national levels in support of high quality health care for the citizens of the State of Nebraska.

I hope you find the bulletin of interest. Feel free to call or write this office for any additional information.

Alastair M. Connell, M.D.
Dean
GOVERNANCE
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Richard Kennedy, UNMC ................................ January, 1981
Katti Rinn, UNO ........................................ January, 1981
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Edward Schwartzkopf, Lincoln ......................... January, 1985
Robert G. Simmons, Jr., Scottsbluff ..................... January, 1981
Kermit Wagner, Schuyler ................................ January, 1983

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University-Wide

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Norman H. Cromwell, Ph.D., Acting Director of Eugene C. Eppley Institute
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Thomas D. Smith, I.M. Engr., Executive Director, Business and Fiscal Administration
C. R. Boughn, B.A., Executive Assistant to the Chancellor
John E. Aronson, M.A., Assistant to the Chancellor for Student Services
Reba Benschoter, Ph.D., Director of Biomedical Communications
Richard L. Moore, Ph.D., Director of Continuing Education
Helen B. Coon, B.A., Registrar
Robert M. Braude, M.L.S., Director, Library of Medicine
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Anece McCloud, B.S., Minority Student Affairs Officer
College of Medicine

Alastair M. Connell, M.D., Dean of the College of Medicine
F. Miles Skultety, M.D., Ph.D., Associate Dean for Clinical Affairs
Robert T. Binhammer, Ph.D., Associate Dean for Academic Affairs
Judith A. Ramaley, Ph.D., Associate Dean for Research & Development
William R. Ruegamer, Ph.D., Associate Dean for Allied Health
Robert S. Wigton, M.D., Assistant Dean for Graduate Medical Education
James R. Erixon, B.A., Assistant to the Dean for Business Affairs
Margaret Faithe, M.D., Assistant Dean for Continuing Education

Department Chairmen

**Anatomy**  
William K. Metcalf, M.D.

**Anesthesiology**  
(Actg.) Jerry D. Edelman, M.D.

**Biochemistry**  
William R. Ruegamer, Ph.D.

**Dermatology**  
Ramon M. Fusaro, M.D., Ph.D.

**Family Practice**  
(Actg.) Margaret E. Faithe, M.D.

**Internal Medicine**  
(Actg.) Michael F. Sorrell, M.D.

**Medical and Educational Administration**  
Alastair M. Connell, M.D.

**Medical Jurisprudence and Humanities**  
Alfred G. Ellick, A.B.

**Medical Microbiology**  
Harry W. McFadden, Jr., M.D.

**Neurology**  
Donald R. Bennett, M.D.

**Neurosurgery**  
F. Miles Skultety, M.D.

**Obstetrics and Gynecology**  
Joseph Scott, M.D.

**Ophthalmology**  
Raymond E. Records, M.D.

**Orthopaedic Surgery and Rehabilitation**  
John Connolly, M.D.

**Otolaryngology and Maxillo Facial Surgery**  
Anthony J. Yonkers, M.D.

**Pathology**  
C. A. McWhorter, M.D.

**Pediatrics**  
(Actg.) Carol R. Angle, M.D.

**Pharmacology**  
Michael S. Ebadi, Ph.D.

**Physiology and Biophysics**  
Joseph P. Gilmore, Ph.D.

**Psychiatry**  
Merrill T. Eaton, M.D.

**Radiology**  
Harold Baltaxe, M.D.

**Surgery**  
Paul E. Hodgson, M.D.

**Urology**  
Francis F. Bartone, M.D.
Emeriti Faculty

Chauncey Leroy Anderson, B.S., M.D.,
Clinical Associate in Family Practice, Emeritus

Paul M. Bancroft, B.S., M.S., M.D.,
Clinical Associate Professor of Pediatrics, Emeritus

Arthur Lawrence Bennett, A.B., Ph.D., M.D.,
Professor of Physiology and Biophysics, Emeritus

Rolland Francis Bresnahan, B.S., M.S., M.D.,
Instructor in Internal medicine, Emeritus

H. H. Brinkman, B.S., M.S.,
Clinical Assistant in Surgery, Emeritus

Herbert H. Davis, A.B., M.S., M.D.,
Professor of Surgery, Emeritus

Herbert Leroy Davis, A.B., Ph.D.,
Research Associate Professor of Biochemistry and Surgery, Emeritus

Horace K. Giffen, B.A., M.D.,
Assistant Professor of Pathology, Emeritus

Harold Gifford, Jr., B.S., M.D.,
Professor of Ophthalmology, Emeritus

Julius C. Goldner, B.S., M.D.,
Assistant Professor of Psychiatry, Emeritus

Bernice M. Hetzner,
Professor of Medical and Educational Administration, Emeritus

Williamina H. Himwich, B.S., M.S., Ph.D.,
Research Professor of Psychiatry and Biochemistry, Emeritus

Arthur Letcher Irons, D.D.S.,
Associate in Surgery, Emeritus

J. Hewitt Judd, B.S., M.D.,
Professor of Ophthalmology, Emeritus

Esley Joseph Kirk, A.B., M.D.,
Associate Professor of Internal Medicine, Emeritus

John Stephens Latta, A.B., Ph.D.,
Professor of Anatomy, Emeritus

A. Ross McIntyre, B.S., Ph.D., M.D.,
Professor of Pharmacology, Emeritus

Carl John Potthoff, B.S., M.S., M.D.,
Professor of Preventive Medicine and Public Health, Emeritus

Helen Wyandt Relhart, B.S., M.S.,
Research Associate in Psychiatry, Emeritus
George Edwin Robertson, B.S., M.D.,
Professor of Pediatrics, Emeritus

John Rudolph Schenken, B.S., M.D.,
Professor of Pathology, Emeritus

Lynn W. Thompson, B.S., M.D.,
Assistant Professor of Anesthesiology, Emeritus

Chester Hill Waters, Sr., B.S., M.D.,
Professor of Surgery, Emeritus

Robert S. Wigton, B.S., M.A., M.D.,
Professor of Psychiatry and Neurology, Emeritus

Violet Wilder, A.B., M.A., Ph.D.,
Associate Professor of Biochemistry, Emeritus

Cecil Legriel Wittson, B.S., M.D.,
Chancellor of the Medical Center, Emeritus;
Professor of Psychiatry, Emeritus

George A. Young, Jr., M.D.,
Associate in Psychiatry and Neurology
Educational Programs
University of Nebraska Medical Center

COLLEGE OF MEDICINE
The College of Medicine operates a fully accredited program leading to the Doctor of Medicine degree. The College also offers students, who have completed the first two years in medicine without having previously received a Bachelor's degree, the opportunity to receive a degree of Bachelor of Science in Medicine.

CONTINUING EDUCATION
Continuing education is offered through a variety of approaches to practicing physicians, nurses and people in allied health professions. Approximately fifty on-campus courses are offered each year by the University of Nebraska Medical Center. Located within the Eppley Science Hall, the Center is uniquely designed to facilitate adult learning. Medical students are welcome to attend most scheduled programs. Continuing education is also brought to health workers in their own hospitals through circuit courses and a program of two-way amplified telephone conferences involving the University of Nebraska Medical Center faculty and out-state participating hospitals.

POSTDOCTORAL MEDICAL EDUCATION
Medical education is recognized as a continuing process that begins in medical school and continues through the professional life of the physician. There are multiple pathways for many possible career choices in medicine.

Residency programs are available in Anesthesiology, Child Psychiatry, Dermatology, Family Practice, Internal Medicine, Neurology, Obstetrics and Gynecology, Ophthalmology, Oral Surgery, Orthopaedic Surgery, Otolarynglogy and Maxillo-Facial Surgery, Pathology, Pediatrics, Pedodontics, Psychiatry, Radiology, Surgery, and Urology. There are eighty first year and over 300 total positions. These programs are integrated with affiliated community hospitals to provide greater flexibility in graduate education.

SCHOOL OF ALLIED HEALTH PROFESSIONS
The School of Allied Health Professions within the College of Medicine offers baccalaureate, associate degree and certificate programs:

<table>
<thead>
<tr>
<th>Program</th>
<th>Degree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Health Services Administration</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Medical Technology</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Nurse Anesthetist</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Physical Therapy Education</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Physician's Assistant Education</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Radiologic Technology</td>
<td>Associate of Science</td>
</tr>
<tr>
<td>Radiologic Technology</td>
<td>Bachelor of Science</td>
</tr>
<tr>
<td>Nuclear Medicine Technology</td>
<td>Associate of Science</td>
</tr>
<tr>
<td>Nuclear Medicine Technology</td>
<td>Bachelor of Science</td>
</tr>
</tbody>
</table>
Biomedical Communications Education
Medical Nutrition Education
Radiation Therapy Technology

Graduate degrees offered by the Graduate College at the Medical Center include Master of Science in Pathology for medical technologists; and the post-baccalaureate certificate in Biomedical Communications.

Bulletins may be obtained upon request.

COLLEGE OF NURSING

The College of Nursing offers the Associate of Science in Nursing degree at the conclusion of two years of study, the Bachelor of Science in Nursing degree at completion of the junior and senior years. Graduates of the Baccalaureate Program are prepared for either community health or hospital nursing. Graduates of the Associate Program take state board examinations for licensure as Registered Nurses.

The College also offers graduate programs leading to the Master of Science in Nursing for those wishing careers as clinical specialists in either medical-surgical nursing, psychiatric nursing, maternal-child nursing, or community nursing. (See Graduate Studies Bulletin of the University of Nebraska Medical Center.)

COLLEGE OF PHARMACY

The College of Pharmacy offers a program leading to the degree of Doctor of Pharmacy.

The College also offers the Masters degree in the Departments of Pharmaceutics, Pharmacodynamics and Toxicology, and Biomedical Chemistry. These three departments are also a part of the interdepartmental Area of Medical Sciences. (See the Graduate Studies Bulletin of the University of Nebraska Medical Center.)

GRADUATE COLLEGE

The Graduate College of the University of Nebraska operates as a system-wide educational organization with programs administratively located on each of the three major campuses of the University of Nebraska, namely UN-Lincoln, UN at Omaha, and UN Medical Center, Omaha. Those programs which are administratively housed on the Medical Center Campus are as follows:

Four departments of the College of Medicine (Anatomy, Biochemistry, Medical Microbiology, and Physiology and Biophysics) offer independent majors leading to the degrees of Master of Science or Doctor of Philosophy. The Departments of Pathology and Radiology offer independent majors leading to the degree of Master of Science only, while the Department of Psychiatry offers a major leading to the degree of Master in Psychiatric Occupational Therapy. In addition, 14 departments of the College of Medicine (Anatomy, Anesthesiology, Biochemistry, Internal Medicine, Medical Microbiology, Obstetrics and Gynecology, Otolaryngology and Maxillo-Facial Surgery, Pathology, Pediatrics, Pharmacology, Physiology and Biophysics, Psychiatry, Radiology, and Surgery); and three departments in the College of Pharmacy cooperate in
offering a Medical Sciences Interdepartmental Area Program which permits the student to engage in a course of study for the Master of Science degree or the Doctor of Philosophy degree with concentration in the area rather than a specific department.

For information about the entrance requirements and the courses of study available, please consult the Graduate Studies Bulletin.

COLLEGE OF DENTISTRY

The College of Dentistry offers programs which provide a solid foundation of fundamental scientific knowledge and the basic technical skills necessary to enter the general practice of dentistry and dental hygiene. The dental program culminates in the degree of Doctor of Dental Surgery, or a combination of degrees of Bachelor of Arts or Bachelor of Science and Doctor of Dental Surgery. The last two years of a four-year college program leading to both the Bachelor of Science degree and the Certificate in Dental Hygiene is conducted by the College of Dentistry.

The College of Dentistry is fully accredited by the Council on Dental Education of the American Dental Association. Officially established in 1918, the College is located on the East Campus in Lincoln and offers modern educational facilities. Clinical experiences are offered at the Lincoln facility, the Medical Center and in a variety of extramural programs.

Advanced training for students at the College of Dentistry may take one of three forms: graduate education, certification in a clinical specialty or continuing education.

The dental graduate program and the certification program are parts of the complete graduate program at the University, and are administered by the Graduate College of the University of Nebraska.

Individual bulletins of the colleges, schools and divisions of the Medical Center can be obtained free of charge by addressing:

Office of the Registrar
University of Nebraska Medical Center
42nd and Dewey Avenue
Omaha, Nebraska 68105
# University of Nebraska College of Medicine

## ACADEMIC CALENDAR 1980-1981

### QUARTERS

<table>
<thead>
<tr>
<th>Period</th>
<th>Fall (Quarters I &amp; IV)</th>
<th>Winter (Quarters II &amp; V)</th>
<th>Spring (Quarters III &amp; VI)</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2, 1980 through November 26, 1980</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>December 1, 1980 through March 8, 1981</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 9, 1981 through June 7, 1981</td>
<td></td>
<td></td>
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### CLERKSHIP PERIODS

<table>
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<tr>
<th>Period</th>
<th>Clerkship Periods</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 7, 1980 through August 3, 1980</td>
<td>1A</td>
</tr>
<tr>
<td>August 4, 1980 through August 31, 1980</td>
<td>1B</td>
</tr>
<tr>
<td>September 2, 1980 through September 28, 1980</td>
<td>2A</td>
</tr>
<tr>
<td>September 29, 1980 through October 26, 1980</td>
<td>2B</td>
</tr>
<tr>
<td>October 27, 1980 through November 23, 1980</td>
<td>3A</td>
</tr>
<tr>
<td>November 24, 1980 through December 19, 1980</td>
<td>3B</td>
</tr>
<tr>
<td>January 5, 1981 through February 1, 1981</td>
<td>4A</td>
</tr>
<tr>
<td>February 2, 1981 through March 1, 1981</td>
<td>4B</td>
</tr>
<tr>
<td>March 2, 1981 through March 29, 1981</td>
<td>5A</td>
</tr>
<tr>
<td>April 6, 1981 through May 3, 1981</td>
<td>5B</td>
</tr>
<tr>
<td>May 4, 1981 through May 22, 1981</td>
<td>6A (graduating seniors only)</td>
</tr>
<tr>
<td>May 4, 1981 through May 31, 1981</td>
<td>6A</td>
</tr>
<tr>
<td>June 1, 1981 through June 28, 1981</td>
<td>6B</td>
</tr>
</tbody>
</table>

### RECESSES & HOLIDAYS

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>July 4, 1980</td>
<td>Independence Day</td>
</tr>
<tr>
<td>September 1, 1980</td>
<td>Labor Day</td>
</tr>
<tr>
<td>November 17, 1980 through November 30, 1980</td>
<td>Thanksgiving (pre-clinical student)</td>
</tr>
<tr>
<td>November 27, 1980</td>
<td>Thanksgiving (clinical students)</td>
</tr>
<tr>
<td>8:00 a.m. March 30, 1981 through April 5, 1981</td>
<td>Spring Recess</td>
</tr>
<tr>
<td>May 25, 1981</td>
<td>Memorial Day</td>
</tr>
<tr>
<td>8:00 a.m. June 29, 1981 through July 5, 1981</td>
<td>Summer Recess (clinical students)</td>
</tr>
</tbody>
</table>

### SPECIAL EVENTS

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>September 2, 1980</td>
<td>Freshman Orientation (Class of 1984)</td>
</tr>
<tr>
<td>October 5, 1980</td>
<td>Oktoberfest/Family Day</td>
</tr>
<tr>
<td>April 7-8, 1981</td>
<td>National Boards Part II</td>
</tr>
<tr>
<td>June 9-10, 1981</td>
<td>National Boards Part I</td>
</tr>
<tr>
<td>To Be Announced</td>
<td>Health Professions Day</td>
</tr>
<tr>
<td>May 24, 1981</td>
<td>Commencement</td>
</tr>
</tbody>
</table>
HISTORY

The Legislative Act of February 15, 1869, provided for the formation of the University of Nebraska and included provision for a college of medicine. In 1883 the University of Nebraska College of Medicine was established at Lincoln. It continued in operation until the 1887 session of the legislature withdrew its appropriation, necessitating discontinuance of the college on May 19, 1887. The Omaha Medical College, incorporated at Omaha in 1881, became a part of the University of Nebraska in 1902. However, the first class entered in the fall of 1880; therefore, the College of Medicine celebrates its centennial in the 80-81 academic year. The merger resulted in the first two years of the four-year medical course being given in Lincoln and the last two years in Omaha. Since 1913 the entire educational program has been given in Omaha. The College of Medicine is a component of the University of Nebraska Medical Center, one of the three major campuses of the University of Nebraska System.

STANDING

A strong faculty is meeting the demands of the expanding requirements of medical education. Excellent clinical facilities are provided through the University Hospital and clinics as well as other affiliated hospitals.

The College of Medicine meets the requirements of the most exacting state examining and licensing boards. It is a member of the Association of American Medical Colleges and is accredited by the Liaison Committee on Medical Education representing the American Medical Association and the Association of American Medical Colleges.

The College of Medicine operates a fully accredited program leading to the Doctor of Medicine degree. The University Hospital and clinic also provides residency programs in most of the major medical specialties.

Recently, several new programs have been undertaken with the objectives of providing better health services for the citizens of the state: developing interdisciplinary educational programs at both undergraduate and graduate levels; increasing allied health professions enrollments; expanding graduate training opportunities for physicians; increasing the emphasis on ambulatory care; expanding continuing education programs for physicians, nurses, and allied health professionals; organizing circuit courses and two-way telephone conferences for physicians, nurses, and hospital administrators in rural areas; establishing a Rural Health Task Force to work toward the goal of improving health care in rural areas.

EDUCATIONAL GOALS

The goal of the College of Medicine is to develop the knowledge and skills and foster attitudes appropriate for all doctors of medicine. The College aims to provide a sound basis for support of career choices in medical practice, teaching, research, or administration by stimulating students to obtain a background of basic information, a command of the language of biomedical science, a mastery of the skills necessary for clinical problem solving, a habit of self-education, and a sympathetic
understanding of the behavior of healthy and sick people. The College is particularly oriented toward training physicians to meet all the health care needs of the citizens of Nebraska.

The course of study in the College of Medicine is designed to produce an unspecialized physician, soundly grounded in modern science, who, after a variable period of postgraduate education and training, is competent to enter the field of medicine. Practicing physicians, medical investigators and medical teachers are products of the same educational process. All three are essential in the field of medicine. The practicing physician and the medical teacher must be capable both of practicing an art and of applying the natural sciences to medicine. Most medical investigators also have some responsibility in the teaching or practice of medicine. Thus, Doctors of Medicine deal with people as individuals and/or as a society.

An awareness of one's personal limitations is as important a characteristic as any other. Students of medicine are encouraged to seek experiences which will develop self insight.

A combined M.D.-Ph.D. program for a limited group of enrollees is under consideration.

Learning Facilities

CLINICAL FACILITIES

University Hospital and Clinic — The University Hospital and Clinic is the central and largest unit of the group of buildings comprising the Medical Center. University Hospital has 320 beds and 46 bassinets. The Medical Center also contains 95 beds at the Nebraska Psychiatric Institute, and an additional 52 beds at the Hattie B. Monroe Pavilion, an extended care facility for children. University Hospital features five intensive care units, a Neonatorium for the special care of newborns, the Eppley Radiation Center, and other specialized patient care facilities, all of which utilize the most modern equipment.

University Hospital and Clinic operates extensive outpatient services in the University Clinic building and in the north wing of the University Hospital. Among the sixty clinics are Internal Medicine, Surgery, Pediatrics, Obstetrics and Gynecology, and all of their subspecialty services. In addition, the Departments of Ophthalmology, Otolaryngology and Maxillo-Facial Surgery, Dermatology, Orthopedic Surgery and Rehabilitation, Neurology, Urology and Family Practice operate outpatient clinics. A modern emergency service suite is also a part of the complete outpatient services available at University Hospital. Psychiatric clinics are operated by the University Hospital and the Nebraska Psychiatric Institute.

The C. Louis Meyer Children's Rehabilitation Institute, also located on the Medical Center Campus on 44th Street, provides specialized diagnostic and rehabilitative services for the handicapped child. University Hospital operates the Family Health Center, outreach clinics in South Omaha, North Omaha, and Central Omaha.

Governance authority for the University of Nebraska Hospital and Clinics and the Nebraska Psychiatric Institute is delegated to a Board of Governors subject to the Bylaws, Policies and Procedures of the Board of Regents.
AFFILIATION AGREEMENTS WITH COMMUNITY HOSPITALS

To further emphasize the College of Medicine's concern for improving health care in rural areas, a number of affiliation agreements between the Board of Regents and community hospitals distributed over the state are in effect. In Omaha, affiliations exist with the Douglas County Hospital and the Omaha Veterans Administration Hospital, both fully integrated into the programs of the College of Medicine including two-way, closed-circuit television connections. Four private hospitals also are affiliated: The Children's Memorial Hospital on campus, the Bishop Clarkson Memorial Hospital on campus, the Immanuel Hospital, the Nebraska Methodist Hospital and Salvation Army Booth Hospital. Finally, pilot educational programs underway in affiliated community hospitals located in rural Nebraska are worthy of particular mention. The College of Medicine is indebted to the volunteer faculty in these community hospitals for their contributions to the College's teaching efforts.

LABORATORY FACILITIES

Anatomy — The Department of Anatomy is located in the lower two levels of Wittson Hall. Facilities include well-equipped teaching and research laboratories, a modern audio-visual room with a wide variety of auto-instructional materials, and a small electron microscope suite.

Biochemistry — The Biochemistry Department is located on levels three and four of the South Building. Both levels house the departmental offices, research laboratories, and special supporting facilities such as instrument rooms, cold and constant temperature rooms, and storage areas.

Medical Microbiology — This department occupies space on the second, third, and fourth levels of Wittson Hall and shares student laboratory facilities with the Departments of Anatomy and Pathology. The diagnostic microbiology laboratory, located in the University of Nebraska Hospital and Clinics, provides material useful in class teaching exercises.

Pathology — The offices and classroom areas are located on the first and second floors of Wittson Hall. The student laboratories are also utilized by Microbiology and Anatomy. Approximately 9,000 colored lantern slides and numerous electron photomicrographs are used for the teaching exercises. Audio-visual aids are available to the student both as 35mm. pulsed tape programs and as microfiche. All instructional materials may be used on equipment maintained by the Department. The laboratories of the Department of Pathology in the University Hospital provide additional materials and case findings which support the teaching program.

Physiology & Biophysics — The department occupies the fifth, sixth, and seventh levels of the South Laboratory Building. The department library has extensive audio-visual programs. Research laboratories for staff and graduate students and supporting facilities are available on the fifth and sixth levels.
Pharmacology — The fourth, fifth and sixth floors of Poynter Hall (the oldest building in the Medical Center, constructed in 1913) have been completely remodeled for the use of the Department of Pharmacology. In addition to ample laboratory space, the renovated space also contains a seminar hall, an auditorium with television recording equipment and a large reading room with audio-visual facilities for use by medical students, graduate students and residents. In addition, a drug and poison information center with microfilm and computer facilities will be housed in the reading room.

Museum — The pathological museum of the College of Medicine in Wittson Hall contains about 3,500 specimens. Nearly every variety of pathological lesion is represented and the constant addition of fresh material from the autopsies performed continually adds to its interest. In addition to the gross specimens are thousands of microscopic sections and a large collection of wax reproductions of various lesions. The museum is an important and necessary adjunct to the teaching of pathology and of clinical medicine.

LIBRARY FACILITIES
The Leon S. McGoogan Library of Medicine in the University of Nebraska Medical Center is one of the country’s major health sciences resource libraries. It is housed in a 58,000 net-square-foot edifice situated above Wittson Hall, a location designed to reflect the concept of the library as a catalyzing agent for all activities on the campus. The collection numbers about 160,000 volumes, with a current journal titles list of about 2,800. Multi-media materials for self-instruction in curricular fields are also collected and made available in the Learning Resources Center. The library seats 450 readers in a variety of individual and group seating arrangements.

Reference services are offered the clientele of the Library of Medicine, including such on-line computer-based bibliographic services as MEDLINE (Medlars-on-line) and CHEMCON (Chemical Abstracts Condensates). Bibliographic instruction and interlibrary borrowing are also available. The library is a link in a national network designed to facilitate biomedical information transfer, having been named by the National Library of Medicine as the management headquarters for the seven-state Midcontinental Regional Medical Library. This offers unlimited opportunity for the pursuit of research and study.

In addition to its regular functions, the library maintains a rare book collection in the history of medicine and houses the Orr Collection of the American College of Surgeons. It also collects special materials on the history of medicine in Nebraska. Incorporated within the Library of Medicine are 2,000 volumes of the Omaha Douglas County Medical Society, periodic transactions of the Nebraska State Medical Association and several outstanding medical libraries of former practitioners of the state.

OFFICE OF EDUCATIONAL RESEARCH AND SERVICES
The office of Educational Research and Services, in the Department of Medical and Educational Administration, was founded to provide assistance in a variety of educational areas to the faculty of the College of
Medicine. The director and staff members are available to assist departments, individual faculty members and program directors with projects or problems which pertain to curriculum, course design, teaching techniques, evaluation and testing methodology. Special emphasis is placed on the design and implementation of educational research in all areas of curriculum.

MINORITY STUDENT AFFAIRS OFFICE

The Office of Minority Student Affairs was created to assist the Medical Center in reaching its commitment to train health professionals for underserved communities in Nebraska as well as in other parts of the nation. Shortages of health professionals are particularly acute in minority communities. Therefore, Blacks, Chicanos and Native Americans are especially sought for careers in medicine, nursing, pharmacy, dentistry, and allied health.

The UNMC Office of Minority Student Affairs is responsible for planning and implementation of programs for recruitment, admission, retention, and progression of ethnic minority students and economically disadvantaged students. Services include:

1. Personal and educational counseling on all UNMC colleges and programs and the College of Dentistry on the UNL Campus.
2. Assistance to accepted applicants in locating suitable housing and jobs for the spouse.
3. Establishment of small group tutorial sessions for enrolled students.
4. Advisory support to the Student National Medical Association (SNMA) and the UNMC Minority Student Affairs Committee.
5. Social and cultural functions for enrolled students and local pre-professional students.
6. Summer enrichment programs for high school and college students interested in the health professions.

Additionally, the Office of Minority Student Affairs sponsors cultural awareness activities for all students and employees of the Medical Center and for the public.

The Minority Student Affairs Officer, Anece McCloud, may be contacted by writing:

Office of Minority Student Affairs
42nd and Dewey Streets
Omaha, Nebraska 68105
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<td>Perspectives in Aging</td>
<td>Clinical Medicine</td>
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(2 mo. elective block to be taken sometime during junior year)
A new 4-year (158 week) course of studies leading to the M.D. degree was implemented in October, 1979. The program is designed to qualify the medical graduate for residency training in any field of medicine, but especially for residency in the primary-care fields, and to prepare graduates for a lifetime of continuing professional education.

Phase 1 of the curriculum (6 quarters, 2 years) requires mastery of the basic science disciplines (anatomy, behavioral science, biochemistry, microbiology, pathology, pharmacology and physiology) and acquisition of basic clinical skills and insights. Phase 2 (86 weeks) requires that the student develop thoroughness in evaluating clinical problems, a strong capacity for rational therapeutic decisions, high standards of professional conduct and productive habits for independent study. 48 weeks of Phase 2 are allotted to the required clinical clerkships in family practice, internal medicine, obstetrics, pediatrics, psychiatry and surgery. The student then completes an additional 38 weeks of elective clinics or basic science experiences. To qualify for graduation, each student demonstrates to the faculty that the knowledge, skills and attitudes necessary for successful entry into the residency (graduate) phase of medical education have been acquired.

The Curriculum Committee with student representation is responsible for curricular change and evaluation. Written educational goals and objectives are required of all course or clerkship directors.

SPECIFIC EDUCATIONAL REQUIREMENTS

The growing complexity of our society makes it increasingly necessary that physicians be well founded in the humanities which put them in touch with society, and help them gain the understanding and compassion which are basic to the art of healing. However, the rapid development of medicine as an applied science, requiring quantitative precision and analytical reasoning is also placing an increasing premium upon excellence of preparation in scientific and mathematical disciplines.

The following specific educational requirements have been chosen to foster students facility with quantitative and analytical methods. However, the needs of the whole patient should always be kept in mind as well as the importance of physician-patient communication. Thus, it is imperative that the student acquire a sufficiently broad experience to meet these demands.

High School — This should be a strong college preparatory course. It is recommended that the student complete two years of study in a foreign language, four years of English, and as much mathematics and science as possible.

College or University — A minimum of 90 semester hours (three years of college work) in an accredited college is normally required. To provide an opportunity for scholarship in depth, the completion of a college major is strongly recommended. In most instances, preparation for medical school can be achieved by including the following group requirements:
<table>
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<th>Course</th>
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<tr>
<td>CHEMISTRY</td>
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<tr>
<td>The requirement is for two semesters of general or inorganic chemistry (analytical chemistry may serve as part of this requirement) and a two-semester, complete course in organic chemistry.</td>
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<td>BIONOLOGY</td>
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<td>Unless biology is chosen as the college major, additional electives in this field which may significantly duplicate courses given in medical school are less advantageous to the student than other electives.</td>
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<td>PHYSICS</td>
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<td>This should include a complete course in physics. The student should register for the course which is commensurate with his mathematical background if more than one is available.</td>
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<tr>
<td>ENGLISH</td>
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<td>Under extreme circumstances, a total of 3 hours may be waived. Consultation with the Chairman of the Admissions Committee, however, is necessary for this action.</td>
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<tr>
<td>MATHEMATICS or STATISTICS</td>
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<td>This must include material through introductory calculus. Familiarity with statistics and with the principles of computers is highly desirable.</td>
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<tr>
<td>ELECTIVES</td>
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<td>The student is urged to select courses from the general field of the humanities and behavioral sciences and not to limit training to the above scientific subjects.</td>
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Hours earned in professional colleges or schools which hold both regional collegiate accreditation and professional accreditation may be applied to the “90 hour general requirements.” Examples of institutions referred to are Engineering and Technology, Collegiate Nursing, Pharmacy, Physical Therapy and other programs in the Allied Health area.

Hours may not be applied to specific group requirements for admission to the College of Medicine unless investigation (or previous UNMC experience) verifies that course content has been found equivalent to approved pre-professional courses offered by traditional undergraduate liberal arts colleges.

Hours awarded for CLEP Subject examinations must be verified by submission of official CLEP Score Reports. Scores must meet UNMC requirements for credit — usually the 50th percentile. If verified, the hours may be used to meet the “90 hour general requirement” but are not acceptable for application to the College of Medicine group requirements.

The Admissions Committee of the College of Medicine will not accept credit hours graded Pass-Fail towards the required courses and discourages applicants from taking more than 10 hours of Pass-Fail courses toward the 90-hour group requirements. In a situation where an applicant does not have the option of grades and only Pass-Fail courses are available, consideration will be given if the applicant can produce a written evaluation of each course taken on a Pass-Fail basis.

APPLICATIONS FOR ADMISSION

Admission to the College of Medicine is granted without regard to age, handicap, sex, race, color, national origin or religious or political beliefs.

The College is deeply concerned about underserved rural and minority communities in the state. Because research data show candidates emanating from those areas are likely to return, the Admissions Committee gives particular attention to under represented minority applicants and to applicants from counties with population under 25,000.
In considering scholastic records of applicants, greater weight is given to the quality of work than to an excess of credit hours over the minimum required number. Consideration is given also to appraisals of character, personal interviews, scores on the new Medical College Admission Test, and general fitness and promise of the candidate.

The following statement represents the guideline regarding technical standards under which the Admissions Committee operates:

The objective of the faculty of the College of Medicine is the training of undifferentiated physicians with an adequate fund of knowledge in both basic and clinical sciences and the requisite skills to solve clinical problems while dealing sensitively with patients. Qualification for admission to and graduation from the College of Medicine is dependent upon the possession of:

1. The intellectual capacity to meet curricular requirements.
2. The physical ability to master the skills involved in the independent practice of medicine.
3. The ability to communicate effectively with patients, peers and other members of the health care community.
4. The emotional stability to cope with the demands that characterize the practice of medicine.

The Admissions Committee considers, without bias, all applicants who meet these technical standards.

A limited number of students from states other than Nebraska may be accepted for the freshman class.

APPLICATION PROCEDURE

The University of Nebraska College of Medicine is a participant in the American Medical College Application Service (AMCAS) of the Association of American Medical Colleges. Application Request Cards are available from premedical advisers and from participating medical schools. Forward your requests to the Registrar’s Office, University of Nebraska Medical Center, 42nd and Dewey, Omaha, Nebraska 68105.

Complete instructions for proceeding with the application will be with the application packet received from the above source. Careful attention to all details listed will expedite the handling of applications. Changes in residency status cannot be implemented during the time your application is being considered. The application will be processed by AMCAS and forwarded to the University of Nebraska College of Medicine. Deadline for receipt of applications by AMCAS will be November 15, 1980 for 1981 admission.

Upon receipt of your application from AMCAS, the College of Medicine will request letters of reference, a photograph and supplementary information.

A personal interview is required of each student. Interview sessions are held on the Medical center Campus and arrangements should be made through the Admissions Office of the College of Medicine. Interviews are conducted without knowledge of the academic credentials. Thus, the purpose of the interview is to assess personal attributes and the nature of the candidate’s motivation.
Any applicant who has applied for admission previously, must re-apply in the regular manner if consideration for a subsequent year is desired. Special programs of study toward the degree of Doctor of Medicine can be arranged for individuals holding doctorates in other areas of science. These programs are individually designed by a faculty committee and take advantage of the talents and background of the applicant. Consultation with the Dean's Office prior to entering this program is required.

ADMISSIONS COMMITTEE

The Admissions Committee meets weekly from late December until late April. Notices of acceptance, rejection or "hold" are sent weekly to those candidates who were considered. Applicants on hold are given reconsideration in April. The remaining places are filled and an alternate list is developed from among these applicants. Each acceptee is given the opportunity to defer admission for one year.

ADVANCED STANDING

If a vacancy exists, application for admission with advanced standing will be considered from students attending medical schools accredited by the Council on Medical Education or from Nebraska residents who attend a foreign medical school. In the case of the latter, performance on the MSKP examination will constitute an important aspect of the evaluation. Applications may be obtained from the Registrar's Office, University of Nebraska Medical Center, Omaha, Nebraska 68105.

An application fee of $10 for residents and $25 for non-residents is required. The fee is not applicable to tuition if the student is accepted for admission. It is not refundable. The student must furnish evidence of satisfactory completion of courses equivalent in kind and amount to those taken by the class to which admission is sought. The student must also present a letter of recommendation from the Dean of the medical school last attended. The College of Medicine reserves the right in every case to give examinations in any or all subjects in which credit is requested.

Students who have been dropped from another medical school may not be considered for admission to this College of Medicine.

REGISTRATION AND ADMISSION TO CLASSES

When an applicant receives notice of acceptance for entrance to the College of Medicine, a deposit of $55.00 is required within two weeks to hold a position as a member of the class. The pre-enrollment deposit is applicable to tuition. Forty dollars of the $55.00 deposit will be refunded to a student who finds it necessary to withdraw during or prior to the first week of classes.

All men and women planning to attend the University of Nebraska Medical Center under Chapters 31, 34 and 35 of the Educational and Assistance and Vocational Rehabilitation Laws administered by the Veterans Administration should inquire at the Registrar's Office of the University of Nebraska Medical Center, 3018 Conkling Hall, before they register to make sure that all necessary steps have been taken.

Registration for first-year students is accomplished at orientation. Registration for subsequent quarters will be completed approximately
two weeks preceding the beginning of each quarter. Any change in registration during the first three years must be approved by the Associate Dean for Academic Affairs or recommended by the Scholastic Evaluation Committee.

Each student enrolling in the College of Medicine agrees to meet the normal requirements for fulfillment of educational training, including attendance at classes, conjoint examinations and clerkship requirements under the normal schedules. Implied in the acceptance is the understanding that medical education will take precedence over other activities.

**STUDENT RECORDS**

The academic record of a student is confidential and an official transcript of such record is sent only at the request, or with the consent, of the student or alumnus. The only information that will be released without the student’s permission is name, dates of attendance and degree(s) awarded, if any.

The records kept by the Dean’s Office are the official records of the College. They are available to the student and may be inspected upon request. The official records include the original application for admission with its supporting documents, unless the student has previously waived the right to see them; the narrative reports describing the student's performance in the medical curriculum; grade sheets; any entries about him or her in the minutes of the Scholastic Evaluation Committee and finally the letter of recommendation written in support of application for residency. In effect there are no records kept by the Dean’s Office which the student may not peruse.

**FAMILY RIGHTS AND PRIVACY**

The University of Nebraska complies fully with the Family Educational Rights and Privacy Act of 1974 which was designed to protect the privacy of educational records. Students have the right to inspect and review their educational records, and to request the correction of inaccurate or misleading data through informal and formal hearings.

Questions concerning the Family Educational Rights and Privacy Act may be referred to the Office of the Registrar or other appropriate offices that maintain student records.

**CREDIT FOR ADVANCED STANDING**

According to the Board of Regents policy, the Medical Center Registrar will maintain a record of names and credit hours of courses taken at other Colleges of Medicine, but grades received in courses presented for advanced standing credit will not appear on the permanent record sheet of the student.

The educational program of students admitted for advanced standing in the College of Medicine will be reviewed by the faculty of the College of Medicine. The faculty will decide about the applicability of each course toward the requirement for graduation.

**Auditing Courses** — A course may be audited with the permission of the instructor and the Dean of the College in which the course is offered.
The student must be academically qualified and there must be adequate space and facilities for the student to audit a course. There is no credit for an audited course. Application forms for auditing courses may be secured from the Assistant Registrar for Academic Records, Room 3020, Conkling Hall. This form must be completed by the sixth day of the current term. The fee for auditing a course is one-half the current resident credit hour fee.

Conjoint Examinations — During the basic science sequence, students are examined once every four weeks in conjoint examinations. Each course participating in a quarter is allotted time in the examination in proportion to the hours of credit in the course. The specific dates for these examinations will be given to the students at the beginning of each quarter. The usual examination period is from 8 a.m. to 12 noon on Saturday. Special arrangements are made with students who are unable, because of religious restrictions, to sit for examinations on Saturday. Students seeking to be excused from a scheduled examination must make prior arrangements with the Conjoint Examination Coordinator and department chairman. Medical students as future physicians are expected to meet their obligations in spite of minor adversities. However, excuses from scheduled examinations will be granted for compelling reasons.

Performance on the conjoint examinations will constitute at least 75% of the individual's evaluation. Examinations other than the conjoint may be given. If a course instructor plans to conduct additional examinations, the times at which these will be given, the type of examination and how much value these will hold in assessing course achievement must be provided to students.

COMPREHENSIVE EXAMINATIONS

Students enrolled before September 2, 1980, are required as a prerequisite for graduation to present passing scores in Parts I and II of the National Board Examination.

For students enrolled on or after September 2, 1980, the comprehensive examination will be internally generated. A comprehensive examination in the subjects of Anatomy, Physiology, Biochemistry, and Behavioral Science will be given during the last week of the first year. A similar comprehensive examination in the subjects of Microbiology, Pathology and Pharmacology will be given at the termination of the second year. A comprehensive examination in clinical disciplines of Internal Medicine, Family Practice, Ob/Gyn, Pediatrics, Psychiatry and Surgery will be given at the termination of the mandatory clerkship schedule. Students must pass these comprehensive examinations as a prerequisite for promotion and graduation. The passing level of individual segments will be set by the departments.

Grading System — The grading system for classes entering in 1979 or earlier is as follows:

H - Honors
P - Pass
F - Fail
Any course which, for good reason, has not been completed, but in which progress has been satisfactory, may be reported as "Incomplete."

The grading system for the classes entering in 1980 and all classes thereafter is as follows:

A - Excellent performance
B - Good performance
C - Satisfactory performance
D - Marginal performance
F - Fail

The above letter grades do not have or require fixed numerical percentage equivalents.

A course which, for good reason, has not been completed, but in which progress has been satisfactory, may be reported as "Incomplete." The department issuing the incomplete will indicate by departmental record, with a copy to the student, how the incomplete is to be removed. A student must remove an "Incomplete" by the end of the quarter subsequent to which the "Incomplete" was received or the grade will be converted automatically to a failure. The department may petition the Scholastic Evaluation Committee to make individual exceptions to this rule.

The grading system was adopted by the faculty in order to single out outstanding students who may be encouraged to vie for very competitive post-graduate positions and also to identify students who need extra attention because of weakness in one or more areas. The college feels that students learn for the sake of helping those who are sick or for discovering new knowledge rather than simply for getting grades. Students are encouraged to view grading systems from this perspective.

Procedures have been developed to handle student appeals of academic evaluation. Students who believe that evaluation of their academic progress has been prejudiced or capricious should consult with the Associate Dean for Academic Affairs who will provide the student with the procedural guidelines.

SPECIAL ASSISTANCE TO STUDENTS

In recognition of those students whose educational or social background has been disadvantaged, the college offers various forms of special assistance. Under the guidance of an individual advancement program, it is possible to reduce the number of courses taken and thereby reduce the academic load. This is accomplished by spreading the curriculum of Phase I over three years instead of two. The student must attain the same level of academic achievement as his or her colleague in the regular program but may have longer to do so. Concurrence on the schedule must be obtained from the Associate Dean for Academic Affairs and the Scholastic Evaluation Committee. Tutoring in small groups or on an individual basis is available for any student who may be having academic difficulty.

Class Performance and Promotion — Instructors in each of the courses are responsible for evaluation of the student’s academic performance. Written or oral examinations, personal observations or any other method may be used in making assessments. The student's total performance is reviewed at the end of each quarter by the Scholastic
Evaluation Committee. The committee is charged with the responsibility to decide whether a student should advance, complete additional work, repeat a course or courses or, if work has been unacceptable, to recommend the student be dropped from enrollment.

A complete description of the policies used by the Scholastic Evaluation Committee is contained in a document entitled “Guidelines for Scholastic Evaluation Committee.” Each student is given a copy of the guidelines shortly after matriculation and each is asked to become familiar with the contents. As a brief summary it should be noted that a grade of fail in a course is indication for repetition of the course. Failing performance in three or more courses is usually indication for dismissal.

**Right of Appeal** — If it becomes necessary to discontinue enrollment the student may request review of the situation by an Appeal Board. The Appeal Board, appointed by the Dean, is composed of a minimum of 4 members of the faculty, none of whom were involved in the original recommendation for termination. The Associate Dean for Academic Affairs and the chairman of the Scholastic Evaluation Committee act as non-voting members of the Appeal Board. Care will be taken to give full respect to the rights of students when decisions are made about them.

The Scholastic Evaluation Committee, the Appeal Board and the Faculty Council for Governance have the responsibility and prerogative for determining the fitness of a student to continue in the college. Any student who by quality of work, by conduct or other reason indicates unfitness to enter the practice of medicine may be dismissed from the college.

In cases in which disciplinary action is warranted, procedures relating to student discipline which have been developed will be followed. A detailed account of the procedure is available in the Dean’s Office. The procedures ensure that the rights of students have been carefully protected.

**THE STUDENT BODY AND STUDENT ORGANIZATIONS**

At the present time there are 153 positions in the entering class. The total enrollment numbers approximately 530 students of which 25% are women. The attrition rate is low and is for the most part attributable to illness or loss of motivation rather than academic failure. The college subscribes to the policy that there should be careful selection for admission to minimize attrition.

The student body has representation upon virtually all the planning and governing bodies of the college. Two student members are specified on Standing Committees for Admission, Curriculum and Scholastic Evaluation. It is the policy to include students on all special or ad hoc committees that deal with issues which have an impact upon student life.

**Medical Center Student Senate** — The Medical Center Student Senate governs the organization and regulation of student activities of the College of Medicine, College of Nursing, College of Pharmacy, School of Allied Health Professions, and UNMC students in the Graduate College. It serves as a liaison group between students in the various disciplines and works toward the common goals of students at UNMC. Each college or school elects representatives to serve on the Medical Center Student Senate.
Organization of Student Representative — The OSR, established by action of the Assembly of the American Association of Medical Colleges (AAMC), provides a mechanism for making student opinion known to the AAMC. Students have two votes on the AAMC Executive Council and are recommended to Standing Committees. An elected representative from the University of Nebraska attends the AAMC Annual Meeting and the annual regional meeting of the Group on Student Affairs.

American Medical Student Association (AMSA) — Over twenty thousand medical students in American medical schools are AMSA members. The AMSA chapter of the University of Nebraska College of Medicine is the eighth largest in the country and is one of the most influential. AMSA represents student views concerning health care and delivery and all current medical issues. In addition, AMSA provides a large number of valuable services to its members. For example, members can participate in a four-week preclinical experience called MECO in the summer of their first year. AMSA arranges for freshmen to spend time in the UNH Emergency Room and organizes many noon conferences and films of student interest. At Nebraska, AMSA has been especially influential in developing and establishing community services such as interdisciplinary health teams and health screenings.

Student National Medical Association — The SNMA is a nonprofit corporate association of minority students in pursuit of a medical education. SNMA is dedicated to leadership development, social awareness, service to humanity, and excellence as a physician.

Student Association for Rural Health — SARH was organized by students at the Medical Center to promote interest in health careers in rural areas of Nebraska. Outreach programs to youth in rural areas to encourage consideration of a health career have been developed. The Association also gives support to enrolled students who have expressed interest in rural health care delivery.

Alpha Omega Alpha — A.O.A. is a nonsecret, medical college honorary society. Membership is based upon scholarship and moral qualifications. Elections are limited to those whose scholastic record places them in the upper 25 percent of their class, but the total number of members shall not exceed one-sixth of the total number expected to graduate. The University of Nebraska Chapter was organized November 2, 1914.

Student Research Opportunities

Medical students can acquire research experience during the summer vacation after the first year by pursuing a research elective during the clinical phase of the curriculum. It is recommended that all students consider participation in research activity in order to understand how medical progress is made and to test the potential of incorporating research into their career plans.
1. **RESEARCH PROJECTS**
   Many of the faculty are interested in providing research experiences for medical students. Stipends are available for some research endeavors scheduled during vacation periods. Students may not accept stipends for research if academic credit is being given. For a list of interested faculty and their research interests, as well as information on the availability of stipends and fellowships for work either in the College of Medicine or at other institutions, contact the Curriculum Office. For additional help see the Associate Dean for Research and Development, Wittson Hall, Room 5025.

2. **HONORS PROGRAM**
   Students whose academic performance during the first two years of the medical curriculum places them in high rank as determined by the Scholastic Evaluation and Curriculum Committee will be eligible for the Honors Program. The intent of this program is to encourage highly qualified students to go beyond the standard curriculum by developing a project that will lead to a significant research experience or substantially different clinical competence than that developed in the normal curriculum. Information about this program can be obtained from the Curriculum Office.

An Annual Student Research Forum is sponsored on the campus. Individuals are selected to represent the College at regional and national student research meetings.

**LEAVE OF ABSENCE OR WITHDRAWAL**

Experience suggests that ability to perform satisfactorily in a demanding curriculum such as is the case in medicine can be severely compromised by internal or external forces not clearly understood by the student nor readily under his or her control. In many instances leaving the stressful environment is a suitable way to gain perspective because it provides uninterrupted time to analyze the problem, develop one's own valid solutions, and evaluate their efficacy. Leaves are particularly effective in dealing with problems of motivation. A leave may also be the most effective way of coping with severe financial problems, complicated relations with significant others or health related difficulties. Because it has been found that leaves of absence are almost always very helpful, the process to arrange them is a simple one.

Students are asked to consult with Dr. Binhammer in the Dean’s Office and then make a formal request in writing. Ordinarily a leave of absence is granted for a year or a portion thereof. Under normal circumstances a leave may be extended for more than a year.

Students who feel the necessity to withdraw from enrollment are asked to consult with Dr. Binhammer before taking action.

**REQUIREMENTS FOR GRADUATION**

Requirements for graduation must be met within five years of matriculation into the College of Medicine, except when the Dean determines that a student's course of studies has been interrupted by research experience, illness, disability, or financial exigency, or when an approved
leave of absence has been granted.

The degree of Doctor of Medicine is granted only under the following conditions:
1. The candidate must be at least 21 years of age.
2. Must possess a good moral reputation.
3. Must have pursued the study of medicine for at least two years and must have passed all courses and examinations of the College of Medicine.
4. Must have successfully passed examinations posed by the appropriate committees of the College of Medicine as outlined under the section on Comprehensive Examinations and have passed all departmental examinations.
5. Must have discharged all indebtedness to the University of Nebraska.

The Scholastic Evaluation Committee may select not more than eight students from the top 10 percent of the graduating class and recommend them for the degree of Doctor of Medicine with Distinction.

The Scholastic Evaluation Committee may also select not more than four students from the top 10 percent of the graduating class who have shown outstanding scholarship or who have made an outstanding contribution to medical science and recommend them for the degree of Doctor of Medicine with High Distinction.

APPLICATIONS FOR DEGREE
Each student who expects to receive a diploma must file an application of candidacy for the diploma in the Academic Records Office, Room 3020, Conkling Hall. Announcements concerning deadlines for applications are posted throughout the campus and published in the internal communications journals of the Medical Center.

DEGREE OF BACHELOR OF SCIENCE IN MEDICINE
Students presenting premedical college credits of high standard and who have satisfactorily completed all courses of the first three quarters in medicine, but who have not fulfilled the requirements for the degree of Bachelor of Science or Bachelor of Arts in a College of Arts and Sciences, may become candidates for the degree of Bachelor of Science in Medicine.

COURSES LEADING TO THE DEGREES OF BACHELOR OF ARTS OR BACHELOR OF SCIENCE AND DOCTOR OF MEDICINE
Students who have transferred from the University of Nebraska-Lincoln or Omaha Colleges of Arts and Sciences may earn the Bachelor of Arts degree or Bachelor of Science degree, providing all other requirements have been fulfilled, by using the subjects of the first year of the medical curriculum as a major.

These degrees are conferred at a commencement on the UNL or UNO campus.

Candidates for baccalaureate degrees in other institutions may arrange with their colleges to accept such degrees, or otherwise satisfy the requirements of those institutions.
COMMENCEMENT EXERCISES

Commencement attendance is required for those completing degree requirements in May and December unless explicitly excused by the Dean of the appropriate college concerned. Those graduating at other times will receive diplomas when requirements are fulfilled — but have the privilege of participating in the next formal commencement.

ALUMNI ASSOCIATION

Alumni of the University of Nebraska College of Medicine maintain an active organization with headquarters in Omaha, at the College. Activities include sponsorship of class reunions and social functions at various national meetings attended by graduates of the College of Medicine. The association supports a student loan and scholarship fund and also a library endowment fund. A news bulletin is sent to members every two months.

FEES AND EXPENSES*

All students who are legal residents of Nebraska will pay a quarterly fee of $562. Nonresident students will be charged $1000 per quarter. Tuition is payable quarterly.

The annual fee includes matriculation, registration, library, diploma and course fees. In case of breakage or loss of equipment because of negligence on the part of the student, a penalty charge may be levied.

*Fees and tuition are subject to change without notice.

Fee Refunds — A student who withdraws from the University during any term for which he/she is registered is entitled to claim a refund of the portion of his/her fees. The University's current refund policy is:

- First week .................................................. 100%
- Second week .............................................. 75%
- Third week .................................................. 50%
- Fourth week .................................................. 25%
- Fifth week ................................................... None

MISCELLANEOUS FEES

Special service fees:
- Transcript of grades ........................................ $ 1.00
- Bad Check ................................................... 3.00

Deposits:
- Keys (refundable) ........................................... 1.00
- Pre-registration (applied toward tuition) .............. 50.00

Late fees:
- Late registration ............................................. 5.00
- Late payment of tuition .................................... 10.00
- Reinstatement of cancelled registration ................ 10.00

Other fees:
- Health assessment questionnaire ........................ 5.00
- Replacement of student ID card .......................... 5.00
- Change of class schedule .................................. 5.00
- Student Health Service .................................. Per Quarter 16.50
- Student Senate Fee ......................................... Per Quarter 1.00
Expenses — Apartments can be obtained in the vicinity of the College campus at a cost of approximately $175 per month. Students rooming together will spend less. Four hundred dollars a year should be allowed for books and instruments. The average expense of a resident student for a school year, including board and room, books, instruments (exclusive of microscope and other special equipment), and all fees is about $5,400(9 mo.) or $7,000(12 mo.)

Microscopes — University owned microscopes are available for a small fee for use in the teaching laboratory during scheduled laboratory and study sessions. However, students may find it advantageous to provide their own microscopes for full-time use. If so, the microscope should meet these qualifications: 3 objective including 16mm, 4mm and oil immersion objective; substage condenser and substage lamp or other illuminator, at least 10x oculars and mechanical stage.

Financial Assistance

The University of Nebraska Medical Center has financial aid programs to assist students with unmet financial need. The program operates on the premise that students and parents have a responsibility to meet as much of the educational and related costs as possible. The Medical Center is prepared to supplement family contributions from its aid sources and to assist students in obtaining assistance from outside sources. The University of Nebraska Medical Center Office of Scholarships and Financial Aid administers the financial aid programs.

Application Procedure — All financial aid programs require annual application. Applicants need not apply for a specific scholarship or award as applicants are evaluated in terms of their eligibility for all forms of assistance. Application for aid in which “financial need” is a consideration requires all students and parents to complete a financial statement. Application forms and instructions are mailed automatically to all students accepted for enrollment into Medical Center programs. Financial statements for “need” based programs are forwarded upon request. The deadline for applications and financial statements is March 1. Students receiving acceptances after February 1, are given a 30 day period in which to complete financial aid forms. Official notification of financial aid awards is made as early as possible before the start of each school year.

Types of Aid — There are three basic types of financial aid available through the University of Nebraska Medical Center; scholarships or grants, loans, and student employment on a limited basis. Detailed information about the various sources of financial aid and estimated expenses for all or specific University of Nebraska Medical Center educational programs is available upon request from the Office of Scholarships and Financial Aids, Conkling Hall, University of Nebraska Medical Center, Omaha, Nebraska 68105, telephone (402) 541-4799. Major sponsors of aid sources are summarized below.
University of Nebraska Medical Center and University of Nebraska Foundation Scholarships or Grants and Loans — A number of scholarship, grant, and loan funds are available. Some were established by the University Board of Regents and others made available by private donors. Generally, scholarship or grant awards are $200 to full-tuition and are awarded for one year. Loans up to $2,000 per year can be obtained.

Federal Government Aid Programs — The Medical Center participates in and administers several federal grant and loan programs. Demonstrated “financial need” is the prime eligibility criterion for these programs, therefore, a financial statement must be filed. The federal government also sponsors a program of guaranteed loans primarily made by banks, savings and loan associations, and credit unions. Financial need is not always a criterion for guaranteed loans. The federal government pays the interest for eligible students during school. In addition, various governmental agencies offer educational assistance.

Community and Other Sources — Financial aid is also available from community agencies, foundations, corporations, unions, religious organizations, and civic and cultural groups. Assistance from these sources may be in the form of scholarship or loan.

Nebraska Medical Student Assistance Act — Long Term low interest loans made available by the State to a maximum of 10 medical students yearly who plan practice in a rural area.

Emergency Loan Funds — Loans in small denominations are available on a short-term basis to meet “emergency” needs. Students should contact the Office of Scholarships and Financial Aids when an emergency arises.

STUDENT RESPONSIBILITIES

Affidavit of Educational Purpose — Before receiving any federal funds, each student must sign an Affidavit of Educational Purpose stating funds will be used only for the expenses related to attendance at the Medical Center.

Satisfactory Progress — To receive federal aid students must be making “satisfactory progress” toward their degree according to the standards and practices of the institution.

Continuation of Aid — Students must file a financial statement each year if applying for aid in which “financial need” is a consideration. Students must also apply each year for scholarships which are not based on “need.” Renewal in either case is not automatic. Applications and financial statements must be completed before March 1st for the following academic year.

HEALTH SERVICES FOR STUDENTS

The Student-Employee Health Service is directed by Dr. Gerald
Fleischli, a member of the Department of Family Practice. The health service is designed to provide outpatient care for enrolled students and optionally for their dependents. Routine health care — TB testing, immunizations, diagnosis and treatment of episodic illness — is provided in attractive surroundings by physicians associated with the health service. Participation is dependent upon payment of tuition and the student health service fee.

If specialized care is deemed necessary students will be referred to consultant specialists without additional charge.

Since costs of hospitalization and inpatient care are not covered for students or dependents, students are urged to obtain suitable health insurance. A policy is available through the Student Services Office.

Students accepted to the class entering in September, 1980, will be asked to complete a Life Style Assessment Questionnaire as a substitute for a formerly required physical examination. The questionnaire will be included in the pre-enrollment package and should be sent back a month before registration.

RESIDENCY — Applicants or enrolled students may be asked to certify their residency. The qualifications used in assessing residency are set forth in an enactment of the 1980 Legislature (Sec. 85-502) which is effective after July 19, 1980, as follows:

85-502. A person shall not be deemed to have established a residence in this state, for the purpose of sections 85-502 to 85-504, unless:

1. Such person is of legal age or is an emancipated minor and shall have established a home in Nebraska where he or she is habitually present for a minimum period of one hundred eighty days, with the bona fide intention of making this state his or her permanent residence, supported by documentary proof;

2. The parents, parent, or guardian having custody of a minor registering in the educational institution shall have established a home in Nebraska where such parents, parent, or guardian is habitually present with the bona fide intention of such parents, parent, or guardian to make this state their, his, or her permanent residence, supported by documentary proof; Provided, that if a person has matriculated in any state education institution while his or her parents, parent, or guardian has an established home in this state, and the parents, parent, or guardian leave the state, such person shall not lose his or her resident status by reason of such parents, parent, or guardian having ceased to reside in this state if such person has the bona fide intention to make this state his or her permanent residence, supported by documentary proof;

3. Such person is of legal age and is a dependent for federal income tax purposes of a parent or former guardian, who shall have established a home in Nebraska where he or she is habitually present with the bona fide intention of making this state his or her permanent residence, supported by documentary proof;

4. Such person is a nonresident of this state prior to marriage, and marries a person who has established a home in Nebraska where he or she is habitually present with the bona fide intention of making this state his or her permanent residence, supported by documentary proof;
5. Such person, if an alien, shall have established a home in Nebraska for a period of at least two years where he or she is habitually present with the bona fide intention to become a permanent resident alien of the United States and make this state his or her permanent residence, supported by documentary proof;

6. Such person is a dependent of a staff member of the University of Nebraska, one of the Nebraska state colleges, or one of the technical community college areas who joins the staff immediately prior to the beginning of term from an out-of-state location;

7. Such person is on active duty with the armed services of the United States and has been assigned a permanent duty station in Nebraska, or is a legal dependent of a person on active duty with the armed services of the United States assigned a permanent duty station in Nebraska; or

8. Such person is a graduate of a high school of this state or has been previously registered in a state educational institution at a time when he or she was a resident of this state.
DEPARTMENTS AND COURSES

COURSES OF INSTRUCTION

In the following departments, courses number 500 through 699 are basic science and transitional courses. Courses number 700 through 799 are clinical medicine courses. "Su" indicates courses offered during the summer quarter; "F" courses offered in the fall quarter; "W" courses offered in the winter quarter; and "Sp" courses offered in the spring quarter.

See the Bulletin of the Graduate College for details concerning advanced degree programs.

ANATOMY

Professors W. Metcalf (Chairman), Gardner (Vice-Chairman), Sharp, Holyoke, Hard (Emeritus), Latta (Emeritus); Associate Professors Bach, Blake, Earle, N. Metcalf; Assistant Professors Crouse, Pereira, Prentice, Todd, Stinson, Rodriguez-Sierra.

In this department instruction is given in all phases of human morphology, including gross, microscopic, embryological and neurological anatomy.

Every effort is made to correlate the teaching with related basic and clinical fields in order to establish the relevance of morphological studies in the solving of problems of clinical medicine. The basic courses are established as core courses presenting fundamentals of universal importance. Opportunity is provided for additional study in depth through a selection of elective courses.

ANATOMY — 04

510 Human Gross Anatomy I (5 q hr cr) Stinson (810G)
The course covers the dissection of the upper extremity and head and neck.

511 Histology I (2 q hr cr) Gardner (811G)
A study of cells and fundamental tissues with the light microscope. Ultrastructure is also emphasized.

512 Neuroanatomy (3 q hr cr) Earle (812G)
This course provides a study of the neuronal organization of the nervous system and how the inter-neuronal relationships serve as a basis to explain the function of the sensory and motor systems. The medical aspects of the structural and functional organization is demonstrated from clinical case material.

513 Human Embryology I (2 q hr cr) Metcalf (813G)
A course specially designed to meet the needs of medical and paramedical students destined for clinical practice. Only those features of morphological embryology which are of clinical importance will be stressed. It includes embryogenesis, placentation and development of the nervous system.

520 Human Gross Anatomy II (4 q hr cr) Stinson (820G)
A dissection of the torso and lower extremity. (A continuation of Human Gross Anatomy I)

521 Histology II (4 q hr cr) Gardner (821G)
A continuation of Histology I involving the study of organ systems.

523 Human Embryology II (2 q hr cr) Metcalf (823G)
A continuation of Human Embryology I involving a study of the morphogenesis of organ systems.

19-540 Clinical Medicine/Living Anatomy (2 q hr cr) Metcalf
An introduction to Physical Examination correlating dissecting room anatomy with the anatomy of the living.

19-542 Clinical Medicine/Living Anatomy (2 q hr cr) Metcalf
A continuation of 540.

ELECTIVES —

NOTE: Prerequisite for all elective courses is by permission.

Special Studies in Anatomy, Staff
Students are offered the opportunity to pursue studies in the various fields indicated in depth beyond that given in the basic courses. The work will consist of lectures, demon-
strations, designed readings or laboratory work, depending on the nature of the material and the hours of registration. Full credit indicated can be achieved by re-registration in a course should a student elect to do so. Students should contact the Chairman of the Department for information relative to arranging for any of these courses.

530 Cross Sectional Anatomy — (2 q h cr) Spring Quarter (Stinson)
612 Electron Microscopy — Spring Quarter (Gardner)
616 Hematology — Spring Quarter (Sharp)
620 Embryology — Spring Quarter (N. Metcalf)
621 Teratology — Spring Quarter (Staff)
622 Neuroanatomy — Spring Quarter (Earle)

Applied Anatomy (1-5 q h cr) Metcalf, Staff
Demonstrations, dissections, and lectures covering the gross, topographical and surgical aspects of human anatomy. Special emphasis will be placed on clinical applications.

626 Extremities
628 Thorax
629 Head and Neck
630 Topographic Anatomy
632 Pelvis and Perineum
690 Research in Anatomy, Staff
Prereq: Arrangement with departmental staff
Work can be carried out in any of the subdivisions of Anatomy.

732 Basic Science Clerkship (6 q h cr) Staff

ANESTHESIOLOGY


The curriculum in Anesthesiology aims to introduce the student to the broad aspects of anesthesiology, management of the comatose patient, and the problems of the perioperative period.

We hope to accomplish this by giving them a better understanding of applied respiratory physiology, teaching respiratory and circulatory resuscitation, recognition and management of patients with acute and chronic respiratory problems. The student will have the opportunity to handle acute problems and make rapid decisions under supervision.

Courses of study involve familiarizing the student with some anesthetic agents and adjuvant drugs, thus adding to this understanding of clinical pharmacology and making him aware of the problems involved in evaluating and preparing a patient for the physiologic and psychological changes associated with the perioperative period.

ANESTHESIA—06
INTERDEPARTMENTAL

19-642 Clinical Medicine III
Seminar and laboratory course during second year designed to provide an understanding of some of the common causes and mechanisms of sudden death, and to learn skills in an effective approach to resuscitation and life support.

ELECTIVES

720 Anesthesia Clerkship (4 or 8 weeks)
Opportunity to gain an understanding of preoperative evaluation and preparation of patients for anesthesia and operation, clinical pharmacology of adjunctive drugs and anesthetic agents, respiratory physiology, principles of resuscitation, care of the unconscious patient, inhalation therapy, and approach to the control of pain.

725 Intensive Care Clerkship (Seniors only) (each 4 weeks)
Prereq: Anesthesia Clerkship 720
Opportunity to gain an understanding of and experience in the application of life support measures for patients requiring ventilatory and circulatory assistance outside the operating room.
**760 Off Campus Anesthesiology (Each 4-8 weeks)**
Arrangements in other medical centers can be made for extra-ordinary learning experiences not readily available without our assets. Department of Anesthesia faculty will be pleased to work with the student interested in an extramural clerkship when credit for this clerkship is desired.

**772 Anesthesiology Residency**
A three- to four-year educational program with gradually increasing responsibility. The trainee develops skills and knowledge in the pharmacology of anesthetic agents, the administration of regional and general anesthesia, and the preoperative and postoperative care of patients. The resident also receives training in intensive care and inhalation therapy. In keeping with the career goals of the trainee, special programs in subspecialty areas and research methods are available.

**799 Research in Anesthesia (By arrangement)**
Opportunity to select an area of interest from the aims of Anesthesia clerkship for more intense study. Definition of problems and program of learning to be decided upon discussion with faculty. Limit by arrangement.

**ANESTHESIA GENERAL EXERCISES—**

- **Anesthesia Case Reports** (Every Wednesday—7-8 a.m.)
- **Anesthesia Residents Seminars** (Every Thursday—7-8 a.m.)
- **Basic Science Review** (Every Saturday-8:30-10 a.m., September-June)
- **Preoperative Conference** (Monday, Tuesday, Friday-7-7:30 a.m. Wednesday, Thursday—8-8:30 a.m.)

**BIOCHEMISTRY**

Professors Reugamer (Chairman), Bark, Barker, Carver, Clayson, Copenhaver, Harman, R. Ramaley, Ryan, Schaefer, and Tobin; Associate Professors Cavalieri, Cook, Davis (Emeritus), Goldsmith, Heidrick, Hofert, Johnson, Mahowald, Mirvish, Phares, and Smith; Assistant Professors Curtis, Murthy, Schneider, Siegfried, Tuma, and Whelly.

In addition to a curriculum of required and elective courses for medical students, the department also offers (1) graduate-level courses (800-99 series) each quarter to graduate students working for a M.S. or Ph.D. degree in Biochemistry or related disciplines and (2) courses in basic biochemistry that are tailored to fit the needs of students in the Physical Therapy Education Program (305), the Physician’s Assistant Program (308) and the College of Nursing (315).

**BIOCHEMISTRY—08**

**305 Physical Therapy Education Biochemistry** (1 q hr, F) Ruegamer
This is a survey course in which the basic concepts of protein carbohydrate and lipid metabolism are presented. The mechanisms for energy production and metabolic control are also studied from a conceptual viewpoint.

**308 Physician’s Assistant Biochemistry** (6 q hr, F, W) Goldsmith and Staff
This course covers the fundamental aspects of cellular biochemistry. The major areas of carbohydrate, protein, lipid, amino acid and nucleic acid chemistry and metabolism are covered. In addition, protein synthesis and genetic control, biological oxidation and enzyme chemistry and kinetics are studied. Nutrition and biochemical endocrinology are also surveyed.

**315 Biochemistry** (3 s hr, F) Cook and Heidrick
A one semester course offered primarily for students in the College of Nursing covering the fundamentals of intracellular environment, enzymes, energy, metabolism (carbohydrate, lipid, nucleic acid, amino acid, and protein), transport, regulation and special selected topics including the biochemical aspects of parenteral feeding, detoxification, blood, immunology and connective tissue.

**315 Biochemistry** (3 s hr, F) Ruegamer
This is a one semester course offered to nursing students on the Lincoln Campus. It covers essentially the same basic subject areas as those listed under 315 except that the lectures are presented on 32 fifty minute video tapes. A syllabus which was especially written for use with the tapes is available.

**510 Cellular Biochemistry** (6 q hr graduate cr, F) Ruegamer and Staff (810G)
This course includes all the fundamental aspects of cellular biochemistry through basic intermediary metabolism. The chemistry and metabolism of carbohydrate, protein, lipid, amino acid and nucleic acid are covered. In addition, protein synthesis and genetic con-

41
trol, radioisotope theory and application, biological oxidations, and enzyme chemistry and kinetics are studied. Demonstrations and conferences are included as part of the course.

511 Systems Biochemistry (4 q h graduate cr, W) Ruegamer and Staff (811G)
Prereq: 510/810 or its equivalent
Three major subject areas are included in this course. The first, special tissue metabolism, is concerned with connective tissue, blood, nerve, bone and teeth, and acid-base balance. The second subject area deals with the biochemistry of the endocrine system and the third area is a comprehensive treatment of nutrition.

513 Laboratory Techniques (credit and time by arrangement) Staff
The student spends a minimum of one afternoon each week in the research laboratories of faculty members, learning the principles and application of selected techniques to the study of problems in biochemistry.

596 Research Projects (credit and time by arrangement) Staff
The student may choose from a variety of research projects dictated by individual faculty members. The student helps to plan the project, learns to perform the techniques and methods needed, collects the data, and helps to summarize and interpret the results.

Series of Advanced Topics in Biochemistry (5 q h cr per subdivision except Special Topics, see below)
Prereq: Biochem. 510/810 — available to all students with permission of the instructor.
The subdivisions below constitute a comprehensive and advanced coverage of the chemistry and intermediary metabolism involved in the major areas of biochemistry.

720 Enzymes—Mahowald and Staff (920G)
722 Carbohydrates—Hofer! and Staff (922G)
724 Proteins—Ramaley and Staff (924G)
726 Nucleic Acids—Baker and Staff (926G)
728 Endocrine and Cellular Regulation—Hofer! and Staff (928G)
730 Lipids—Goldsmith and Staff (930G)
740 Special Topics (1-5 q h graduate credit) Staff

DERMATOLOGY

Professors Fusaro (Chairman), Crotty; Associate Professors Johnson, Koh; Instructors Colantoni, Fonda, Fredrickson, Luckasen, Papenfuss, Regan, Rohrer, Strnot, Till.
Instruction in dermatology is provided through lectures, self-instructional material, and clinical experience in University Hospital and its affiliated hospitals under the supervision of attending dermatologists. The educational objective is to provide the student with basic diagnostic and therapeutic skills for the care of patients with common dermatologic disease.

DERMATOLOGY—16

720 Dermatology Outpatient Department Senior Clerkship
Period Offered: 4 weeks
Student Limit: 2
Each student will be assigned to a resident and will follow patients for a month period during which time he will be supervised by the staff in dermatologic interview, physical diagnosis, topical therapy, and cutaneous therapeutic procedures (skin biopsy, cautery, cryotherapy, etc.).

722 Omaha Dermatologist Clerkship
Period Offered: 4 weeks
Student Limit: 1
This is a full-time elective with one of several of the part-time dermatologic staff who take one student per month in their private offices. Approval based on availability of periods and student interview.

760 Off-Campus Elective United States and/or Europe (4 or 8 weeks)
A student may take their elective at another university dermatology training center within the United States or at an approved foreign facility. Options must be endorsed on an individual basis by the department chairman. Time required for processing is minimum of two months.
The first year consists of inpatient clinical services at University Hospital and the Omaha Veterans Administration Hospital. Second-year house officers are supervised in their care by full-time staff. Outpatient dermatology clinics are also part of the rotation and are at the University of Nebraska Medical Center, Creighton University-St. Joseph Hospital Dermatology Clinic, and the Omaha Veterans Administration Hospital. Staff supervision on the clinical service is very intense. There are weekly University of Nebraska Medical Center seminars in dermatopathology, current literature, grand rounds, basic sciences and clinical disease, and book review in classic dermatologic literature.

The second year consists of outpatient dermatology clinics at the Omaha Veterans Administration Hospital, Creighton-St. Joseph Hospital and Creighton University Health Care facilities. Inpatient service is at St. Joseph Hospital. Staff supervision on the clinical service stresses one-to-one teaching. Attendance at weekly University of Nebraska Medical Center seminars is required.

During the last year senior residents' duties consist of outpatient dermatology clinics with minimal staff supervision at Ehrling Bergquist SAC Hospital and the University of Nebraska Medical Center Hospital. Inpatient consultation with staff supervision at University of Nebraska Medical Center Hospital and Creighton University-St. Joseph Hospital. Attendance at weekly University of Nebraska Medical Center seminars is required.

The objective of this Department is to prepare the student to carry out his or her function as a leader and coordinator of the health care team as he or she provides access to the health system and assumes continuing responsibility for management of the student's patients over a long period of time. More specifically, the program is designed to do the following:

1. Provide a stimulating experience in a model of family practice which will infuse the student with a philosophy of family practice and an understanding of the role of the family physician.

2. Help the student acquire excellent skills in diagnosis, treatment, and management of patients and technical procedures appropriate for family practice.

3. Help the student acquire the knowledge and appropriate depth in various fields of medicine encompassed by family practice.

4. Provide opportunity for the student to develop mature clinical judgment and appreciation of the limitation of his or her competence.

5. Provide understanding of research and methodology in problems relating to the delivery of health services.
6. Encourage student to develop life-long habits of learning and an understanding of the role of continuing education in maintaining professional excellence.

FAMILY PRACTICE—18

512 Principles of Primary Care (3 q h cr, Sp)
This course introduces the student to the following basic components of primary care: Importance of family interacting in treatment, health care teams, patient participation, business and finance aspects, prevention, a consultant, and use of community resources.

604 Epidemiology (1 hr weekly, F) Patil
Introduction to statistical analysis, community health, occupational and environmental health, and economics of health care.

616 Clinical Continuity Experience (1 q h cr, Sp)
A required course for second year students. This course is designed to allow students to observe a small number of patients over several months time.

705 Community Preceptorship (8 weeks required in 1981)
This is a clerkship with a solo, dual or group practice in which the student is afforded the opportunity of observing a local community and its interrelationships with the practice of medicine in that community.
Prereq: Completion of three basic clerkships.

720 Family Health Center-University Hospital Clerkship
A clinical experience in the Family Practice Clinic of the University Hospital involving physical examinations and treatment of acute illness and trauma. Limit 2.

721 Family Health Center-Dodge Street Clerkship
A clinical experience at the University satellite clinic located at 3610 Dodge Street. Covers all clinical areas. Full-time and volunteer faculty. Limit 2.

722 Family Health Center-South Omaha Clerkship
A clinical experience at the University satellite clinic located at 5211 South 31st Street. Covers all clinical areas. Full-time and volunteer faculty. Limit 2.

727 Inpatient Service
Periods Offered: Each 4 weeks
Student Limit: 1-2 (3rd or 4th year students only)
Quarter Hours: 6
Students are given externship responsibilities commensurate with experience under the direct supervision of the Family Practice inpatient resident, chief resident and inpatient attending physician. The inpatient service admits patients from the three Family Practice clinics, from the ER or Family Practice referral patients from outstate Nebraska.

728 Family Practice Clerkship—Nebraska Methodist Hospital
A clinical experience, both inpatient and outpatient, on the Family Practice service. Average monthly census of patients per volunteer faculty is 25. Particularly recommended for early clinical experience. This course will not fulfill the outpatient medical requirement.

730 Family Practice Clerkship—Lincoln General Hospital
A clinical experience, both inpatient and outpatient, on the Family Practice service. Average monthly census of patients per volunteer faculty member is 25. Limit 2.

732 Community Emergency Room—Methodist Hospital
This is an experience at the Methodist Hospital and will show the operation of a community emergency room in a large community by full-time staff who are also volunteer faculty of the College of Medicine.

733 Community Emergency Room—Lutheran Hospital
Same as 18-732 except for location. Limit 1.

734 Community Emergency Room—Immanuel Hospital
Same as 18-732 except for location. Limit 2.

735 Community Emergency Room—Lincoln General Hospital
Same as 18-732 except for location. Limit 1.
740 Evaluation of Health Care, Fleischli, Staff
Periods Offered: Each 4 weeks, or each quarter when requested by 5 students.
Student Limit: 12.
Quarter Hours: 3.
This course will consider a variety of methods to evaluate health care, along with the reasons that evaluation is becoming more critical. Didactic sessions covering patient care will be intermingled with laboratory exercises giving students the opportunity to actually review selected medical records.

742 Elective in Occupational Health
This course is offered in conjunction with the occupational health unit at the Omaha plant of Western Electric Company. Experience includes observation of and participation in the outpatient clinic and industrial hygiene team activities at the plant. Outpatient activities include care of employment related illness and surveillance of employee health. Discussions and self-study will include surveillance strategies, appropriate handling of compensation cases and reduction of environmental risks. Limit 2.

744 Pilot Course in Agricultural Medicine
This course is a pilot course being offered in conjunction with the University of Nebraska College of Agriculture in Lincoln. Experience includes lecture and self-study in identification toxic exposures, zoonoses, accidents, allergic disorders, and health care delivery problems common in medical practice in agricultural communities. Experience also includes a "hands on" experience in a community health program. Limit 10.

750 Computer Aided Instruction (CA), Fleischli (3 q h cr)
Periods Offered: Each quarter.
Student Limit: 10.
This elective will briefly orient the student to the use of a computer terminal, to the theories behind CAI, and to the use of the computer in the student's own education and future practice. With the use of the educational computer programs of Ohio State University and Massachusetts General Hospital (Boston), the student will experiment with various forms of CAI. With the experience gained during this course, it is hoped that the student will continue to use the computer terminals of UNMC during the rest of his/her medical education. This elective will utilize free time periods and will not conflict with regularly scheduled classes.

760 Private Practice Office Clerkship
This clerkship offers a chance to participate in and observe private practice in family physicians' offices in Omaha.

761 Family Practice Off-Campus Elective
This clerkship offers a chance to participate in and observe an off-campus elective in an out-of-state locale of the student's choice.

762 Migratory Health (May, June, and July)
The student will participate in the Nebraska Migrant Health Project in Gering, Nebraska as a member of the health team in the Family Practice Clinics and other activities. Limit 1.

763 Off-Campus Elective in Community Health, Fleischli, Patil, Starr
Periods Offered: Each 4 weeks.
Student Limit: 3 (by arrangement)
Quarter Hours: 1-9 (by arrangement)
This elective is to enable students to obtain credit for educational experiences related to community health which are off-campus. Students traveling in foreign countries who are interested in studying other health work, occupational medicine, or medical computing are those for whom it is intended. There is also the capability to secure experience in health maintenance through injury and environment control, health fitness testing, and athletic medicine.

766 Community Health Care (MECO)
Medical Education Community Orientation Project is sponsored and arranged by the American Medical Student Association for pre-clinical medical students.

772 Family Practice Core Residency
This full-time three-year program of clinical assignments plus seminars and conferences has been designed to prepare the physician to meet the demand for a single, competent primary physician for the entire family. The program is flexible enough to allow the physician to elect assignments based on his interest and needs. Specific assignments include one-half day per week in each of the three Family Health Centers (University Hospital, Dodge Street and South Omaha) and a four-month experience in one of the outstate Nebraska community hospitals affiliated with the Medical Center.
Research Project in Family Practice
The student may select a project in which they are particularly interested and with the approval of the faculty, may pursue this project intensively for four weeks. Such projects might be concerning with the delivery of health care or with the value of screening procedures. Faculty advice will be given, and the research project will be structured.

Family Practice Fellowship
During this year long advanced program, the physician will continue his residency training on a half-time basis. He will also assume half-time responsibilities in the department's teaching activities with faculty status of Instructor. Open to physicians who have completed a three-year residency in an accredited program or are diplomates of the American Board.
INTERDEPARTMENTAL

518 Human Genetics (s), Eisen, Staff (1 q h cr, Sp)
Current principles and concepts of human genetics are discussed. Examples of gene and chromosome disorders, their mechanisms, and possible etiologies are presented. Stress is placed upon an integration of both basic science and clinical points of view. Particular emphasis is placed upon the subject of current status and implications of in utero detection of genetically abnormal fetuses. Procedures of genetic counseling are discussed throughout. This course, or its equivalent, is required for the elective coordinated laboratory course in Human Cytogenetics.

540 Clinical Medicine I—Living Anatomy (2 q h cr, F)
Introduction to Physical Diagnosis, sequentially correlated with Gross Anatomy and supplemented with a weekly Clinical Pathologic lecture.

542 Clinical Medicine II—Living Anatomy (2 q h cr, W)
See 540.

620 Perspectives in Aging (1 q h cr, F) Grissom, Staff

642 Clinical Medicine III—(F, 2nd year)
Life Support Clinical Practicum and other small group practice rotation.

644 Clinical Medicine IV and V—Basic Physical Diagnosis (W, Sp, 2nd year)
Basic Physical Diagnosis instruction and practice. Lecture correlations, small group discussion and individual practice and assessment. The end point is thorough and reliable performance of a normal physical examination with accurate description of differences from that norm.

INTERNAL MEDICINE


MEDICAL SERVICES

Hospital, University of Nebraska, Chief, Michael F. Sorrell
Hospital, Veterans Administration, Chief, Robert Ecklund
Hospital, Bishop Clarkson Memorial, Chief, George Loomis
Hospital, Immanuel Medical Center, Chief, Jack Lewis
Hospital, Nebraska Methodist, Chief, John Sage
Hospital, Bryan Memorial, Chief, Jack Stemper
Hospital, Lincoln General, Chief, D. F. Purvis
Hospital, University Medicine Clinics, Chief, Michael F. Sorrell
Research, Chief, Michael F. Sorrell
Section of Cardiology, Head, David McCall
Section of Clinical Nutrition, Head, Robert E. Hodges
Section of Diabetes, Endocrinology and Metabolism, Head, Joseph C. Shipp
Section of Digestive Diseases and Nutrition, Head, Frederick Paustian
Section of General Medicine, Head, LeeRoy Meyer
Section of Biomedical Gerontology, Head, Denham Harman
Section of Hematology, Head, Richard B. Davis
Section of Infectious Disease, Head, J. C. Davis III
Section of Oncology, Head, Henry Lemon
Section of Pulmonary Medicine, Acting Head, Louis Burgher
Section of Renology, Acting Head, Frederick Ware
Section of Rheumatology, Acting Head, Gerald Moore
It is the aim of instruction in Internal Medicine to establish a broad and thorough understanding of patients with disease and to develop a scholarly approach to the study of medical problems. Intensive study by each student of relatively fewer patients is emphasized rather than superficial observation of many patients. The student studies health as well as disease and early phases as well as late stages of disease. Small group conferences (four to six students) are utilized, with each member of the group participating. Time is allowed in each weekly program for reading, research, and other independent pursuits for the purpose of establishing habits for self-development that will persist for life.

INTERNAL MEDICINE—20

705 Required Medicine Clerkship, Staff
   Periods Offered: Each 8 weeks
   Student Limit: 26-30
   Quarter Hours: 12
The student is an integral member of the health care team responsible for the care of inpatients on the Internal Medicine service at one of the three hospitals (University Medical Center, Omaha Veteran's Administration Hospital, or St. Elizabeth's Hospital, Lincoln). As a team member the student will perform thorough history and physical examinations, assess the patient's problems, and plan diagnostic and therapeutic programs. Students will be expected to assume responsibility for the daily care of their patients commensurate with their level of training. Skills in patient interaction, decision-making and performance of routine procedures will be emphasized. The fundamentals of Internal Medicine will be reviewed in formal sessions and through daily patient contact. Several of the weekly Internal Medicine conferences are designed for student participation.

708 Ambulatory Medicine Clinics, Staff
   Periods Offered: Each 4 weeks
   Student Limit: 3
   Quarter Hours: 6
The student will be part of the team including house officers, faculty, nursing staff, dietetic staff, social service staff, which focuses upon the ambulatory patient and gives attention to both the healthy person and to the early detection and treatment of disease. Students will select and rotate through a variety of University-based clinics, including medicine clinic, with scheduling to be handled by the Department of Internal Medicine. Supplemental reading and/or research in ambulatory health care topics will be required. This clerkship can include scheduled time in the University Hospital Emergency Room.

710 Diagnostic Clinic, Staff
   Periods Offered: Each 4 weeks
   Student Limit: 3
   Quarter Hours: 6
The Diagnostic Clinic enables the senior student, in the ambulatory setting, to gain experience in the evaluation of patients with Internal Medicine problems. Initially, a complete History and Physical is done by the senior. He then formulates the problems and plans. These are then evaluated by a senior medicine house officer. Modern methods are used in collecting the Data Base and the History and Physicals are dictated. The student then sees the patients as frequently as necessary while he is on the service. If hospitalization should become necessary, the student will serve as the primary physician to that patient in the hospital. At the end of each day, all patients are presented to the staff physician for his evaluation and comments.

715 Inpatient Clerkship, Loomis, Lehnhoff, Ware, Stone (Clarkson)
   Periods Offered: Each 4 weeks
   Student Limit: 5
   Quarter Hours: 6-12
   Offered for four or eight weeks as an inpatient general internal medicine experience. Students electing eight weeks will have preference.

716 Inpatient Clerkship, Lewis and Watson (Immanuel and/or Methodist)
   Periods Offered: Each 4 weeks
   Student Limit: 2 (By arrangement)
   Quarter Hours: 6
   Same as 715 except for location.
717  **Inpatient Clerkship, MICU (OVAH)**
Periods Offered: Each 4 weeks  
Student Limit: 1  
Quarter Hours: 6  
This clerkship offers opportunity for participation in the management of acutely ill patients, working closely with the intensive care unit and with supervision by resident and attending physician. The experience is enhanced because of frequent consultations with specialty services. The student is also encouraged to participate in the regularly scheduled educational activities at the OVAH.

718  **Inpatient Clerkship, Inpatient Consultations (OVAH)**
Periods Offered: Each 4 weeks  
Student Limit: 1  
Quarter Hours: 6  
On this service the student has the opportunity to see and perform initial consultations on all patients on nonmedical services for whom an internal medicine or certain subspecialty consultations are requested. The activity is closely supervised by the chief medical resident and attending physician appropriate to the problems identified. The student is encouraged to participate in the regularly scheduled educational activities at the OVAH as well. Because of the diverse nature of the problems identified and requiring resolution, the student has the opportunity for officially attaching himself to subspecialty services and participating in teaching activities of those services.

719  **Inpatient Diabetes and Endocrinology, Stone (Clarkson)**
Periods Offered: Each 4 weeks  
Student Limit: 3  
Quarter Hours: 6  
Prereq: 20-705  
This elective is designed to offer a careful study of a wide variety of endocrine disease. Active participation in the primary care service and in the consultation service at Clarkson Hospital is the primary function. The activities include daily rounds at Clarkson Hospital with teaching both on rounds and at formal and informal sessions. The emphasis is on the following conditions: diabetes mellitus and all its complications, hypoglycemic states, thyroid disease, parathyroid disease, and diseases of the adrenal cortex. The main emphasis is upon the recognition and treatment of these conditions. There is an ample supply of patient material from whom the student can learn.

720  **Adult Cardiology — OVAH, Buell and Staff**
Periods Offered: Each 4 weeks  
Student Limit: 2  
Quarter Hours: 6  
This is a combined clinical cardiology rotation involving both students and staff from Creighton University and University of Nebraska. The V.A. cardiology service is a consultation service involving evaluation of inpatients plus outpatients in the Cardiology Clinic. Staffing consists of faculty members from both schools. House officers rotate from both University of Nebraska and Creighton medicine and cardiology departments. Reading electrocardiograms is an important part of the clerkship in addition to observing treadmill exercise testing, echocardiography, vectorcardiography, phonocardiography, pulse displacement, and cardiac catheterizations. Weekly conferences and teaching rounds are available. Students also have the opportunity to attend scheduled cardiology lectures offered at either school.

721  **Adult Cardiology, McCall, Staff (UNH, OVAH)**
Periods Offered: Each 4 or 8 weeks  
Student Limit: 6  
Quarter Hours: 6  
An elective which combines hemodynamics, electrocardiography, phonocardiography, inpatient and outpatient experiences.

722  **General Medicine, Meyer, Staff**
Periods Offered: Each 4 weeks (September-March)  
Student Limit: 12  
Quarter Hours: 6  
In the period of one month, this elective will review basic concepts in Internal Medicine, uncommon diseases, and problem solving.
723 Diabetes, Endocrinology and Metabolism, Shipp, Staff  
Periods Offered: Each 4 or 8 weeks  
Student Limit: 3  
Quarter Hours: 6  
Each student will have direct management responsibility for care of inpatients on the Diabetes, Endocrine and Metabolism Service under the supervision of a senior house officer and the staff. Particular emphasis will be placed on the diagnosis and treatment of those endocrine disorders encountered with the greatest frequency in the practice of medicine, specifically, diabetes mellitus and thyroid diseases. There will be adequate opportunity to acquire a working understanding of the complex diagnostic approaches for the less common endocrine disorders (adrenal, pituitary and others). Students who elect an eight week rotation will have increasing responsibility for primary patient care and the opportunity to pursue special projects of a clinical or investigative nature.

724 Gastroenterology, Paustian, Staff (UNH, BCMH, OVAH)  
Periods Offered: Each 4 or 8 weeks  
Student Limit: 3  
Quarter Hours: 6-12  
This elective in digestive diseases and nutrition emphasizes the application and correlation of the basic science principles of physiology, pharmacology, biochemistry, and pathologic anatomy in clinical gastroenterology. There will be one position available on each of the services.

725 Hematology, R. B. Davis, Staff  
Periods Offered: Each 4 or 8 weeks  
Student Limit: 3  
Quarter Hours: 6-12  
The Hematology Division offers a broad program of training in the Department of Internal Medicine, Pediatrics and Pathology, with emphasis on new concepts in the management of hematologic problems. Patient care serves as a basis for teaching the principles of diagnosis and management of the anemias, leukemia, hemorrhagic disorders and disorders of Immunology. Patients are seen in the University Hospital, Omaha Veterans Hospital, and the Clarkson Hospital. Consultations are answered from general internal medicine and other subspecialties and patients are seen in the adult and pediatrics-hematology outpatient clinics. Teaching in a more structured manner is one in weekly blood morphology demonstrations and in the Blood Club, in which a variety of hematologic subjects are discussed. Students who elect Hematology have ample opportunities for reading and a research opportunity can be provided for the interested student by special arrangement.

726 Infectious Disease, J. C. Davis, Staff  
Quarter Hours: 6  
By arrangement only.

727 Renal, Loomis, Ware (Clarkson); OVAH  
Periods Offered: Each 4 weeks  
Student Limit: 3  
Quarter Hours: 6  
Experience with patients having acute and chronic renal disease, experience in hemodialysis and peritoneal dialysis, contact with kidney transplant patients.

728 Metabolism, Tobin, Associates  
By special arrangement.

729 Medical Electronics, Staff  
Periods Offered: Each 4 or 8 weeks  
Student Limit: 8  
Quarter Hours: 6  
Solid state transistor theory combined with laboratory applications of practical circuits and instrumentation.

730 Oncology, Lemon, Staff  
Periods Offered: Each 4 or 8 weeks  
Student Limit: 4  
Quarter Hours: 6-12  
Medicine, Radiotherapy and Surgery inpatient and outpatient experience. Clinical training in cancer prevention, early detection, carcinogenesis, cell biology, clinical pharmacology of hormones and anti-cancer agents, paraneoplastic syndromes, and kinetics of cell growth is offered. Experience includes daily ward rounds, seminars twice weekly. Research experience in cell biology and tissue culture, experimental carcinogenesis, biochemistry of estrogens, experimental chemotherapy and cancer genetics and epidemiology is available on a part of full-time basis (with salary if taken during vacation time). Combined conference with radiation therapy every Monday morning.
731 Psychosomatic Medicine, General Internal Medicine, Inpatient, Ward (Clarkson)

Periods Offered: Each 4 weeks
Student Limit: 4
Quarter Hours: 6
Training in the principles of neurophysiology in relation to the psycho-physiologic reactions with emphasis on the management of patients with psycho-physiologic illnesses. Students and house officers are offered bedside training in the diagnosis and management of many of the chronic and acute diseases which must be managed by practicing internists as well as by those in the academic practice of internal medicine. Experience is also gained by instruction in doing the common procedures.

732 Clinical and Didactic Introduction to Pulmonary, Kass, Staff

Periods Offered: Each 4 or 8 weeks
Student Limit: 4
The Pulmonary Division offers an elective designed to provide the student with a practical background in Pulmonary Medicine. The student will be assigned to either University Pulmonary Service or the Clarkson Pulmonary Service for training in patient management. All students electing the course will attend the didactic lectures in chest diseases, presented three times each week at the University Hospital, during the rotation. Those students assigned to the University Pulmonary Service will also have the opportunity of participating in outpatient management of chest diseases twice weekly. In addition to the didactic lectures, the student will also attend two clinical chest conferences and a seminar on interpretation of chest radiographic patterns each week. The course includes practical experience in the performance and interpretation of basic pulmonary function tests.

733 Clinical and Intensive Cardiac Care, Miles (BCMH)

Periods Offered: Each 4 weeks
Student Limit: 2
Quarter Hours: 6
Clinical cardiac experience including cardiac catheterization, electrocardiology, post-operative care, and inpatient evaluation.

734 Advanced Internal Medicine Seminar Course, Staff

Especially to be considered with basic science part-time electives.

735 Honors Program in Internal Medicine, Sorrell, Staff

Maximum 4 students. By arrangement only.

736 The Physiology of Symptoms, Grissom

1 hour per quarter; total 3

PROBLEMS IN MEDICINE

737 Diabetes Mellitus (1 hr q)
738 Advanced Endocrinology (1 hr q)
739 Metabolism and Nutrition (1 hr q)
740 Rheumatology (1 hr q)
741 Advanced Intestinal Liver Diseases, Paustian, Staff (1 hr q)

ADVANCED STUDIES OF THE Cardiovascular Renal System:

742 Cardiologic Diagnosis and Electrocardiography (4 hr q; total 12)
743 Management of Heart Disease (3 hr q; total 9)
744 Hypertension and Nephritis (3 hr q; total 9)
745 Peripheral Vascular Disease (1 hr q; total 3)
746 Infections Diseases, Chemotherapy, and Antibiotics, J. C. Davis, Staff

(3 hr q; total 9)

747 Advanced Allergy, Kass, Staff (1 hr q; total 4)
748 Advanced Hematology, Staff (2-3 hr q; total 6)

Prereq: Pathology 56-865 (Advanced Hematology)

Anatomy 04-908 (Advanced Hematology)
749 **Use of Isotopes in Internal Medicine**, Drs. Mattole, Quaife
Quarter Hours:  6

750 **Cardiovascular Seminar** (1 hr q)

752 **Medical Seminar** (1 hr q)

760 **Off-Campus Medicine Elective**
  Periods Offered: Each 4 or 8 weeks
  Student Limit: By arrangement
  Quarter Hours: 6-12
  Clerkships of 4 or 8 weeks duration in universities or teaching hospitals elsewhere sponsored by a member of the Department of Internal Medicine and in which the instructor directing the elective is not a member of our faculty. Appropriate off-campus electives are those providing opportunities in areas in which we have no comparable programs or in which the University cannot accommodate the number of students desiring the course.

762 **Off-Campus Medicine Preceptorship**
  Periods Offered: Each 4 weeks
  Student Limit: By arrangement
  Quarter Hours: 6
  A preceptorship with a general internist where the student is exposed to outpatient care.

772 **Internal Medicine Core Residency, Staff**
The first two years of the program emphasize internal medicine in its broadest sense; that is, general or undifferentiated medicine; learning the management of patients without a previously defined disease state of subspecialty orientation. The clinical applications of both preclinical sciences and of the other clinical sciences and the scientific approach are stressed. Specific assignments include inpatient internal medicine at the University of Nebraska Medical Center, at the Omaha Veterans Administration Hospital, and at affiliated hospitals. Ambulatory medicine, in the clinics of the University of Nebraska Medical Center, receives special emphasis. During the first year each house officer learns about emergency internal medicine.

774 **Internal Medicine Advanced Residency, Staff**
During the third and fourth years of the programs, the student may take one of two general tracks. He may continue with the general education in internal medicine, becoming more sophisticated as his experience and learning permits. Or he may elect to develop his education in one of several subspecialties by the American Board of Internal Medicine. There are specialized education programs in the Division of General Internal Medicine; Diabetes, Endocrinology, Metabolism, Digestive Diseases, Nutrition, Hematology, Cardiovascular Disease, Renology, and Pulmonology.

776 **Chief and Associate Chief Residents in Internal Medicine**
There are full-time positions with intense clinical responsibility being assumed under direct faculty supervision.

799 **Research in Medicine**
Should consider applying for research fellowship several months in advance.
MEDICAL JURISPRUDENCE AND HUMANITIES

Professor Friedlander; Associate Professors Ellick (Chairman), Spire; Instructor Jones.
The courses offered in this department are those concerned with the various humanities and social sciences which relate to the practice of medicine.

MEDICAL JURISPRUDENCE AND HUMANITIES—28

550 Clinical Medical Humanities (3 q hr cr) Friedlander
This is a required introduction into the role of history, sociology and ethics in medical practice. With an historical and sociological bias, it defines the function of a physician as well as the role of the medical profession, defines the patient as an entity, and examines the interface between the two as well as methods for resolving the moral and ethical dilemmas that arise from this interface.

702 Medical Jurisprudence (a q hr cr) Ellick
Medical legislation, medical evidence and witnesses, privileged communications, general medico-legal relations, physicians' contracts and compensation, malpractice, legal problems relating to conception and childbirth, and liability of hospitals and nurses are some of the subjects discussed.

622 Medical History (2 q hr cr) Friedlander
This is a series of didactic lectures which offer an introduction into the history of medicine and allied fields. It stresses the development of ideas and the relation of medicine and society rather than only biographic material. It is designed to demonstrate one aspect of humanism in medicine. The elective is open to all students at the Medical Center.

MEDICAL MICROBIOLOGY

Professors McFadden (Chairman), N. G. Miller (Vice-Chairman), von Riesen; Associate Professors Conrad, Dubes, J. W. Jones, McCarthy, White; Assistant Professors Booth, Henry, M. Johnson, Kruger, Lerman, McDonald, Phares, P. Smith, Steinkraus; Instructors Kinsey, Yam; Assistant Instructors Berthold, Swanson.

It is the goal of the faculty of this department to develop with the student a balanced concept of Immunology, medical microbiology and infectious disease. Endeavor is made to demonstrate the principles of pathogenesis, host parasite relationships, and molecular biology as these affect the field of medical microbiology. As specific goals we consider with the student the effects upon the human host of microbial agents and suggest the manner in which a microbiological diagnosis may be made. This is accomplished by lectures and laboratories which emphasize such host parasite relationships, pathogenesis, and principles of infectious disease. Principles of immunology are considered as well as those immune responses which are associated with infectious diseases.
Medical Microbiology 620, 621 and 622 aim to acquaint students with the basic principles of microbiology and immunology particularly as these relate to infection and disease. The instruction offered in these courses is supplemented with more advanced and specialized courses (620 to 692) for students who are candidates for the M.S. or Ph.D. degree and for other students such as the honors student, residents in specialty training, and other desiring advanced work in medical microbiology, independently of the requirements for a degree. For more details concerning the program in graduate education, please see the Bulletin of Graduate Studies of the University of Nebraska Medical Center or the Handbook of Clerkships and electives of the College of Medicine. Certain of these advanced level courses, which have been attractive to medical students in the past, are listed here for the student’s convenience.

**MEDICAL MICROBIOLOGY—32**

610 **Infectious Diseases**, (1 q h cr) McFadden, Staff
   Course 610 is an interdepartmental lecture course given during the spring quarter of the sophomore year of medicine. Selected topics of importance in the management of patients with infectious disease are considered. The course is intended to assist the student in the transition from basic sciences to clinical sciences.

620 **Medical Microbiology and Immunology I**, (4 q h cr) McFadden, Staff (820G)
   Courses 620, 621 and 622, when taken in sequence, comprise a composite course in Medical Microbiology, Parasitology and Immunology, extending over the second academic year. 620 is a lecture, conference and laboratory course dealing with the basic principles of immunology, with the principles of host parasite relationships, and with a consideration of medical microbiology including consideration of protozoa, helminths and arthropods of medical importance.

621 **Medical Microbiology II**, (4 q h cr) McFadden, Staff (821G)
   Course 621 is a lecture, conference, and laboratory course dealing with the basic principles of bacteriology and with the cultural characteristics, pathogenic properties, immunological responses, host-parasite relationships, etc., of certain pathogenic bacteria.

622 **Medical Microbiology III**, (4 q h cr) McFadden, Staff (822G)
   Course 622 is a lecture, conference, and laboratory course dealing with the basic principles of mycology and virology. In addition the course considers the laboratory characteristics, pathogenic properties, immunological responses, host-parasite relationships, etc., of certain fungi and viruses which cause disease in man and animals.

640 **Diagnostic Bacteriology**, McFadden, Staff (3-9 q h cr) (940G)
   Prereq: A laboratory course and 620 and 621 or its equivalent or by permission.
   By arrangement.
   Special techniques for isolation, identification, and susceptibility testing of microorganisms from clinical matter available in the diagnostic laboratories of the University of Nebraska Medical Center. Practical approach with conference and laboratory.

642 **Diagnostic Virology**, White, Staff (3-9 q h cr) (942G)
   Prereq: A laboratory course in Bacteriology, 620 and 621 or by permission.
   By arrangement. A study of specific techniques for the isolation and identification of viruses from clinical material available in the diagnostic virology laboratory of the University of Nebraska Medical Center. Practical approach with conference and laboratory.

660 **Off-Campus Elective**, McFadden (cr arr)
   By permission.
   Tutorial or preceptor experience in some aspect of Medical Microbiology, Immunology, or Infectious disease (basic or clinical).

692 **Advanced Topics in Microbiology**, Staff (cr arr) by permission (992G)
   This course constitutes advanced study (research other than thesis) in one of the several disciplines of medical microbiology such as bacteriology, immunology, mycology, virology, parasitology, electron microscopy, tissue culture, etc.
   Note: Medical students who wish to take a Basic Science Elective Clerkship experience in Medical Microbiology may register, after appropriate departmental consultation, in this course.
MEDICAL SOCIAL WORK

MEDICAL SOCIAL WORK—34

720 Medical Social Work Elective, Hansen, Staff
   Periods Offered: Each 4 weeks
   Student Limit: 2

Students will work with both hospitalized and clinic patients. They will be assigned to patients known to the Social Work Department because of difficulties in coping with illness and with planning for discharge, return to the community, and continuity of care in the community. Students will talk with patients and their families and work in conjunction with the social workers.

NEUROLOGY

Professors Bennett (Chairman), Ellingson, Friedlander, Greenhouse, J. A. Alta, Baker, Lorenzo, Wigton; Associate Professors Danneel, Ladwig, Van Dyke; Assistant Professors J. F. Alta, Decker, Gill, Goldner, Hertzler, Isburg, Kader, Ohr, Peters, Prendes, Schima, Shuman, Streib, Sun, Torkelson, Weber, Wolcott; Instructors Birkmann, Cooper, Cotton.

NEUROLOGY—36

604 Clinical Neuro-Science (4 q h cr) (W)
   Provides for the teaching of the essential fundamentals necessary for the clinical approach and evaluation of patients with neurological diseases. The format combines lectures, patient demonstrations, case presentations, CPC's, and small group sessions under faculty supervision.

732 Clinical Neuro-Science Clerkship
   Periods Offered: Each 4 weeks
   Student Limit: 7 (4 at UNH; 3 at VA Hospital)
   Quarter Hours: 6

This elective offers students a combined neurology (3 weeks) and neurosurgery (1 week) experience where evaluation, diagnosis, and managerial approaches are experienced under close faculty supervision. Focus is also flexible enough to serve the student's interest in electroencephalography, electromyography, and/or neuropathology.

734 Clinical Pediatric Neurology
   Periods Offered: Each 4 weeks
   Student Limit: 2
   Quarter Hours: 6

This course offers students clinical pediatric neurology experience with specific focus on the evaluation, diagnosis, and treatment of the neurological diseases in children from conception to the adult state under close supervision of the faculty.

760 Off-Campus Neuroscience Elective
   Periods Offered: Each 4 weeks
   Student Limit: By arrangement
   Quarter Hours: 6

Arrangements must be made by the student and approved through the Department of Neurology at least two months in advance of elective date.

790 Clinical Research Elective
   Periods Offered: Each 4 weeks
   Student Limit: By arrangement
   Quarter Hours: 6

This elective offers students an opportunity to work with faculty members in clinical investigations of neurological diseases and to participate in ongoing research projects. Definition of problems and program of learning to be decided upon discussion with faculty.

772 Junior Residency In Adult Neurology
   Prereq.: 1 year Medicine, Family Practice or rotating internship in and approved program.

The first year of the residency program is spent in the inpatient and outpatient adult neurology services. Teaching emphasis is placed on the neurological history and examination, differential diagnosis and familiarity with laboratory procedures and treatment and management regimes. The resident is exposed to patients with a diversity of neurological diseases, assumes responsibility for patient care and is closely supervised. First year rotations consist of four consecutive months at each of the participating hospitals, the University of Nebraska Hospital, Veterans Administration Hospital, and St. Joseph Hospital.
Intermediate Residency in Adult Neurology

1. Pediatric Neurology — (four months, University of Nebraska Hospital) The goals and objectives of this rotation are to familiarize the adult neurology resident with developmental neurology in relationship to the neurologic examination, neuropathology, neurophysiology, and clinical implications of the child from conception to the adult state. It is hoped that this will enhance the resident's education so that he or she is familiar with neurologic problems during the developmental period and to broaden the trainee's understanding of pathology that might exist in the adult patient as a result of neurologic problems during the developmental period.

2. Neuropathology — (four months, University of Nebraska Hospital) Neuropathology is a full-time assignment for a four month period. One neuropathology conference is held each week, rotating among the three teaching hospitals. These consist of brain cutting, microscope review and teaching conferences. There is a monthly neurological clinical-pathological conference. The resident assigned to neuropathology attends and participates in all these conferences and is responsible for writing the CPC. Microscopic neuropathology on all cases is examined by the resident and reviewed with the neuropathologist. Special study sets are used and reviewed with the resident. Gross and microscopic photographs, case abstracts and interpretations are available for study. The study program includes an introduction to neurohistology, enzyme histochemistry, electron microscopy and experimental neurology. The assignment in neuropathology includes a review of neuroanatomy and a review of relevant general pathology. Experience and training in muscle and brain biopsy is also included.

3. EEG and evoked potentials — (four months, University of Nebraska, St. Joseph, and Veterans Administration Hospitals). The resident spends a four month rotation in EEG and evoked potentials. Both laboratory and didactic experience in electronics, equipment, techniques and interpretation is received. By the time the rotation is completed the resident is expected to be able to run a complete EEG on a patient including preparing the patient for the test. Reading sessions are conducted daily with the attending. The resident will have reviewed all records prior to this conference. A weekly one-and-one-half hour conference review of interesting records from the three hospitals is also held. Books, references, articles, manuals, and teaching records are available for self-study.

Senior Residency in Adult Neurology

1. EMG — In the four months exposure to neuromuscular techniques both didactic and practical experience is scheduled. The former includes the review of electrophysiology with emphasis on the physiological basis of nerve excitability and conduction of the nerve impulse, review of clinical physiology of the neuromuscular transmission and the known clinical alterations at this point of nerve transmission, review of the physiology of excitation-contraction, coupling and various clinical conditions relating to muscle fiber problems. The resident will spend time with the electromyographer in a weekly clinic learning equipment and techniques for motor and sensory conduction studies, neuromuscular transmission assessments, EMG with needle electrodes, H-reflex and blink reflex studies. When he is familiar with these techniques he will be allowed to perform these studies under the supervision of the electromyographer. The resident will also be expected to attend the muscle disease clinic.

2. Neuroradiology — (four months, University of Nebraska and St. Joseph Hospitals) The resident spends a four month rotation under the supervision of the neuroradiologist. During this period he learns the techniques and potential risks of the various diagnostic studies with emphasis on computerized axial tomography. He will also learn normal radiographic anatomy. Through daily review of all x-rays with the staff he will become familiar with the various abnormalities. He will participate in the neuroradiology seminars held at both institutions. Teaching files are available for his review.

3. Electives — (four months) The elective program is flexible both in type and time. Before electives are selected the resident meets with the Program Director to review his or her needs. Current clinical electives are offered in Neurosurgery, 2 or 4 months, Nebraska or St. Joseph; Psychiatry, 2 or 4 months, Nebraska; rotation with private practicing neurologist in town who has a departmental appointment, 2 or 4 months. Further training in EEG, EMG, neuropathology, adult or child neurology, can also be obtained in this time period. The resident may also be encouraged to utilize this time to engage in research under the supervision of a member of the Department of Neurology or of a basic neuroscience department. When appropriate, an elective may be taken at another institution. Following completion of electives the trainee will notify the Director of its value and limitations. At the same time, the physician in charge of the elective will report to the Director on the resident's performance.
MEDICAL SOCIAL WORK

MEDICAL SOCIAL WORK—34

720 Medical Social Work Elective, Hansen, Staff

Periods Offered: Each 4 weeks

Student Limit: 2

Students will work with both hospitalized and clinic patients. They will be assigned to
patients known to the Social Work Department because of difficulties in coping with ill­
ness and with planning for discharge, return to the community, and continuity of care in
the community. Students will talk with patients and their families and work in conjunc­
tion with the social workers.

NEUROLOGY

Professors Bennett (Chairman), Ellingson, Friedlander, Greenhouse, J. A. Aita, Baker,
Lorenzo, Witgon; Associate Professors Danneel, Ladwig, Van Dyke; Assistant Professors J. F.
Aita, Decker, Gill, Goldner, Hertzler, Isburg, Kader, Ohr, Peters, Prendes, Schima, Shuman,
Streib, Sun, Torkelson, Weber, Wolcott; Instructors Birkman, Cooper, Cotton.

NEUROLOGY—36

604 Clinical Neuro-Science (4 q h cr) (W)

Provides for the teaching of the essential fundamentals necessary for the clinical ap­
proach and evaluation of patients with neurological diseases. The format combines lect­
tures, patient demonstrations, case presentations, CPC's, and small group sessions
under faculty supervision.

732 Clinical Neuroscience Clerkship

Periods Offered: Each 4 weeks

Student Limit: 7 (4 at UNH; 3 at VA Hospital)

Quarter Hours: 6

This elective offers students a combined neurology (3 weeks) and neurosurgery (1 week)
experience where evaluation, diagnosis, and managerial approaches are experienced
under close faculty supervision. Focus is also flexible enough to serve the student's in­
terest in electroencephalography, electromyography, and/or neuropathology.

734 Clinical Pediatric Neurology

Periods Offered: Each 4 weeks

Student Limit: 2

Quarter Hours: 6

This course offers students clinical pediatric neurology experience with specific focus
on the evaluation, diagnosis, and treatment of the neurological diseases in children
from conception to the adult state under close supervision of the faculty.

760 Off-Campus Neuroscience Elective

Periods Offered: Each 4 weeks

Student Limit: By arrangement

Quarter Hours: 6

Arrangements must be made by the student and approved through the Department of
Neurology at least two months in advance of elective date.

790 Clinical Research Elective

Periods Offered: Each 4 weeks

Student Limit: By arrangement

Quarter Hours: 6

This elective offers students an opportunity to work with faculty members in clinical in­
vestigations of neurological diseases and to participate in ongoing research projects.
Definition of problems and program of learning to be decided upon discussion with
faculty.

772 Junior Residency In Adult Neurology

Prereq.: 1 year Medicine, Family Practice or rotating internship in and approved pro­
gram.

The first year of the residency program is spent in the inpatient and outpatient adult
neurology services. Teaching emphasis is placed on the neurological history and exam­
nation, differential diagnosis and familiarity with laboratory procedures and treatment
and management regimes. The resident is exposed to patients with a diversity of neuro­
logical diseases, assumes responsibility for patient care and is closely supervised. First
year rotations consist of four consecutive months at each of the participating hospitals,
the University of Nebraska Hospital, Veterans Administration Hospital, and St. Joseph
Hospital.
Senior Residency in Adult Neurology

1. Pediatric Neurology — (four months, University of Nebraska Hospital) The goals and objectives of this rotation are to familiarize the adult neurology resident with developmental neurology in relationship to the neurologic examination, neuropsychology, neuropsychology, and clinical implications of the child from conception to the adult state. It is hoped that this will enhance the resident’s education so that he or she is familiar with neurologic problems during the developmental period and to broaden the trainee’s understanding of pathology that might exist in the adult patient as a result of neurologic problems during the developmental period.

2. Neuropathology — (four months, University of Nebraska Hospital) Neuropathology is a full-time assignment for a four month period. One neuropathology conference is held each week, rotating among the three teaching hospitals. These consist of brain cutting, microscope review and teaching conferences. There is a monthly neurological-clinical-pathological conference. The resident assigned to neuropathology attends and participates in all these conferences and is responsible for writing the CPC. Microscopic neuropathology on all cases is examined by the resident and reviewed with the neuropathologist. Special study sets are used and reviewed with the resident. Gross and microscopic photographs, case abstracts and interpretations are available for study. The study program includes an introduction to neurohistology, enzyme histochemistry, electron microscopy and experimental neurology. The assignment in neuropathology includes a review of neuroanatomy and a review of relevant general pathology. Experience and training in muscle and brain biopsy is also included.

3. EEG and evoked potentials — (four months, University of Nebraska, St. Joseph, and Veterans Administration Hospitals). The resident spends a four month rotation in EEG and evoked potentials. Both laboratory and didactic experience in electronics, equipment, techniques and interpretation is received. By the time the rotation is completed the resident is expected to be able to run a complete EEG on a patient including preparing the patient for the test. Reading sessions are conducted daily with the attending. The resident will have reviewed all records prior to this conference. A weekly one-and-one-half hour conference review of interesting records from the three hospitals is also held. Books, references, articles, manuals, and teaching records are available for self-study.

Senior Residency in Adult Neurology

1. EMG — In the four months exposure to neuromuscular techniques both didactic and practical experience is scheduled. The former includes the review of electrophysiology with emphasis on the physiological basis of nerve excitability and conduction of the nerve impulse, review of clinical physiology of the neuromuscular transmission and the known clinical alterations at this point of nerve transmission, review of the physiology of excitation-contraction, coupling and various clinical conditions relating to muscle fiber problems. The resident will spend time with the electromyographer in a weekly clinic learning equipment and techniques for motor and sensory conduction studies, neuromuscular transmission assessments, EMG with needle electrodes, H-reflex and blink reflex studies. When he is familiar with these techniques he will be allowed to perform these studies under the supervision of the electromyographer. The resident will also be expected to attend the muscle disease clinic.

2. Neuroradiology — (four months, University of Nebraska and St. Joseph Hospitals) The resident spends a four month rotation under the supervision of the neuroradiologist. During this period he learns the techniques and potential risks of the various diagnostic studies with emphasis on computerized axial tomography. He will also learn normal radiographic anatomy. Through daily review of all x-rays with the staff he will become familiar with the various abnormalities. He will participate in the neuroradiology seminars held at both institutions. Teaching files are available for his review.

3. Electives — (four months) The elective program is flexible both in type and time. Before electives are selected the resident meets with the Program Director to review his or her needs. Current clinical electives are offered in Neurosurgery, 2 or 4 months, Nebraska or St. Joseph; Psychiatry, 2 or 4 months, Nebraska; rotation with private practicing neurologist in town who has a departmental appointment, 2 or 4 months. Further training in EEG, EMG, neuropathology, adult or child neurology, can also be obtained in this time period. The resident may also be encouraged to utilize this time to engage in research under the supervision of a member of the Department of Neurology or of a basic neuroscience department. When appropriate, an elective may be taken at another institution. Following completion of electives the trainee will notify the Director of its value and limitations. At the same time, the physician in charge of the elective will report to the Director on the resident’s performance.
776 Senior Residency in Neurology with Special Competency in Child Neurology
Prereq: Two years pediatrics (H.O. I and H.O. II) as well as 772 and 774 adult neurology.
The goals and objectives of the course are to complete the resident's education in pediatric neurology with encouragement into academic and research endeavors. To accomplish this the student will spend one year on the pediatric neurology service during which time he or she will have full clinical responsibility for patients on the pediatric neurology service, both inpatient and ambulatory. The program will be under the direct supervision of the Director of Child Neurology, and Chairman of Neurology.

NEUROSURGERY
Professors Skultety (Chairman), Finlayson; Associate Professors Berman, Browne; Assistant Professor Gogela; Instructor Greene.

NEUROSURGERY—38

732 Clinical Neuroscience Clerkship
Periods Offered: Each 4 weeks
Student Limit: By arrangement
Elective offers student a combined neurology and neurosurgical clinical experience where evaluation, diagnosis and managerial approaches are experienced under close faculty supervision. Focus is also flexible enough to serve the student's interest in electroencephalography, electromyography, and/or neuropathology.

738 Neurosurgery Clerkship
Periods Offered: Each 4 weeks
Student Limit: By arrangement
Elective offers student experience with respect to diagnosis, treatment and management of patients with neurosurgical seases under close supervision of the faculty.

OBSTETRICS-GYNECOLOGY
Professors Scott (Chairman), Field, Goodlin, McGoogan; Associate Professor Woods; Clinical Associate Professor Heidrick; Senior Consultant Kovar; Research Professors Ryan, Barker; Research Assistant Professors Whelly, Curtis; Instructors Burks, Bussinger, Gray, Mason, Menke; Volunteer Faculty: Anderson, Bassett, Beavers, Bennett, Boeletter, Bohl, Byington, Cotton, Dietrich, Elston, Garlinghous, Goldkrand, Gorthey, Green, Hansen, Harvey, Hirst, Jerkstrom, Johnson, Kolbeck, LaBenz, Lewis, Luikart, Magid, Marlowe, Marsh, McCarthy, McGinnis, Olson, Orr, Roffman, Rumbolz, Schack, Schulte, Sundell, Taylor, Todd, Wax, Adam, Black, Dilley, Keasling, Marshall, Relly, Taylor, Yost.

OBSTETRICS-GYNECOLOGY—40

INTERDEPARTMENTAL
614 Reproductive Medicine, (3 q hr cr) (Sp) Staff
This course provides an introduction to obstetrics and gynecology. Course content includes diagnosis and care of the normal and abnormal obstetric patient, assessment of the intrauterine patient, and discussion of female pelvic disease. The information will be considered as core material and successful completion of the course is a prerequisite to the primary clinical clerkship.

620 Introduction to Obstetrics and Gynecology, Staff
Anatomy, physiology, and biochemistry of normal human reproduction, and their relation to clinical obstetrics and gynecology.

640 Introduction to Family Planning and Contraceptive Techniques
Prereq: 88-514
Basic familiarization with methods in family planning at UNH clinics and family planning clinics in Omaha under staff supervision. The student will also complete a programmed text in family planning which will be given to him at the beginning of the elective period.

642 Introduction to Clinical Gynecologic Endocrinology
Prereq: Biochemistry 510
An introductory clinical course which is directed at correlating the biochemical basis to disease with endocrine aspects of OB-GYN practice. The student will be required to complete a programmed text which will be provided to him in gynecologic endocrinology and will attend the endocrine clinic and conferences % at UNH.
644 Advanced Topics in Obstetrics and Gynecology  
Prereq: 80-514  
In depth investigation into one of the basic clinical areas in obstetrics and gynecology from course in interdepartmental reproductive biology with the goal of development of an audiovisual teaching package in that specific area.

646 Basic Principles of Fetal Monitoring, Goodlin  
Prereq: 88-514  
An introduction into techniques of fetal monitoring, the clinical course of labor and management of the patients in labor utilizing external and internal methods of fetal monitoring.

705 Junior Clinical Clerkship (8 weeks) Staff  
Junior-year students are assigned to the University Hospital and affiliated hospitals for inpatient experience and to the University Hospital clinics for outpatient obstetric and gynecologic clinics. They will follow the progress of patients in labor, assist at operative procedures, and maintain a complete record until the patient is discharged from the hospital. Outpatient experience will include participation in the following clinics: normal and complicated obstetric, tumor, gynecologic, endocrine-infertility, and family planning. Seminars, conferences, and ward rounds are scheduled regularly.

710 Outpatient (4 or 8 weeks; limit 3) Staff  
Obstetric, gynecologic, and specialty clinic experience including family planning. Daily seminars with the faculty to discuss special problem areas in obstetrics and gynecology including endocrinology. Inpatient service by arrangement at affiliated hospitals.

720 Advanced Obstetrics (4 weeks; limit 3) Staff

722 Advanced Gynecology (4 weeks; limit 3) Staff
A University Hospital inpatient service at the intern level emphasizing obstetrics and/or gynecology. Daily participation in staff seminars and teaching activities.

724 Obstetrics and Gynecology Tutorial (4 weeks) Bohl, Dietrich, Field, Jernstrom, Kolbeck, McGooagan, Orr, Roffman, Rumbolz, Sundell, Wax, Adam, Yost.  
Individual students work in a one-to-one relationship with the staff at the University Hospital or with a volunteer faculty member at an affiliated hospital. By approval only. Limit 1-2 students per faculty member per year.

760 Off-Campus Elective (4 weeks)  
Clerkships in University or teaching hospitals elsewhere. By individual approval only.

772 Core Residency, Scott, Staff  
Prereq: Degree of M.D. from an accredited U.S. Medical School. Foreign medical graduates are required to have an E.C.F.M.G. Certificate.

This is a four year program. The resident rotates between clinical obstetric services including inpatient and outpatient and gynecologic services including inpatient and outpatient. These services are in the University Hospital or one of its integrated hospitals. An additional rotation is a period of time devoted to pathology, endocrinology, Internal medicine, anesthesia, and neonatology. Attendance at the weekly resident seminars is mandatory.

774 Chief Residency  
The chief resident has a clinical experience of eight months on inpatient and outpatient gynecology and four months on inpatient and outpatient obstetrics. Following completion of the core residency and the chief residency, the Board requirements of the American Board of Obstetrics and Gynecology are fulfilled. All residents participate in staff conferences, journal club, radiology seminars, and grand rounds.

796 Research, Medical Education, Scott  
Problems of core curriculum, development of audiovisual aids, and evaluation in undergraduate education.

797 Research, Family Planning (4 weeks; limit 1)  
Problems of family planning, including clinical experience in a variety of settings.

798 Research, Maternal and Infant Care, (4 or 8 weeks; limit 1) Field  
Problems of pregnancy and the perinatal period in relation to maternal health care programs.

799 Research, Gynecologic Cancer, (4 or 8 weeks; limit 1) Jacobs  
Problems of diagnosis and treatment of malignant disease of the female reproductive system.
OPHTHALMOLOGY

Professors Records (Chairman), Eagle, Filkins, Truhlsen; Associate Professors Latta, Mauzolf, Meissner, Statton, Vickery, Christensen; Assistant Professors Anis, Chase, Crawford, Dinsdale, Faier, Geiger, Griffiths, Morgan, Nye, Pemberton, Ramsell; Instructors Arkfield, Campbell, Crossman, Durrie, Madson, McIntosh, Meyer, Priluck, Shefte, Trolta, Wood.

OPHTHALMOLOGY—44

602 Principles of Clinical Ophthalmology (2 q h cr, Sp)
The many disciplines which make up the broad field of clinical ophthalmology are presented in a concise and encapsulated manner. These include elementary geometric optics, physiologic optics, external disease, disease processes peculiar to the visual system and the ophthalmic manifestations of systemic disease. The goal of this course is to give the student a firm foundation of basic ophthalmic knowledge which will aid in differentiating normal variation from true disease processes. Such basic knowledge and diagnostic skills will compliment and enhance the individual's diagnostic and therapeutic efforts in any area of clinical medicine.

720 Clinical Ophthalmology
Periods Offered: Each 4 weeks (8 weeks by arrangement with Chairman)
Student Limit: 2
Quarter Hours: 6
The elective in Clinical Ophthalmology will include experience in all areas of general ophthalmological diagnosis and therapy. Within this wide field the following areas will receive particular emphasis: 1) Ophthalmic history taking and its correlation to the general medical history; 2) Functional evaluation of the visual system including determination of near and distance, visual acuity, the size, and shape of the visual field, color vision, stereopsis, and other testing procedures designed to detect dysfunction of any components of the visual system; 3) Direct examination of the visual system including both applanation and indentation tonometry, the use and limitation of the slip-lamp, direct and indirect ophthalmoscopy; and 4) Observation and participation in ocular surgical procedures. The goal of this program is to lay a firm foundation of basic knowledge and diagnostic skill which will aid the non-ophthalmologist in evaluating disease processes of the eye adnexa, and visual pathways. Such knowledge will make for more rational and complete patient care as well as understanding the problems of the patients who have ophthalmic disease or ophthalmic manifestations of systemic disease processes.

760 Off-Campus Elective (4 or 8 weeks)
Clerkships in teaching hospitals elsewhere. By individual approval only.

772 Residency Program in Ophthalmology
The residency training program in ophthalmology is 36 months in duration. It is fully accredited by the Liaison Committee on Graduate Medical Education and fulfills the formal training requirement for certification by the American Board of Ophthalmology. Three appointments are made effective July 1st of each year. Successful applicants are generally notified of their appointment some nine to twelve months prior to the start of formal training.

Facilities: Four hospitals in the Omaha area are utilized for resident training activities:
1. The University of Nebraska Medical Center Hospital in a 296-bed general hospital which functions as the primary teaching facility of this program.
2. The Omaha Veterans Administration Medical Center, a 486-bed facility, is an important source of both medical and surgical cases for further in-depth ophthalmic teaching.
3. The Bishop Clarkson Memorial Hospital and 596 beds provides additional clinical material as does
4. St. Joseph Hospital with 570 beds.
The University of Nebraska Medical Center Ophthalmology Clinic furnishes outpatient care to a wide range of patients. No income restrictions are applied to patients seeking care and services. This brings a complete spectrum of clinical material ranging from totally indigent to full-pay private patients. The Omaha Veterans Administration Medical Center maintains an extremely active ophthalmology service which functions both as an outpatient screening facility and an inpatient surgical service. A large volume of cases are seen at this hospital yearly and an unusually high percentage of them undergo major ophthalmic surgical procedures. The Bishop Clarkson Memorial Hospital has a small outpatient service and an active emergency room. A large volume of surgical cases are obtained from these sources.
The clinical facilities of both the University of Nebraska Medical Center Hospital and the Veterans Administration Medical Center are among the best equipped in the United States. The latest in diagnostic and refraction equipment is available and all surgical procedures are performed utilizing the operating microscope.
THE TRAINING PROGRAM

First Year: Each new resident is given a short orientation and then is assigned to work under the supervision of a second year resident. As soon as the individual demonstrates a reasonable degree of competence in the management of simple ophthalmic problems he is given his own completely equipped examination room and is assigned random patients from the general eye clinic population. The neophyte resident then undertakes diagnosis and management of these patients under the careful guidance of an attending faculty member. He is encouraged to move as rapidly as possible in developing the skills which are necessary to become a thorough and complete ophthalmic clinician. The best interest of the patient, however, is always the primary concern, and all steps of diagnosis and management are made under careful supervision. As the resident gains more experience and confidence, more latitude is given until at the end of the freshman year a high degree of competence has been obtained in management of everyday ocular complaints. This includes the evaluation of patients who will undergo routine ocular surgery as well as both simple and complicated problems in refraction and medical ophthalmology. Much emphasis is placed upon developing the important skill of ophthalmic history taking and performing a meticulous and detailed examination.

Second Year: An important and rewarding part of the training of each second year resident is close supervision of the freshman residents as they become active in the operation of the clinic. The second year resident continues to improve his skills in diagnosis and management of routine major ophthalmic procedures. Such procedures include enucleations, strabismus surgery, and uncomplicated cataract extractions. During the second year of training, the resident is exposed to various disciplines closely aligned with ophthalmology such as neuro-ophthalmology, ophthalmic pathology, and pediatric ophthalmology. A four month rotation through the ophthalmic surgical service at the Bishop Clarkson Memorial Hospital provides an introduction to ophthalmic surgery. Here the resident scrubs with a variety of staff surgeons and is exposed to many different surgical approaches to various problems.

Third Year: Four months of the senior year in the ophthalmology residency program is spent as Chief Resident at the University Hospital, four months as Chief Resident at the Omaha Veterans Administration Hospital and four months as Chief Resident at Creighton University Health Clinic. At the University Hospital, the Chief Resident is directly responsible for the operation of the clinics and the well-being of the inpatients on the ophthalmology service. He is also active in supervising the first and second year residents and confirming their diagnosis. The senior resident performs most of the major ophthalmic surgical procedures at the University, Veterans Administration and St. Joseph’s Hospitals. The Chief is also responsible for answering all requests for consultations from other services at all major teaching hospitals. During the course of three years of residency a total of 200 to 300 major surgical procedures will be performed.

ORTHOPEDIC SURGERY & REHABILITATION

Professors Connolly (Chairman), Hood; Associate Professors Jardon, Bach, Burney, DeShazer, Dinsmore, Hamsa, Minard, Pitner, Scott-Miller, and Smith; Assistant Professors Cochran, Huurman, Waish, Brantigan, Bush, Kettleson, and O'Neill; Clinical Assistant Professor Stone; Instructors Breed, Albers, Bainbridge, Bence, Ellis, LeWallen, Miller, Peck, Smith, Styner and Yost; Assistant Instructor Garvin and Rosenberger; Clinical Instructor Horn; Demonstrators Bohenkamp and Burton.

Orthopaedic surgery deals with the disease, deformities and injuries of the structures composing the musculo-skeletal system.

ORTHOPAEDIC SURGERY—48

722 Orthopaedic Wards and Clinic Elective (4 weeks)
This elective is intended as an introduction to clinical orthopaedics allowing the student to apprize the scope of orthopaedic surgery and rehabilitation as well as some of the problems that commonly are associated with musculoskeletal injuries and diseases. The clinical clerk is expected to participate actively in the work up and care of both the inpatients and outpatients. Objectives of the course are outlined and emphasized at the beginning of the elective and the student's attainment of these objectives are demonstrated by oral examination at the end of his rotation.
724 Orthopedic Sports Medicine (4 weeks, F, Sp)
The purpose of this rotation is to provide the student with the opportunity to learn how to evaluate and manage sports injuries and related medical problems. It will be coordinated with UNO athletic programs. The University of Nebraska at Omaha athletic facilities will be utilized as well as the Orthopaedic Clinic.

760 Orthopedic Preceptorial Clerkship Elective (4 weeks)
Clinical experience is offered with a member of the orthopaedic faculty who works at one of the affiliated hospitals. The exposure is to inpatient as well as office orthopaedics and emergency responsibilities. The clinical clerk is expected to participate in the work up and care of both inpatients and outpatients. The objectives of the course are outlined and emphasized at the beginning of the elective and the student's attainment of these objectives are demonstrated by oral examination at the end of his rotation.

762 Off-Campus Orthopedic Surgery Elective (4 weeks)
Orthopaedic clerkships in University teaching hospitals or approved private orthopaedic offices elsewhere may be elected. The objectives of this elective are outlined and emphasized by the University Orthopaedic and Rehabilitation Department at the beginning of the elective. The student's attainment of these objectives must be demonstrated by an oral examination at the end of his rotation to be taken at the University Medical Center.

772 Orthopedic Surgery Residency
The program is orthopaedic surgery is based on graduate responsibility in clinical settings and exposure to the basic sciences necessary for thorough understanding of clinical orthopaedics.

For those physicians who have completed an internship, a three-year program in orthopaedic surgery is offered. However, those who have not completed an internship may take a four-year residency program.

The Department of Orthopaedics uses the facilities of University Hospital, the Hattie B. Munroe Pavilion for extended care of children, and the Children's Rehabilitation Institute. The orthopaedic portion of the State of Nebraska Services for Crippled Children also uses these facilities in cases requiring hospitalization. Five affiliated hospitals are also utilized for clinical training.

House officers in orthopaedic surgery participate in regular tumor conferences, general surgery grand rounds, pediatric-orthopaedic case conferences, myelodysplasia clinical and subspecialty clinics such as scoliosis, cerebral palsy, adult prosthetics and children's prosthetics. Weekly conferences are held on pathology, radiology, biomechanics, biochemistry and physiology as they relate to orthopaedics. The training program includes exposure to fractures, trauma, reconstructive surgery and hand surgery.

OTOLARYNGOLOGY AND MAXILLO FACIAL SURGERY

Professor Yonkers (Chairman); Associate Professors Carter, Lovgren; Assistant Professors Babbitt, Beck, Davis, Duff, Eakins, Ferrell, Foote, Crubbs, B. Heywood, Jones, Maness, Olson, Park, Simons, Stivers, Syre, Werth; Clinical Assistant Professor Peterson; Senior Consultant J. C. Davis, Jr.; Associate Gillies; Instructors Crawford, Blattner, T. Heywood.

OTOLARYNGOLOGY AND MAXILLO FACIAL SURGERY—52

720 Otorhinolaryngology Clerkship
Periods Offered: Each 4 weeks
Student Limit: 4
The student is involved closely with all facets of otorhinolaryngology, gaining a view of the scope of this field. Evaluation of patients, diagnostic considerations and management approaches are emphasized. The student will participate in all the activities of the department, including clinical responsibilities, operations, and formal teaching exercises.

760 Off-Campus Elective
Periods Offered: Each 4 weeks
Student Limit: By arrangement
Clerkships at the Veterans Administration Hospital in Omaha or with some of the private practitioners in the Omaha-Lincoln area. By individual approval only.
772 **Core Residency in Otorhinolaryngology**

This three year program requires two years of approved surgical residency and graduation from an approved medical school. This is the standard residency program which prepares the resident for examination by the American Board of Otorhinolaryngology. This program is described in the department literature on residency training.

799 **Fellowship in Otorhinolaryngology**

**Periods Offered:** Each 8 weeks  
**Student Limit:** By arrangement

Designed to support the research interests of a student in any area related to otorhinolaryngology. Eligibility for, and acceptance to, this program, by arrangement with the Chairman of the Department.

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**PATHOLOGY**

Professors McWhorter (Chairman), Berton, G. Haven, A. L. Larsen, McFadden, John Schenken (Emeritus), Shubick, Simons, Jerald Schenken, Toth, Wilson; Associate Professors Greene, Jones, Kulesh, Papenfuss, Roffman, Skoog, F. Smith, A. E. Larsen, Newland; Assistant Professors Anderson, Barta, Dynek, Fitch, Grier, Hicks, Kruger, Stastny, Landmark, Lohff, Markus, Hayes, Neierson, M. Haven, Morris, Pennepacker, Rustia, Runge, Pappas, Shuman, Pester, Scott, Shapiro, E. Smith, Sohn, Herbek, Katz; Instructors McIntyre; Senior Consultant Coleman.

The teaching goal of the Department of Pathology is to provide a learning environment in which the medical student may become familiar with and acquire a working knowledge of the etiology, the pathogenesis, the pathologic physiology, and morphologic consequences of human disease.

**PATHOLOGY—56**

620 **General Pathology I (7 q h cr) (820G)**  
**Prereq:** Human Gross Anatomy, Neuroanatomy, Human Embriology, Cellular and Systems Biochemistry (Medical), and Medical Physiology Parts I and II.

Initial emphasis in this course is on cellular and tissue reactions to injury. The etiology and pathogenesis of major disease processes is stressed. Concepts and principles of cellular and tissue reactions are then extended to the study of human disease by organ systems. In the systemic approach, specific correlations with morphologic reactions to injury are emphasized with integration of additional basic science data pertinent to etiology, pathogenesis and prognosis of specific disease states. Instruction is by lecture, illustrated demonstrations and laboratory, and regularly scheduled Small Group Discussion periods. The Small Group Discussions are so designed as to emphasize the case study approach to the understanding of appropriate diseases.

621 **General Pathology II (7 q h cr) (821G)**  
**Prereq:** General Pathology I 620

The study of human disease by systems is continued. The case study approach is strongly emphasized. Clinical pathologic correlation is regularly introduced through the continuation of Small Group Discussion periods, these scheduled to correlate with and to expand the content of formal lectures. Continued introduction of material obtained in other basic sciences is a part of the instructional strategy. Where appropriate, members of other basic science departments and/or of the Clinical Teaching Staff are asked to contribute. Again the instruction is largely by lectures, illustrated demonstrations and laboratory, and regularly scheduled Small Group Discussion periods.

622 **Clinical Pathology (7 q h cr) (822G)**  
**Prereq:** General Pathology I (820G), General Pathology II (821G)

The course in Clinical Pathology emphasizes the basic rationale, scientific, medical and technical, for the selection and interpretation of laboratory tests necessary to the practice of medicine. The format is one of lecture, demonstration, and Small Group Discussions.

702 **Forensic Pathology**  
**Prereq:** General Pathology I 620, General Pathology II 621

Forensic Pathology essentially addresses all aspects of legal medicine with special emphasis on the contribution of the pathologist.
720 Pathologic Anatomy
Prereq: General Pathology I 620, General Pathology II 621
The Department of Pathology provides students the opportunity to pursue in greater depth, the pathologic anatomy of disease, utilizing a variety of modes and emphasizing structural abnormalities. This course is based largely in Surgical and Autopsy Pathology. Students are assigned to individual staff members by arrangement. This period may be integrated in part with Clinical Pathology 722 by arrangement.

722 Clinical Pathology
Prereq: General Pathology I 620, General Pathology II 621, Clinical Pathology 622
Student Limit: By arrangement, 1-2 students in each specialty area at one time
The Department of Pathology provides a number of opportunities for students to study laboratory medicine, by subspecialty, within the diagnostic laboratory of Clinical Pathology. These studies are designed to expand the student’s understanding of the relationship of disease processes to interpretable functional abnormalities. Experience in the following clinical laboratory subspecialties are available: Clinical Chemistry, Blood Banking, Hematology, Microbiology, Special Clinical Chemistry. Individual students are assigned to staff members with specific interests in one or more of these specialty areas. In depth correlation and appropriate interpretation of clinical laboratory data is stressed. By arrangement, a student may elect to spend a part of one four week period in Pathologic Anatomy 720 in order to better correlate structural and functional abnormalities.

760 Off-Campus Elective
Prereq: General Pathology I 620, and II 621, Clinical Pathology 622
Approved clerkships in University or teaching hospitals elsewhere may be individually arranged. Approval by the Chairman of the Department of Pathology and other concerned parties is mandatory.

774 Pathology Residency
Prereq: General Pathology I 620, II 621, Clinical Pathology 622
This is a full-time four year program of assignments in Pathologic Anatomy and in Clinical Pathology designed to fulfill the requirements of the American Board of Pathology for individual certification in Clinical Pathology and in Pathologic Anatomy. The segments are broken into six month rotating periods in Clinical Pathology and its various components such as Hematology, Immunohematology, Microbiology, Clinical Chemistry, etc., and in Anatomic Pathology consisting of Surgical Pathology, Autopsy Pathology and Cytology. If the individual so desires and it is acceptable to the Director, twelve months of this four-year Residency may be spent in research or other special training.

799 Special Problems and Research (4 weeks)
Prereq: General Pathology I 620, II 621, Clinical Pathology 622
The student interested in a special problems in Pathology or in a related investigative effort for which supervision by faculty in Pathology is necessary is encouraged to discuss available opportunities directly with the appropriate faculty member.

PEDIATRICS
Professors Angle (Actg. Chairman), Al-Rashid, Clark, Eisen, Mooring, Simon, Wiltse; Associate Professors Eaton, Hofschire, Miyazaki, Nelson, Perry; Assistant Professors Antonson, Huseman, Lerman, Kobazashi, Kugler, Sanger, Vanderhoof, Bickers.
The aim of this department is to develop in the student an understanding of human growth and development as well as the diseases characteristics of infancy, childhood and adolescence. This is done through small group bedside conferences and seminars, clinical clerkship at the University Hospital and the Children's Memorial Hospital, and the outpatient service at the University Hospital. Special orientation and training in rehabilitation are given at the C. Louis Meyer Childrens Rehabilitation Institute.

PEDIATRICS—60
706 Comprehensive General Pediatrics I, Staff (6 q h cr)
Periods Offered: Each 4 weeks
Student Limit: 12 total for COMP GEN PED I and COMP GEN PED II combined during any month, no separate limits for the two units.

707 Comprehensive General Pediatrics II, Staff (6 q h cr)
Periods Offered: Each 4 weeks
Student Limit: 12 total for COMP GEN PED I and COMP GEN PED II combined during any month, no separate limits for the two units.
Comprehensive General Pediatrics consists of (4 weeks each) ambulatory pediatric experience with primary-care emphasis and experience at Children's Hospital. Prior to beginning the COMP GEN PED Units, students will have an opportunity to indicate choices of specialty and continuity clinics, well newborn nursery, Children's Rehabilitation Institute, Preventive Care Clinic, and one or more afternoons per week in offices of pediatricians in private practice. Throughout COMP GEN PED I and COMP GEN PED II, attendance will be expected in an intensive didactic course which meets daily, covering major topics in clinical pediatrics and requiring 3-4 daily hours of preparation time.

708 Problems in Clinical Pediatrics I, Staff (6 q h cr)
   Periods Offered: Each 4 weeks
   Student Limit: 9
This course consists of inpatient, largely specialized pediatric experience at University Hospital only. Emphasis is upon independent, supervised problem-solving experience and development of diagnostic skills. There are no core lectures but a variety of case-related conferences. This unit is strongly recommended for any student contemplating a career in pediatrics and should provide valuable preparation for other fields of medicine as well.

709 Problems in Clinical Pediatrics II, Staff (6 q h cr)
   Periods Offered: Each 4 weeks
   Student Limit: 0-8 depending upon openings
This course is an option available to students who wish to continue, and build upon, the problem-solving experience of PROB CLIN PED I within a specialized area of pediatrics. A student who wishes to exercise this option should reserve a slot in one of six available electives (neonatology, cardiology, hematology, endocrinology, metabolism-genetics, gastroenterology) and register for this as PROB CLIN PED II. Students interested in this option should discuss it with the clerkship coordinator prior to registration.

720 Topics in Clinical Pediatrics (2-6 h cr, by arr)
   Offered continuously all quarters. Not available to students who have completed or intend to take course 706 or 707.
This course is identical to the didactic and self-instructional program entitled “Topics in Clinical Pediatrics” which is part of the two pediatric clerkship units, Comprehensive General Pediatrics I and II, #706 and #707. Course 720 omits all of the clinical experiences of courses 706 and 707. The complete course consists of 34 separate instructional units, each requiring 3-4 hours of daily preparation time and attendance at a daily contact hour. Topic list available on request. Twelve instructional units can be completed for 2 hours credit, 24 for 4 hours, or all 34 units for 6 hours of credit. Competence in each of the instructional units is tested by means of an individual written examination covering all completed units. Students who complete course 720 prior to the required pediatric clerkship are advised to select clerkship options 708 and 709.

722 Pediatric Cardiology and Cardiovascular Disease, Mooring, Hofschire
This elective is intended for students desiring to further their knowledge of congenital heart disease and rheumatic fever. It should be especially useful for those who will practice either pediatrics, general practice, or thoracic surgery. Using the excellent clinical material available, the student will become proficient in auscultation and in the diagnosis and management of infants and children with heart disease. The student should become familiar with pediatric electrocardiography and cardiac catherization. Some time will be spent in observation of heart surgery and the post-operative management of heart surgery patients. Correlate hemodynamic studies with patient history and observation. Become familiar with specialized techniques; electrocardiography, cardiac catherization, dye dilution and hydrogen curve analysis, phonocardiography, vectorcardiography, apex cardiology, central venous pressure, cardiopulmonary resuscitation. Improve examination skills, especially in auscultation, introduction to ongoing research projects. If interested, work on a senior thesis. Learn systematic approach to radiologic diagnosis of heart and vascular disease in plain films, fluoroscopy, and angiographic studies. Gain an understanding of operations for cardiovascular disease, including open heart surgery and post-operative management.

726 Pediatric Hematology and Oncology, Al-Rashid
The student will see patients with hematological diseases in the Jahr Pavilion and newborn Nursery with the staff hematologist. Also the student will work up all new patients seen in the outpatient Pediatric Hematology Clinic. An average of 8-10 patients are seen every Friday afternoon. Bone marrow sessions and seminars in hematological disease are held on a weekly basis. Opportunity for research work, clinical or laboratory, is available for students spending more than 10 weeks on the service. In addition to hematological disorders, the student will gain experience in tumors in children, chemotherapy, and exchange transfusion.
727 Human Cytogenetics, Eisen
To familiarize students with laboratory techniques in human cytogenetics. Course content includes techniques and applications of sex chromatin preparations, short- and long-term tissue cultures, chromosome preparation, and karyotype analysis. Correlations with clinical cases.

728 Neonatology, Miyazaki, Bolam
The student will serve as the Nursery House Officer under the supervision of the staff neonatologist. This will include clinical responsibility for all newborns, day and night. There are 100-200 deliveries per month, including 20-40 “risk” deliveries.

729 Pediatric Endocrinology, Huseman (6 q h cr)
Periods Offered: Each 4 weeks
Student Limit: 2
Prereq: Pediatric Clerkship or 20-705
This elective provides the student with experience in diagnostic problems of growth, pubertal development, thyroid dysfunction, and adrenal disorders in both inpatient and outpatient settings. Further experiences can be gained in disturbances of carbohydrate metabolism. This student will be responsible for the daily care of inpatients, endocrine consultations, and implementation of tolerance tests with the supervision of the staff.

730 Pediatric Gastroenterology, Vanderhoof (6 q h cr)
Periods Offered: Each 4 weeks
Student Limit: 2
Prereq: Pediatric clerkship and 20-705
The student will 1) become broadly familiar with gastrointestinal pathophysiology in infants, children, and adolescents, 2) assist in evaluation of patients with gastrointestinal, hepatobiliary, and nutritional disorders, 3) participate in gastrointestinal conferences and seminars twice weekly, 4) observe a variety of gastrointestinal procedures, and 5) gain some expertise in interpretation of gastrointestinal histopathology.

731 Metabolic Disease and Genetics, Wiltse, Eisen (6 q h cr)
Periods Offered: Each 4 weeks
Student Limit: 1
The student will be helped to develop skills in diagnosing, managing, and counseling patients with inherited and acquired disorders of metabolism and genetic defects. Familiarity can be gained with basic techniques in the genetics laboratory, and participating in genetic counseling is encouraged. Topics of particular interest to the student will be discussed in individual conferences.

732 Pediatric Pulmonary Disease (including allergy and cystic fibrosis), Gibbs (6 q h cr)
Periods Offered: Each 4 weeks
Student Limit: 2
Prereq: Basic Pediatric Clerkship or 20-705
The pediatric allergy clinic meets two half-days in which the student, under the supervision of the staff, evaluates and investigates new allergy patients with appropriate history, physical and skin testing procedures. Experience is obtained in the prescription of allergy hyposensitization extracts and in management of the desensitization course. Experience also is obtained in treatment of allergic emergencies such as acute asthma. The cystic fibrosis clinic meets two half-days a week and here the physician examines and follows children in all stages of this chronic and ultimately fatal pulmonary disease. There are opportunities to learn how to perform sweat tests and basic pulmonary function tests. Other pediatric chest diseases cared for include those children who have or have not had tuberculosis and need appropriate follow-up care. Daily ward rounds would be made with the staff on all those patients in the hospital with pulmonary disease. Within this elective there is the possibility of spending additional time in a private allergist’s office.

734 Nephrology, Angle
This elective will center on a clinical research project in pediatric renal disease to be designed by the student and Dr. Angle and usually employing clinical studies carried out in the Pediatric Renal Clinic and Inpatient Service. In addition, the students will function as fellows in pediatric nephrology in the Renal Clinic and Inpatient and Intensive Care Unit.
Developmental Pediatric Practicum, Wuori (6 q h cr)

Periods Offered: Each 4 weeks
Student Limit: 1
Prereq: Basic Pediatric Clerkship

The student will assist and participate with the medical staff in the diagnosis, evaluation, and programming of children presenting significant developmental delays at Meyer Children's Rehabilitation Institute. An office practice format will be followed, and a schedule will be developed for each student to reflect individual interests and needs. Opportunity will be given to observe and participate in evaluations and therapies provided by other disciplines in the institute, such as psychology, speech pathology, physical therapy, occupational therapy, special education, vocational rehabilitation, and dentistry. The student will receive experience in the use of diagnostic screening techniques such as the Milani Comparetti Motor Development Screening Test and the Denver Developmental Screening Test. Students will participate in one or two State Services for Crippled Children clinics at the institute, and with care of inpatients at Hattie B. Munroe Pavilion. About seven complete evaluations are carried out each week and there are over 700 treatments a month in a variety of programs for children with developmental problems.

Pediatric Infectious Disease, Smith (6 q h cr)

Periods Offered: Each 4 weeks
Student Limit: 1
Prereq: Pediatric Clerkship

The student will be actively involved in pediatric infectious disease consultation service and may also participate in epidemiological investigations in the community. The elective will emphasize clinical and laboratory diagnostic and monitoring techniques, judicious use of antimicrobial agents, and understanding of the pathophysiology of infections and mechanisms of their spread.

Student Health and Adolescent Medicine, Hammer (6 q h cr)

Periods Offered: Each 4 weeks except August
Student Limit: 1
Prereq: Required Pediatric Clerkship or 20-705

The student will assist the staff physician at the University Health Center (Lincoln Campus) in providing ambulatory care to college students with acute and chronic health problems, five mornings each week. Afternoons will be spent in Dr. Hammer's office, a pediatric practice setting with emphasis on the adolescent age group.

General Pediatric Preceptorship (6 q h cr)

Periods Offered: Each 4 weeks
Student Limit: By arrangement only

Pediatricians throughout the state and particularly those who are members of Nebraska Pediatric Society, have expressed an interest in having medical students spend four or more weeks with them in their private office.

General Pediatric Outpatient Preceptorship (6 q h cr)

Periods Offered: Each 4 weeks
Student Limit: None

This course is identical to 60-760.

Pediatrics Off-Campus Elective with University Affiliation (6 q h cr)

Periods Offered: Each 4 weeks
Student Limit: None

Senior students may request credit for any off-campus program which offers unusual opportunities in clinical or investigative pediatrics. Advance approval from the department is required.

Pediatric Off-Campus Elective in a Non-University Location (6 q h cr)

Periods Offered: Each 4 weeks
Student Limit: None

Same as 60-764 only regarding non-affiliated hospitals.

Clinical Genetics, Eisen

Course contents and areas of study are: 1) An introduction to the field of medical genetics, 2) mitosis and meiosis, 3) human cytogenetics, 4) genes and man, and 5) genetic counseling.
772 Pediatric Graduate Education
This three-year full-time program involves clinical and research experience in all core aspects of the pediatric specialty which relate to a career in either pediatric practice or general academic and research pediatric pursuits. Correlation of the basic sciences of embryology, biochemistry, physiology, microbiology, ophthalmology and pathology is a structured component of the course.

774 Pediatric Fellowship Graduate Education
This course is limited to students who have completed at least two years of course 772. In-depth subspecialty pediatric education geared toward practice, academic, and research careers are available in the following:
(a) Allergy and Chest
(b) Cardiology
(c) Cystic Fibrosis and Diabetes
(d) Endocrinology and Metabolism
(e) Genetics
(f) Hematology
(g) Multiple Handicapped Children
(h) Neurology
(i) Newborn Medicine
(j) Renalology
(k) Radiology
(l) Infectious Disease
(m) Psychology
(n) Pediatric Neurology

796 Pediatric Research, Staff (6 q hr cr)
Periods Offered: Each 4 weeks
Student Limit: By arrangement
Prereq: By arrangement
A student interested in participating in an ongoing active research area within the Department of Pediatrics may arrange with the appropriate faculty to devote an elective month to laboratory investigation. By registering for the Pediatric Research elective and a related clinical subspecialty elective in consecutive months, the student could arrange a flexible program providing simultaneously enrolling for a graduate level course in a related basic science subject.

799 Fellowship in Cardiovascular Research, Mooring
This elective is intended to provide assistance and supervision to a student interested in research in cardiology. Funds may be available for support.

PHARMACOLOGY

Professor Ebadi (Chairman), Associate Professors Gessert, Hexum, Wolf, Donnelly, Deupree and Piper; Assistant Professors Scholar, Murrin and Pfeiffer, Instructor Mackenzie.

PHARMACOLOGY—66
319 Pharmacology for Physical Therapists (W) Staff (1 q hr cr)
A brief survey of all aspects of pharmacology is presented with special attention to those drugs which will alter physical therapy technique and to physical therapy technique which will alter drug therapy.

610 or 810 Pharmacokinetics (F) Mackenzie (1 q hr cr)
611 or 811 Neuro-psychopharmacology (F) Staff (3 q hr cr)
612 or 812 Systems Pharmacology I (W) Staff (3 q hr cr)
613 or 813 Systems Pharmacology II (W) Staff (2 q hr cr)
The four lecture courses (total 9 q hr cr) listed above (610, 611, 612, and 613 or 810, 811, 812, and 813) together cover all aspects of basic medical pharmacology, including the following: general principles and pharmacokinetics; drug actions on the central, peripheral, and autonomic nervous systems and on cardiovascular, renal, gastrointestinal and metabolic functions; chemotherapy of infectious diseases and neoplasms; toxicology; misuse of drugs.

623 or 823 Clinical Pharmacology (Sp) Pfeiffer (2 q hr cr)
The application of basic pharmacological concepts in the rational clinical use of drugs in the prevention, diagnosis and treatment of human diseases.

The prerequisites of each of the following elective courses (in the 600 or 700 series) are Pharmacology 610, 611, 612, 613 and 623 (or their equivalents) or permission of the Instructor with concurrent registration in Pharmacology 610, 611, 612, 613 or 623. Each course requires a minimum registration of 5 students, with no maximum limit, unless otherwise indicated.
628 Developmental Pharmacology (Sp) Murrin (2 q h cr)
Physiological and biochemical changes that influence drug metabolism from prenatal to adolescent periods.

629 Mechanisms of Toxicity (W) Piper (2 q h cr)
Discussion of the molecular mechanisms involved in the toxicity of therapeutic agents, poisons, and environmental pollutants.

632 Biogenic Amines in Health and Disease (W) Ebadi and Hexum (2 q h cr)
Diseases in which over- or under-production of specific amines play a prominent role in abnormal organ function.

633 Antimicrobial Drugs (Sp) Scholar (2 q h cr)
Actions, indications, pharmacokinetics, mechanisms, and adverse effects of antibiotics and synthetic chemotherapeutic agents used in infectious diseases.

760 Off-Campus Pharmacology Electives or Clerkships (credit and time arrangement) Ebadi
Pharmacology research electives in universities or research institutes or clerkship in clinical pharmacology in teaching hospitals or medical centers elsewhere.

Additional Courses in Pharmacology:
Flexible studies in pharmacology (2 quarter hours each) are provided to offer medical students additional opportunities to further pursue in-depth experiences in pharmacology beyond those obtained from the courses listed above. Research opportunities in select areas of pharmacology will also be made available. These research experiences may be provided on a short-(8 week) or a long-term (18 months) basis.

In certain areas it may be desirable for a student to make arrangements to study a specific problem with guidance from both a clinical faculty and a staff member of the Department of Pharmacology. Every attempt will be made by the faculty of the Department of Pharmacology to integrate the information to be presented with the appropriate faculty of the clinical department. In brief, whenever possible, these electives will be designed to remain flexible in nature and commensurate with the career objectives and/or educational background of the students.

PHYSIOLOGY AND BIOPHYSICS

Professors Gilmore (Chairman), Bennett (Emeritus), Clark, Paustian, Ramaley, Ware; Associate Professors Campbell, Gerlings, Joyner, Lim, Mann, Moriarty, Zucker; Assistant Professors Bell, Cornish, Lipscomb.

Courses 510 and 512 in Medical Physiology and Biophysics are required for the degree of Doctor of Medicine. These courses provide a widely inclusive study of functional mechanisms within the body. To complement biochemical and morphological studies in other departments, emphasis is placed upon the application of biophysical principles to the understanding and measurement of processes in the body. These medical courses include pathophysiology with illustrative problems from clinical medicine to reinforce the student’s understanding of normal function and to prepare him for the application of physiological and biophysical principles to clinical medicine. Courses 510 and 512 do not carry graduate credit toward an M.S. or Ph.D. degree; if graduate credit is desired, the student must register for courses 810 and 812.

Courses in the 600 series are designed as electives carrying credit toward the M.D. They do not carry graduate credit.

Graduate studies leading to the Ph.D. in Physiology and Biophysics are primarily designed to train students to become competent research scientists, knowledgeable in the major areas of modern physiology and competent to teach at the medical and graduate student level. Courses 810 and 812 are part of the core program. Courses in the 500 and 800 series carry graduate credit toward advanced degrees, and by special arrangement with the department, may be taken as electives by medical students, interns or residents. See the Bulletin of the Graduate College for details concerning advanced degree programs.

PHYSIOLOGY AND BIOPHYSICS-68

510 Medical Physiology, Part I (WO) (3 q hr) (810G)
Lect. Lab, dem. conf.
An introduction to the processes that regulate the activity of individual cells and organ systems. Topics covered include membrane physiology of single cell and neurophysiology.

512 Medical Physiology, Part II (Spr. Q) (9 q h cr) (812G)
Lect. Lab, dem. conf.
A consideration of cardiovascular, renal, respiratory, gastrointestinal and endocrine physiology. Clinical applications of the material will be emphasized. In addition to lectures, demonstrations are offered.
Research Experience in Physiology
Quarter Hours: By arrangement
Student Limit: 1-2 per field
Prereq: By arrangement
These are planned as tutorial relationships to be arranged with a staff member who will familiarize the student(s) with research techniques and experimental procedures in use. Students may choose problems in the investigators' laboratory. The student will be expected to spend full time for a full quarter or large fraction thereof.
1. Renal
2. Electrophysiology
3. Techniques in Neurophysiology
4. Cardiovascular Physiology
5. Membrane Transport
6. Endocrinology

PSYCHIATRY

Professors M. Eaton (Chairman), Aita, Bartholow, Ellingson, Menolascino, Roth, Sonderegger, Tunakan, Wigton (Emeritus), Williams, Wittson (Emeritus); Research Professors Carver, Copenhaver, Himwich (Emeritus); Clinical Associate Professor Stein (Emeritus); Associate Professors J. Authier, Benschoter, Berry, Blizek, Blose, Davis, Donaldson, L. Eaton, Fine, Fix, Gedgoud, Golden, Goldner (Emeritus), Haffke, Kentsmith, Lavoie, Long, Lytton, Osborne, Stark, Starr, Strider, Swanson, Weber, West, Young (Emeritus); Assistant Professors Baldwin, Beitenman, Benforf, Brinegar, Calkins, Dahlke, Elrod, Ettinger, Eyde, Goggin, Goldberg, Graber, Gustafson, Gutnik, Hairston, Hartmann, Harvey, Herrick, Hong, Jones, Keith, Kenney, Melcher, Moore, Patino, Pease, Peters, Quinlan, Reid, Richardson, Rohrbaugh, Salladay, Schroeder, Sjogren, Stoller, Sydow, Tramontana, Wengert, Wieland, Witte, Wood, J. Yager; Instructors Alcaparras, Aguirre, K. Authier, Baker, Beerling, Betts, Burger, Cacoloppp, Chavez, Daughton, DeSalvo, Dyer, Ford, Goodloe, Henderson, Hitzing, Hornby, Hubble, Kelley, Limprecht, Meyer, Michael, Pettipiece, Pflug, Quattrocchi, Rajendran, Riley, Schill, Sherrets, Smith, Strider, Townsend, Wilson, Wisman; Assistant Instructor W. Yager.

Courses are planned to give the student, commencing in his freshman year, correlated, progressive training in the anatomical, physiological, and psychological fundamentals of psychiatry. Lectures and demonstrations in the freshman year emphasize the significance of behavioral sciences to the medical career. The sophomore program consists of lectures and case demonstrations in basic psychiatry, which include descriptive and dynamic psychopathology and techniques of examination. In the junior and senior years, stress is placed on supervised experience with psychiatric patients, on inpatient, day-patient, and outpatient basis. Formal lectures are kept to a minimum. Instruction in psychiatry is correlated with the teaching in other departments.

PSYCHIATRY—70

502 Introduction to Psychiatry and the Behavioral Sciences (3 q hr S; 3 h weekly), Haffke, Strider, DeSalvo
This course is designed to give the student, via some understanding of the contributions of both behavioral and biological science, an appreciation of the development of man as a physiological psychological entity reacting to intrapersonal and interpersonal changes and functioning in health and in illness within the context of family, society, and culture. It focuses on an understanding of the development of behavior in the context of both the normal and abnormal. Its objective is, while teaching the student some of the uses of basic psychiatric techniques in other branches of medicine, to help to obliterate the "mind-body" dichotomy thus giving the student the ability to deal with the patient as a "whole" person rather than a series of systems. It is organized under the headings: 1) human development, 2) biological and behavioral factors in human development and function; 3) man in his environment, 4) psychological medicine and its role in modern society.

602 Basic Psychiatry (3 q hr Spr; 3 h weekly), Davis
Descriptive aspects of clinical syndromes are presented. The course is preparatory to the clerkship in psychiatry and gives the student a basic understanding of mental illness from the standpoint of a general practitioner.

610 Alcoholism and Drug Readings (4 weeks, by arr), Blose
Periods Offered: By arrangement
Student Limit: By arrangement
Prereq: First year
Lectures, demonstrations, seminars, and review of literature concerning alcoholism and drug addiction.
616  Neurochemistry (6 q h cr; 12 weeks), Carver
   Periods Offered: By arrangement
   Student Limit: By arrangement
   Prereq: Biochemistry 510
   A basic course in the chemistry of the central nervous system. The material will cover
   aspects of the subcellular units, metabolic compartments, and the regional distribution
   of chemical components. Current literature will be reviewed by the student and pre-
   sented as part of the course.

640  Practicum Training in Clinical Psychology (4 weeks, by arr), Strider
   Periods Offered: All 4 quarters; 4, 8, or 12 weeks; full or half time
   Student Limit: None
   Prereq: Recommendation of major advisor and permission of instructor
   Clinical experience working with patients under clinical supervision. Open to students
   other than medical students.

644  Ambulatory Psychiatry (6 q h cr; 8 weeks or by arr), Swanson
   Periods Offered: All 4 quarters; 8 or 12 weeks; full or half time
   Student Limit: 2 per 8 week period
   Prereq: Psychiatry Clerkship
   Lectures, seminars, demonstrations in individual and group psychotherapy and psycho-
   pharmacology with adult outpatients.

646  Developmental Problems of Children (6 q h cr; 4 weeks or by arr), Donaldson
   Periods Offered: All 4 quarters; 4, 8, or 12 weeks; full or half time
   Student Limit: By arrangement (Total of 4 on service at any one time)
   Prereq: Psychiatry Clerkship
   Lectures, demonstrations and seminars. Clinical experience working with children, in-
   patients and outpatients, and their families. Experience with community agencies work-
   ing with children.

705  Clinical Clerkship (Su, F, W, Sp), Davis, Gutnik and Staff
   A full-time eight-week required clinical clerkship is to be taken in quarters 7 through 12.
   Students are assigned to instructors on a tutorial basis and under this detailed super-
   vision are assigned patients on the adolescent service; adult inpatient service; adult out-
   patient service; alcohol and chemical dependency service; children's service; liaison
   service, preventive and social psychiatry division; and the Veteran's Administration Hos-
   pital psychiatry service. Although assigned to a specific service, a core-curriculum of
   lectures, seminars, and demonstrations of common psychiatric disorders provides each
   student with experiences on all services of the Nebraska Psychiatric Institute.

721  Individualized Studies in Psychiatry (4 weeks or by arr)
   Periods Offered: All 4 quarters, 4, 8, or 12 weeks; full or half time
   Student Limit: By arrangement
   Prereq: None
   Demonstrations, seminars, readings and clinical experience in such areas as alcohol
   and drug problems; community psychiatry, mental retardation; hospital psychiatry
   (given at NPI and/or VA); and liaison psychiatry.

726  Psychiatric Problems of Adolescents (6 q h cr; 4 weeks by arr), Donaldson
   Periods Offered: All 4 quarters; 4, 8, or 12 weeks; full or half time
   Lectures, demonstrations, seminars on adolescent problems. Clinical experience work-
   ing with adolescents and their families and with other community agencies concerned
   with adolescents.

734  Clinical Practice in Counseling of Sexual and Marital Problems (6 q h cr; 4 weeks or by
   arr), Staff
   Periods Offered: All 4 quarters; 4, 8, or 12 weeks; full or half time
   Student Limit: 4 per 8 week period
   Prereq: Psychiatry Clerkship
   Clinical experience in treating individuals with sexual and/or marital problems.

760  Off-Campus Elective (6 q h cr; 4 weeks), Gutnik
   Periods Offered: By arrangement
   Student Limit: By arrangement
   Prereq: Clerkship in Psychiatry
   An introduction to the practice of Psychiatry or its subspecialties. For training not avail-
   able locally, may be transcultural elective taken outside the USA.
772 **Psychiatry Residency,** Davis

This includes clinical work with psychiatric patients, combined with the study of basic psychiatric sciences, medical and social psychology, psycho-pathology, psychotherapy, and the physiological and pharmacological therapies, including the basic knowledge, the form, function and pertinent pathology of the nervous system. The training program in general psychiatry is of three years' duration and is supervised by the faculty to develop competency and the utilization of such basic knowledge in dealing with patients.

774 **Child Psychiatry Residency,** Donaldson

The prerequisite for child psychiatry is at least two years of general psychiatric residency. The child psychiatry residency program is a two-year program, during which the residents remain in the full-time practice of child psychiatry under faculty supervision. During this time competence in the application of the basic psychiatric sciences to in-patient and out-patient psychiatric care of children is required.

776 **Internship in Clinical Psychology,** Strider

The internship program provides a diversified training experience in which the psychology intern is provided the opportunity to work with a wide range of patients, age groups, and clinical problems. Emphasis is also placed on intensive appraisal and understanding of clinical situations. The intern develops basic competence in diagnostic interviewing, psychodiagnostic evaluation and psychodynamic formulation with both children and adults. Experiences with several psychotherapeutic approaches with both children and adults is arranged with emphasis on careful case formulation as the basis for selection or variation of technique. Attention is given to the development of skills in interprofessional relations and community psychology. Opportunities for consultation with referral sources, including schools, other agencies and clinics, are arranged to provide the intern with experience in consultative situations.

798 **Research in Psychiatry (6 q cr, 4 weeks),** Ellingson, Staff

**Periods Offered:** All 4 quarters; 4, 8, or 12 weeks; full-time only

**Student Limit:** By arrangement

**Prereq:** None

Laboratory of clinical research under direction in selected areas of psychiatry and/or behavioral sciences.

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**RADIOLOGY**

Professors Baltaxe (Chairman), Harned, Jones; Associate Professors Bloch, Dobry, Hahn, Kumar, Qualife, and Saichek; Assistant Professors Anderson, Bickers, Dirksen, Hanson, Mazer, and Williams; Instructor Head; Senior Consultant Hunt.

The curriculum in Radiology aims to relate the physical and biological principles of radiation effects to the basic sciences and to the diagnosis, prevention, and treatment of disease. Lectures in the principles of radiology offered in the Clinical Medicine series relate to radiation physics, radiation biology, principles of radiographic technics, the interpretation of roentgenograms, nuclear medicine, and radiation therapy.

During the third year radiologic interpretation, nuclear medicine, and radiation therapy is continued by electives. Sectional teaching to groups of four to ten students is conducted through film reading sessions, group conferences, and tumor clinics.

**RADIOLOGY—76**

720 **Diagnostic Radiology (6 q cr)**

**Periods offered:** Each 4 weeks (May be extended to 8 weeks)

**Student limit:** UNH 10 (these places are filled first), VA 3, Immanuel 2, Methodist 1, Clarkson 2, Lutheran 2, St. Elizabeth's (Lincoln) 2, Mary Lanning (Hastings) 2

Daily sessions in film interpretation, fluoroscopic examination, special radiographic procedures, and correlation of radiographic anatomy, radiographic physiology, and radiographic pathology in the evaluation of human diseases are to be carried out in the Department of Radiology. In addition, there is an introduction to radiation therapy and nuclear medicine. With the cooperation of the instructor, emphasis can be directed to specialized areas such as pediatric radiology.

722 **Radiation Therapy (6 q cr)**

**Periods offered:** Each 4 weeks (May be extended to 8 weeks)

**Student limit:** 2 per section

Cancer is relatively rare in the usual medical practice, though it ranks second as a cause of death. Since most patients with cancer at some time in the course of their disease will receive radiation therapy, this elective permits a concentrated exposure to the manifestations of malignant disease. The emphasis will be the evaluation of patients undergoing treatment with the various radiation therapy modalities. An attempt will be made via discussion of particular cases to correlate the roles of surgery, chemotherapy, and radiation therapy.
724 **Nuclear Medicine** (6 q h cr) Quaife

Periods offered: Each 4 weeks (May be extended to 8 weeks)

Student limit: 4 per section

This elective is directed towards acquainting the student with the field of Nuclear Medicine. The application of nuclear energy to the diagnosis, treatment, and/or investigation of human disease is surveyed with emphasis on clinical applications. The students receive didactic instruction in the principles and practice of pertinent nuclear physics and instrumentation, participate in case evaluation, procedure selection, radionuclide dose calculation and administration, conduction of the procedure, subsequent evaluation and analysis of data with interpretation and formulation of consultative report. Follow-up of patients with integration of the consultative report into the total patient care is stressed. Pertinent radiation biologic and radiation protection considerations are related to the conduct of the routine practice of nuclear medicine. Opportunity is available for the pursuit of individual interests within the overall framework of the elective.

760 **Off-Campus Elective** (6 q h cr)

Periods offered: Each 4 weeks

Student limit: By arrangement

Clerkships in University or teaching hospitals elsewhere. By individual approval only.

772 **Radiology Residency**

This is a three- or four-year program of graduated responsibility, progressing from simple to more complex diagnostic techniques. The second year assignment is in radiation therapy and nuclear medicine. Training in pathology is obtained at the Armed Forces Institute of Pathology.

774 **Diagnostic Radiology Residency**

This three- or four-year program is similar to 772, but responsibility is confined to diagnostic techniques in greater depth than in the combined program.

776 **Radiation Therapy Residency**

Also a three- or four-year program, limited to therapy, allowing greater depth of experience and sophistication in therapeutic techniques.

778 **Nuclear Medicine Residency**

Also a three- or four-year program, allowing greater depth of experience and sophistication in nuclear medicine techniques.

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**SURGERY**

Professors Hodgson (Chairman), Malette, Musselman, Steenburg; Associate Professors Brush, Coe, J. B. Davis, L. F. Davis, Ferlic, Fleming, Johnson, D. M. Miller, Neis, Ott, Potter, Rasmussen, Rees, Schultz, Singer, J. W. Smith, Swenson, Wilson; Assistant Professors Adwers, Black, Gillespie, Harry, Howard, Johnson, Karrer, Kimball, Kullbom, Latenser, Lynch, Marshall, Moor, Mota, Owen, Panzer, Porter, Quast, Rath, Sasae, R. L. Smith, Thompson, Wallace, Westfall, Zweiback; Clinical Assistant Professors Bruce, Cherry; Instructors Brett, Bryson, Hanisch, Kutler, Tempeo; Clinical Instructors Ehrlich, Hillyer, LeWorthy, Moessner, Wiedman; Senior Consultants Cochran, Garlinghouse, Hilton, McLaughlin, Muehlig, Webster; Emeritus Brinkman, H. H. Davis, H. L. Davis.

The Department of Surgery includes sections of general surgery, oral surgery, pediatric surgery, plastic surgery and thoracic-cardiac surgery.

The surgical faculty participates with other departments in interdepartmental exercises during the first two years. The purpose is to correlate the knowledge and precepts of preclinical sciences with the problems displayed in patients with surgical diseases.

The Department of Surgery offers courses for students in clinical science quarters. A primary clerkship has been designed to present the principles of recognition, diagnosis, and care of surgical disease. Students are incorporated into the activities of the surgical team. After this clerkship, students may add to their breadth and depth of understanding of surgical disease by selecting electives in a variety of special areas in the Department of Surgery or in other surgical areas.

**SURGERY—80**

705 **Primary Clerkship**

Students examine and evaluate patients for whom they help care during the course of an illness. They apply and evaluate diagnostic procedures, consider differential diagnosis and observe the consequences of therapeutic decisions. This study is enhanced by conferences, rounds, teaching packages, and demonstrations by the faculty. Essential elements of surgical knowledge and skills have been identified. The students participate in operations, learning principles, and techniques of operations and are actively involved in the care of patients who do not require hospitalization.
ELECTIVES

In the evolution of surgery a number of body regions or systems have become the focus for special attention leading to separation of the broad field into special areas. The core of surgery is still the understanding of cell, organ and system function, and response to injury. A student aspiring to a career in any field of medical practice can feel confident that electing any learning experience in which patients are accessible and in which exchange with faculty is possible will contribute to his/her effectiveness as a physician. The Department of Surgery includes several areas of special interest: general surgery, oral surgery, pediatric surgery, plastic surgery, and thoracic-cardiac surgery.

722 Elective Pediatric Surgery Clerkship (each 4 weeks)
Children's Memorial Hospital.

724 Elective Thoracic-Cardiac Surgery Clerkship (each 4 weeks)

728 Elective General Surgery Clerkship (each 4 weeks)
Designed to build on the foundation achieved in the primary clerkship. The student is an active participant in the professional team caring for patients. Students can expect to acquire confidence in identifying problems, organizing a plan of approach, and conducting patients through the pre-operative and post-operative periods in conjunction with the faculty at affiliated hospitals.

SPECIAL OFF-CAMPUS ELECTIVE—
Special interests of well-developed career goals may lead a student to favor a special course or experience within or away from the Medical Center. In consultation with, and under the auspices of a member of the faculty, special arrangements can be made. Permission for this period will be contingent upon designing a supervised educational opportunity.

780 Off-Campus Surgery Elective (each 4 weeks)

RESEARCH ELECTIVES—
Length of approved time to be determined. In general, this type of experience favored for a student who has identified a research problem for which capacity and facilities exist to permit a fruitful period of study and effort.

772 Surgery Residency
This is a five-year clinical program after graduation from medical school during which knowledge, skills, and judgment are acquired in the management of patients with surgical diseases. This is a progressive educational experience with gradually increasing responsibility. Broad interest includes the prevention and cure of disease and the care and rehabilitation of patients. Broad clinical experience includes anesthesia, general surgery, neurosurgery, pediatric surgery, plastic surgery, thoracic-cardiac surgery, as well as electives to satisfy Board requirements in General Surgery.

776 Oral Surgery Residency
The advanced educational program in Oral Surgery comprises five years. This is a joint program offered by the University of Nebraska Colleges of Medicine and Dentistry. The student will enter as a first-year oral surgery resident during which time he will initiate his oral surgery training, audit certain medical school courses, and take Part I of the National Board Examination in September. Towards the end of the first year, he will apply for admission to the College of Medicine as a special student with advanced standing. It should be noted that the Medical College Admissions Test is a requirement of all applicants. If accepted, he will complete the medical school curriculum (a minimum of two years or eight quarters). Upon satisfactory completion of the above, the resident will be eligible for examination by the American Board of Oral Surgery and granted an oral surgery certificate, a medical degree and a certificate of first-year general surgical training. Clinical experience is gained in outpatient and inpatient management of oral diseases, injuries and/or other abnormalities. Increasing responsibilities are assumed as the educational experience dictates. Additional experience is provided in oral and general pathology, general surgery, general anesthesia, maxillo-facial radiology, and research.

790 Research in Surgery
By arrangement with faculty.

SURGERY, GENERAL EXERCISES—

Surgery Grand Rounds (every Saturday 9:00-10:00 A.M.)
Presentation and analysis of clinical problems. Faculty, house officers, and students.

Surgery Seminar (Thursday, 8:00 A.M. - July through June)
Presentation and discussion of subjects and articles related to surgery. Faculty, house officers, and students.
Professors Bartone (Chairman), (Vice-Chairman), Kammandel, Malashock; Associate Professors Lacy, Mardis; Assistant Professors Gartner, Gilbert, Murray, Synhorst; Instructors Bromfield, Damico, Domina, Felt, and Frank.

The fundamental principles of this specialty, including the diagnosis and treatment of urinary infections, urologic management of genito-urinary trauma and congenital anomalies, malignancies and intersex problems, are taught so that the general physician will be able to recognize these problems and treat those that are within his scope.

This is accomplished by a continual year-long series of seminars, bedside rounds, outpatient and operating room demonstrations, and combined conferences in genitopurinary radiology, pathology and pediatric urology.

Aside from the undergraduate teaching, the members of this department provide instruction to residents and nurses. They also provide urological care to patients in the University Hospital, Veterans Administration, Bishop Clarkson, Methodist, and Immanuel Hospitals. They conduct investigative research in various subjects of urological interest.

UROLOGY—84

720 Hospital Clerkship
Students may elect a one-month period of urology. They are assigned to the University Hospital or one of the affiliated hospitals. Special emphasis is devoted to principles of diagnosis and treatment especially pertinent to urology. Students participate in operations including transurethral surgery, and attempts are made to correlate operative findings with clinical findings, especially with radiologic findings.

760 Off-Campus Elective
By special permission with Professor Bartone, arrangements can be made for off-campus electives.

Residency Program
The clinical graduate training program in genitro-urinary surgery is designed to meet the current requirements of the American Board of Urology. The aim is to expose the resident to all phases of urology. This is to include urologic diagnosis including endoscopy and retrograde pyelography, pre- and post-operative management and to be assured that he has performed a sufficient number and variety of surgical procedures, including endoscopic operations, to become a competent surgeon.

772 Urology Core Residency
A full-time two-year program of clinical assignments utilizing the patient material and the faculty working at the Leavenworth Veterans Administration Hospital and the University of Nebraska Medical Center Hospital. Background in the physiology, radiology, and pathology of the kidney and urinary tract are taught in a series of seminars and conferences in conjunction with the facilities of these respective hospitals. Pediatric seminars emphasizing this aspect of urology are taught in conjunction with the Department of Pediatrics.

774 Urology Chief Residency
A year-long full-time clinical program with assignments at the Veterans Administration Hospital, Omaha, and Leavenworth Veterans Administration Hospital. The chief resident is given clinical responsibility for both diagnostic and operative urology under faculty supervision.

799 Research in Urology
Prereq: Special Permission
The student may elect to spend a period with Professor Bartone in laboratory or clinical research.
For additional information, please write
DEAN, COLLEGE OF MEDICINE
University of Nebraska
Medical Center

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