

VANDERBILT UNIVERSITY

School of Medicine

1968-69



*Containing general information, appointments
and courses of study for the 1968-69 session,
corrected to October 15, 1968* ✓ NASHVILLE

School of Medicine Calendar, 1968-69

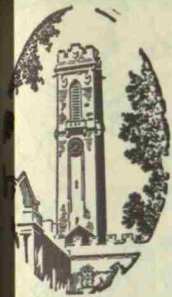
September 3-6, Tuesday-Friday	Registration and orientation
September 9, Monday	Fall semester instruction begins
November 28, Thursday	Thanksgiving Day: a holiday
December 22, Sunday	Christmas holidays begin
January 6, Monday	Instruction resumes
January 22, Wednesday	Instruction ends for 1st and 2nd year students
January 23-25, Thursday-Saturday	Examination period for 1st and 2nd year students
January 25, Saturday	Fall semester ends
January 27, Monday	Spring semester begins
April 13-20, Sunday-Sunday	Spring holidays
April 21, Monday	Classes resume
April 22-23, Tuesday-Wednesday	National Board examination for 4th year students (Part II)
May 24, Saturday	Instruction ends
May 26-28, Monday-Wednesday	Examination period
June 1, Sunday	Commencement
June 17-18, Tuesday-Wednesday	National Board examination for 2nd year students (Part I)

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VANDERBILT UNIVERSITY
MEDICAL SCHOOL
BUILT 1925



VANDERBILT is an independent, privately supported university which was founded in 1873 and opened its doors for classes in October 1875. It is named for the New York shipping and railway magnate, Commodore Cornelius Vanderbilt, who gave a million dollars to build and endow the University. On the base of his statue, placed on the campus by Nashville citizens, is inscribed his wish that the University should "contribute to strengthening the ties which should exist between all sections of our common country."

The University was for forty years, until 1914, under the auspices of the Methodist Episcopal Church, South.

Bishop Holland N. McTyeire, who was the man entrusted by Commodore Vanderbilt with establishing the University, was president of the Board of Trust until he died in 1889. His current successor as president of the self-perpetuating board is William S. Vaughn.

The University's chief executive officer has the title Chancellor. The five men who have held the position are Landon C. Garland from 1875 to 1893, James H. Kirkland from 1893 to 1937, Oliver Cromwell Carmichael from 1937 to 1946, Harvie Branscomb from 1946 to 1963, and Alexander Heard since 1963.

The University includes a liberal arts college and six other schools. All are coeducational. The degrees offered are as follows:

COLLEGE OF ARTS & SCIENCE: *Bachelor of Arts.*

THE GRADUATE SCHOOL: *Master of Arts, Master of Arts in Teaching, Master of Science, Doctor of Philosophy.*

SCHOOL OF ENGINEERING: *Bachelor of Engineering.*

THE DIVINITY SCHOOL: *Master of Divinity, Doctor of Divinity.*

SCHOOL OF LAW: *Doctor of Jurisprudence.*

SCHOOL OF MEDICINE: *Doctor of Medicine.*

SCHOOL OF NURSING: *Bachelor of Science in Nursing, Master of Science in Nursing.*

No honorary degrees are conferred.

The faculties of the several schools number just over a thousand. Student enrollment is approximately 5,700; about a fourth of them are women. A majority of the students live on the campus which occupies 150 acres in the University Center section of Nashville. Vanderbilt's campus adjoins those of George Peabody College for Teachers and Scarritt College for Christian Workers. The Joint University Libraries, serving all three institutions, contain more than a million volumes.

Facilities off the campus include the Arthur J. Dyer Observatory, situated on a 1,131-foot hill six miles south.

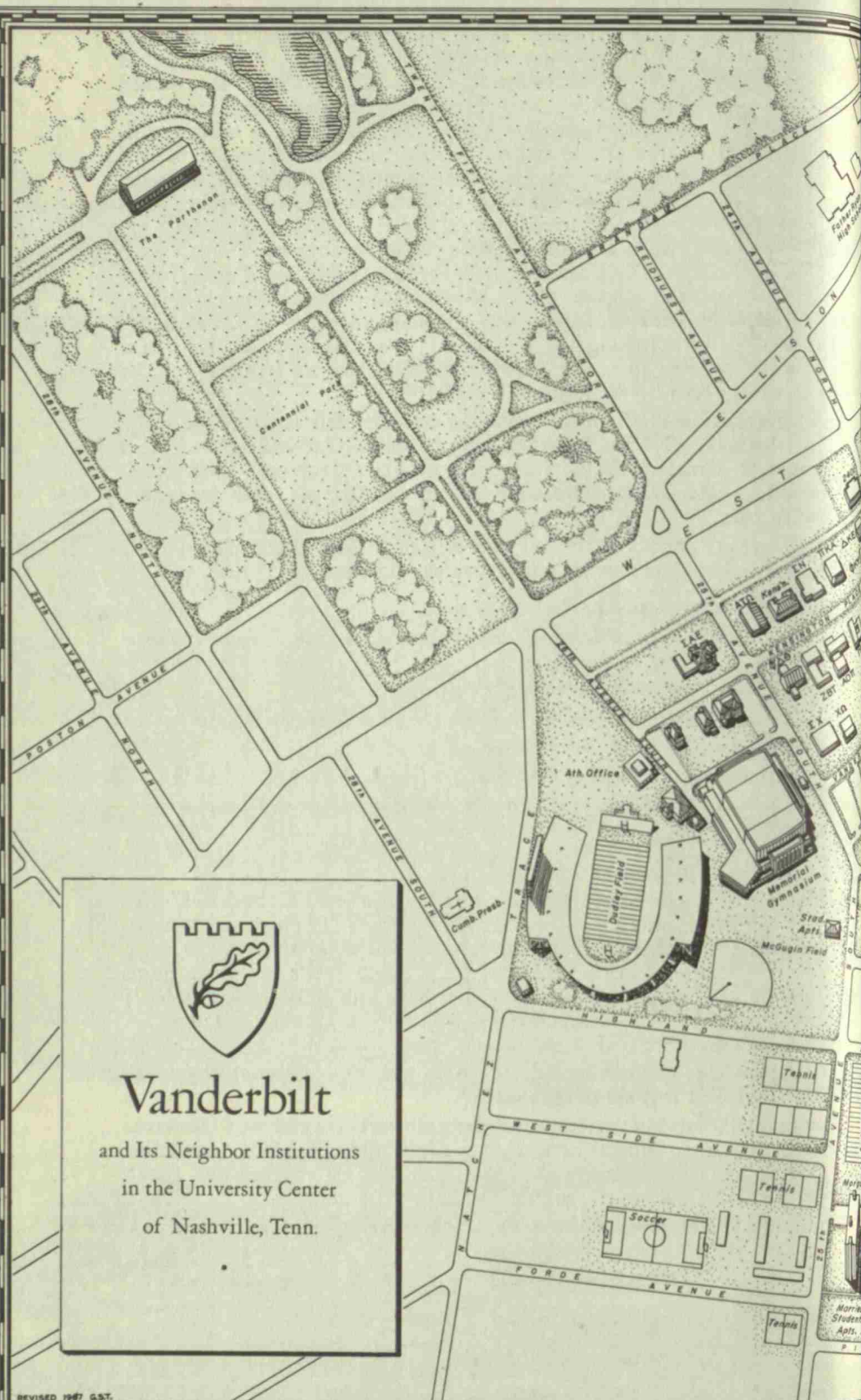
Honorary scholarship societies and the year each chapter was chartered are: Phi Beta Kappa (liberal arts, 1901); Alpha Omega Alpha (medicine, 1923); Sigma Xi (scientific research, 1944); Tau Beta Pi (engineering, 1946); Order of the Coif (law, 1948); Sigma Theta Tau (nursing, 1953).

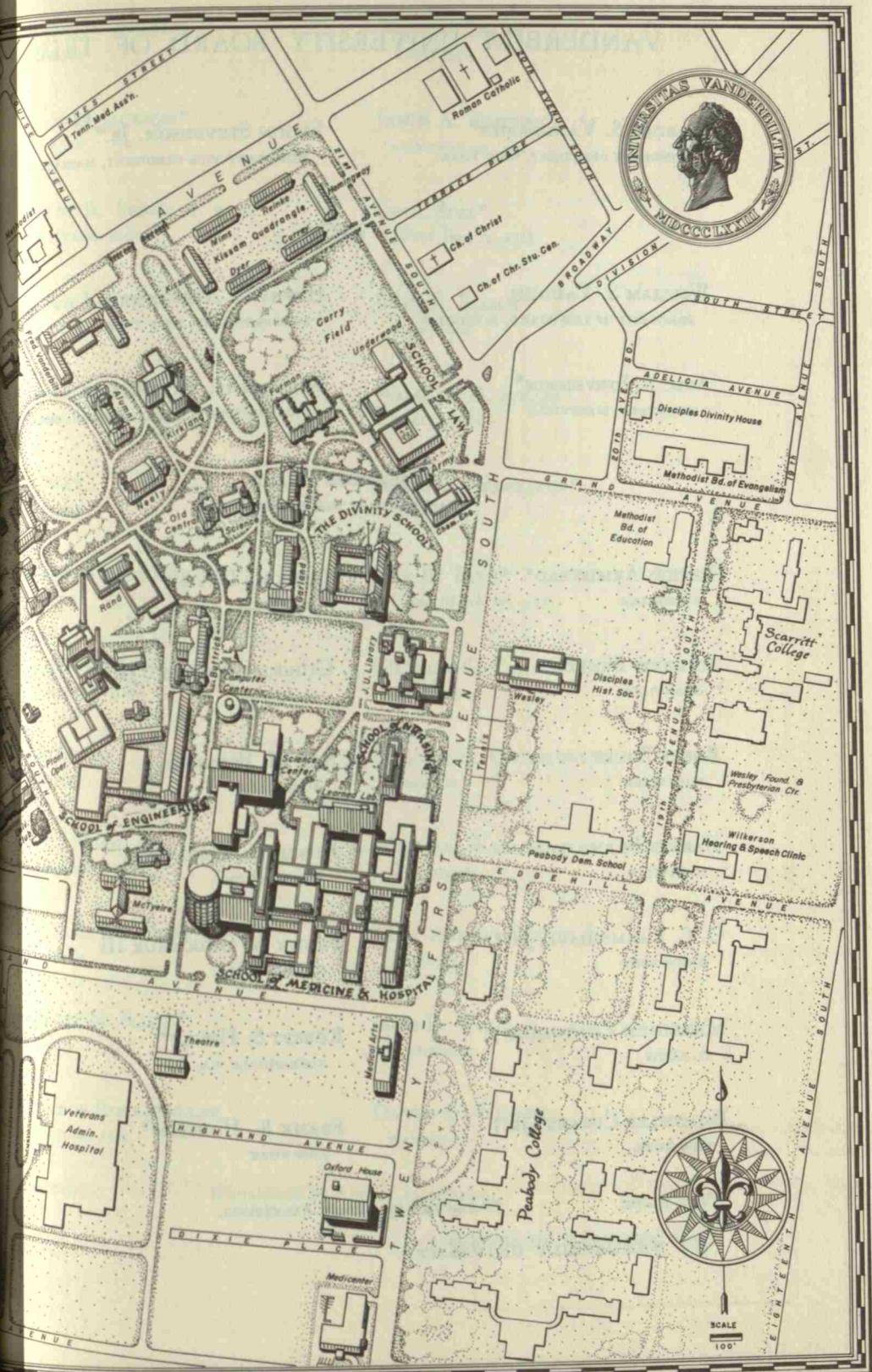
Vanderbilt is a member of the Association of American Universities.



Vanderbilt

and Its Neighbor Institutions
in the University Center
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GENERAL INFORMATION

THE first diplomas of graduation from Vanderbilt University were issued to sixty-one new Doctors of Medicine on February 25, 1875. The diplomas were in accord with an arrangement that the Vanderbilt trustees had made with the University of Nashville whereby that university's medical school was recognized as serving both institutions. The students could elect to receive their degrees from either university. Thus Vanderbilt embraced a fully-organized and functioning medical school before its own campus was ready for classes in October of that year.

The arrangement continued for twenty years, and the School of Medicine remained on the old "South Campus" for thirty more. In the beginning, the School was owned and operated as a private property of the practicing physicians and surgeons who comprised the faculty and received the fees paid by the students. This system was typical of medical education in the United States at that time. Vanderbilt made no financial contribution to the School's support and had no control over the admission requirements, the curriculum, or the standards for graduation. Even so, the catalogue proclaimed the instruction to be "inferior in no respect to that of any medical school in the country."

In 1895, the School was reorganized under the control of the Board of Trust. The requirements for admission were raised, the course of study was lengthened, and the system of instruction was changed to make way for laboratory work in the basic sciences. Subsequently there was a gradual increase in the quality of training offered.

The famous report of Abraham Flexner, which was published by the Carnegie Foundation in 1910 and was afterward credited with revolutionizing medical education in America, singled out Vanderbilt as "the institution to which the responsibility for medical education in Tennessee should just now be left." The Flexner Report declared Vanderbilt to be "the only institution in position at this juncture to deal with the subject effectively."

Large grants from Andrew Carnegie and his foundation and from the Rockefeller-financed General Education Board enabled Vanderbilt to carry out the recommendations of the Flexner Report. (These two philanthropies, with the Ford Foundation added in recent years, contributed altogether more than \$20,000,000 to the School of Medicine from 1911 onward.) The reorganized School drew upon the best-trained scientists and teachers in the nation for its faculty. The full benefits of the reorganization were realized when the decision was made to move the School to the main campus, thus integrating instruction in the medical sciences with the rest of the University.

PLAN OF INSTRUCTION

The objective of the program of medical education at Vanderbilt University is to produce the highest quality of medical graduate. A good medical education is best achieved by demanding excellence in performance on the

part of the student, excellence in teaching, research, and service on the part of the instructors, and by providing for close contact between the student and his teachers.

During the four years of undergraduate medical education at Vanderbilt the student will gain an understanding of the foundations of medical science necessary for the pursuit of any medical career, as well as a respect for the responsibilities of the physician to society. After graduation, most students continue their education by spending several years in training in clinical specialties or in research fellowship programs.

The curriculum of Vanderbilt University School of Medicine provides time for all students to take courses of their own choosing. The student thereby has an opportunity to increase his knowledge in fields in which he has particular interest, or to correct deficiencies in fields of importance to his overall medical education.

Students bear a high level of responsibility for participation in the curriculum in an effort to develop the sense of obligation for continuing scholarship necessary to keep pace of the rapid advances in medical knowledge.

The College of Arts and Science and the Graduate School of Vanderbilt offer courses which augment the medical curriculum, particularly during the senior year. As the Medical School is located on the University campus, the total facilities of Vanderbilt University are available to the medical student.

MEDICAL CENTER BUILDINGS

When the School's new quarters were opened in 1925, they were called "the best-arranged combination school and hospital to be found in the United States." The Medical Center buildings now encompass in excess of 750,000 square feet of floor space due to additions to research and clinical facilities.

Recent additions include:

The Andrew B. Learned Graduate Science Hall, a laboratory for research in the sciences basic to medicine and health-related research being conducted by members of the University's Medical and Graduate faculty. The building, which joins the main building on the north, was completed in 1964.

The West Wing addition to Vanderbilt University Hospital, a 154-bed patient care facility completed in 1962. This wing, which joins the main building at the southwest corner, is circular in shape with the nursing station located in the center surrounded by rooms for patients.

The Clinical Research Center, a United States Public Health Service regional facility for research in clinical medicine. This unit contains 100 beds and approximately 10,000 square feet of laboratory space. At the time of its opening it was the largest noncategorical clinical research center in the nation.

The West Court building, completed in 1964, contains a greatly expanded X-ray department, the entrance to the University Hospital, offices for admission and discharge of patients, a newborn nursery, and additional space for the Department of Pediatrics.

The Northeast Wing, a multi-purpose structure housing a complete laundry, the medical storeroom, research laboratories, and the Medical Library. Stacks and reading room were occupied by the library in 1964. An outstanding collection on the History of Medicine is accommodated within the library.

The Student Health & Radiology Wing, completed in 1967, is the most recent addition to the Medical Center. Comprising four floors with a total gross area of 40,000 square feet, it will accommodate a future addition of 10 floors. The upper two levels house the Student Health Center with outpatient facilities and a 26 bed inpatient unit. The second level is shell space, and the first level is occupied by Radiological research and therapy, using high energy electron and cobalt equipment. The design of the wing is of contemporary style, using materials of brick and exposed concrete to be compatible with the existing hospital and adjacent Science Center. Large areas of glass brighten inpatient rooms; a play deck is provided for the hospital's pediatric patients.

Other buildings in the Medical Center include the Medical Arts Building, erected in 1955 to provide part-time members of the clinical faculty with convenient office space; Mary Henderson Hall, which houses the Vanderbilt University School of Nursing; and the Bill Wilkerson Hearing and Speech Center, a community-operated diagnostic and treatment center for audiological and speech problems.

The Medical Center contains all the equipment and facilities necessary to operate a modern teaching hospital and a school of medicine. The laboratories and clinical facilities are closely coordinated to allow a ready flow of ideas between the laboratories of the medical sciences and the wards and outpatient clinics. Teaching laboratories are provided for the major subdivisions within medical science and for the clinical departments.

The hospital contains 501 beds and 45 bassinets divided into the following seven service units: medicine, surgery, obstetrics, gynecology, pediatrics, ophthalmology, and psychiatry.

The outpatient clinics are located on the first floor and contain a series of examining, treatment, and teaching rooms for general medicine and surgery, pediatrics, neurology, dermatology, psychiatry, dental surgery, orthopedic surgery, ophthalmology, otolaryngology, obstetrics, gynecology, urology, and plastic surgery.

There are 10 operating rooms and three delivery rooms.

Besides the clinical facilities offered by the wards and outpatient clinics of the University Hospital, the School of Medicine has clinical privileges in the 2,300 bed Central State Hospital for psychiatric patients. Vanderbilt is closely affiliated with the 500 bed Veterans Administration Hospital, it being a Dean's Committee hospital. The Nashville Metropolitan General Hospital, containing 240 beds and outpatient facilities, is another affiliate of the School of Medicine. The chiefs-of-service of this hospital are all members of the Vanderbilt faculty.

MEDICAL LIBRARY

The Library of the School of Medicine was founded in 1906. A year later the Nashville Academy of Medicine donated the private library of Dr.

Richard Douglas, consisting of 2,500 volumes. This nucleus has been augmented by generous gifts from local physicians. The library has been the recipient of many grants from the Rockefeller Foundation which made rapid development possible. The collection now contains most of the material needed for research in any of the medical sciences. It contains complete files of the important journals, both in English and foreign languages, numerous well-selected monographs and basic textbooks, and the important reference works and bibliographic indexes.

The Library contains approximately 75,000 volumes and receives 1,500 current periodicals and serial publications.

A collection of books, journals, and memorabilia illustrating the history and development of the literature of medicine, especially that of the United States, is being developed. This collection is kept in a History of Medicine Room provided by a generous donor. The funds for acquiring this collection have come largely through the gifts of patrons of the Library. Donations of letters, photographs, books, and money are gratefully received.

A FRIENDS OF THE MEDICAL LIBRARY FUND has been established honoring faculty, students, and other friends of the School of Medicine, and these memorial donations are used for the purchase of current and historical publications.

Professional librarians provide reader assistance and instruction in the use of medical literature. First year medical students are given orientation in the arrangement and services of the Library, and small group seminars are held for demonstration of methods of information retrieval, including practical experience in the use of medical indexes, abstracts, review publications, and specialized bibliographic products of modern computer technology.

A Xerox 914 copier machine is provided for library use within the limits of copyright laws, and loan services are maintained with local and out-of-town libraries. Through the facilities of the Joint University Libraries system, which contains more than a million volumes, students have ready access to publications in other fields.

The Medical Library is open from 8:00 a.m. to 11:00 p.m. Monday through Friday; from 8:00 a.m. to 4:30 p.m. on Saturday, and from 9:00 a.m. to 12:00 noon and 2:00 to 11:00 p.m. on Sunday; it is closed on New Year's Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day.

STUDENT AFFAIRS

HONOR CODE

All work in the School is performed in accordance with Honor Committee regulations. Suspected violations of the system are investigated by the Student Honor Committee, which is composed of representatives of all four classes.

VANDERBILT SOCIETY OF HISTORICAL MEDICINE

The Society was organized by the Class of 1953 for the purpose of encouraging awareness and appreciation of our medical heritage in the medical school community. Regular dinner meetings are held at which speakers

are invited to present papers for discussion. In the interest of fostering "a clear view of the panorama of medicine," membership in the Society is open to both students and faculty. Demonstrations and displays of books and pictures of historical significance are provided through the courtesy of the Medical Library.

STUDENT BODY

Number of students per class (1968/69) is as follows: Freshmen—59; Sophomores—60; Juniors—56; Seniors—56. The present student body comes from 27 states, the District of Columbia, and 2 foreign countries.

STUDENT HEALTH SERVICE

1. A physical examination by the family physician is required of all new students, prior to registration.

2. For the protection of themselves and others against communicable diseases, all new medical students receive their chest X-rays and tuberculin skin tests during their orientation. All new students are required to have a vaccination against smallpox within three years, tetanus toxoid immunization within three years, and current polio immunization. Immunizations for typhoid and diphtheria are highly recommended, but not required.

3. The University operates the Student Health Service and Infirmary for students with mild illnesses. For major illnesses, students are admitted to Vanderbilt University Hospital. At hours when the Student Health Service is closed, students may receive medical care at the Emergency Service of the Vanderbilt University Hospital. A student identification card must be presented.

Special medications, X-ray examinations, special laboratory tests, fees to private physicians, and hospital room and board charges which are not covered by the insurance will be paid for by the student.

4. *Student Insurance Plan:* All *full-time* students will be automatically covered with hospital insurance at the time of their registration. No additional premium is required. Coverage extends from the time of registration until September 1 of the following year, whether a student remains in school or is away from the University. This plan is designed to provide certain hospital, surgical, and in-hospital medical care benefits. Married students who wish to provide hospital insurance for their families or students who are classified as part-time who wish this insurance coverage must apply and pay an additional premium. All inquiries as to details should be directed to Smith, Reed, Thompson & Ellis Co., 1322 Nashville Trust Building, Nashville, Tennessee 37203.

5. The Health Service has the policy of maintaining complete health records on all students. If a student is admitted to a hospital, seen in Emergency Room or seen by a private physician, he should request that his physician forward a summary of his illness and treatment to the Health Service.

LIVING ARRANGEMENTS

The Vanderbilt residence halls are an integral part of the University's educational facilities.

Rooms may be occupied on the day before the opening of the semester and through the last day of the semester. Basic furniture is provided by the University, and the occupant is responsible for the condition of both furniture and room, being charged with all damage. Residents furnish their own sheets, pillow cases, towels, pillows, blankets and bedspreads. These items may be rented.

Rooms are rented for the academic year. All rent is payable in advance at the Bursar's Office. Students withdrawing from the University for any reason, are not entitled to return of room rent, and the University will not be liable for its return or refund.

Rooms for men may be reserved by application to the Housing Office. A room reservation deposit of \$50 is required at the time of reservation. Refund of the room reservation deposit will be considered if the cause for the request is judged to be a matter beyond the applicant's control and if the request, in writing, is received by July 15.

Single rooms for men are available in air-conditioned Currey Hall for \$205 a semester. Single and double rooms in Wesley Hall are also available at \$100 to \$115 a semester. Wesley Hall is on Twenty-first Avenue facing the Joint University Libraries.

A few rooms for graduate women are available on the campus. Inquiries concerning women's on-campus housing should be addressed to the office of the Assistant Dean of Women, 4111 Branscomb Quadrangle.

NOTICE: Rates are subject to periodic review and change.

HOUSING FOR FAMILIES

Apartments available for married students include 240 air-conditioned units (studio, one- and two-bedroom apartments) in Morgan and Lewis Houses (furnished and unfurnished) and 20 two-bedroom furnished units in the Highland-Forde Apartments. Inquiries should be addressed to the Housing Office, Building A, West Side Row.

Assignments are made with the understanding that assignees are eligible for occupancy only while enrolled as full-time students, and that the apartment will be vacated immediately after the occupant ceases to be a student. Tenants are required to sign leases which are renewable sixty days prior to expiration. The University reserves the right to require any occupant to vacate the apartment at any time and for any reason, a reasonable notice having been given.

OTHER HOUSING

Suitable living quarters in the city of Nashville are easily available and students have usually found little difficulty in locating satisfactory accommodations. A list of rooms and apartments for rent is maintained at the Housing Office, Building A, West Side Row.

UNIVERSITY DINING FACILITIES

The Vanderbilt Hospital cafeteria is located within the building.

The University's main cafeteria in Rand Hall serves students, faculty, and employees. By the semester, students can board at Rand for approximately 15 per cent less than the daily cash prices for meals. Students engaging board by the semester should apply at the office of the Director of Food Services.

The Divinity School refectory serves meals, on a cash basis, to professional and graduate students, faculty, and staff.

AUTOMOBILES

Students driving on the campus must register their cars with the Department of Safety. Parking spaces are not available for all cars registered, and students are urged to use off-campus parking.

ATHLETIC FACILITIES

Vanderbilt Memorial Gymnasium may be used by medical students and their families. Facilities include an enclosed swimming pool. Tickets to basketball and football games may be purchased at reduced rates.

EXPENSES AND FINANCIAL AID

THE average annual expense of a student in the School of Medicine, exclusive of clothes and incidentals but including living accommodations is estimated as amounting to approximately \$3,100.

TUITION AND FEES

The University reserves the right to change the schedule of tuition and fees without further notice.

Tuition Fee for the Academic Year.....\$ 1,760

NOTE: Effective September, 1969, tuition will be \$1,860 per academic year.

Tuition and fees and other University charges are due and payable not later than ten days after the date of billing each semester. An arrearage in tuition for any session must be paid before admission to the succeeding session.

Application Fee (To accompany Application Form)..... 10.

Contingent Deposit..... 10.

This deposit will be required of first and second year students to cover breakage of apparatus and damage to building, and will be returned, less the charges, at the close of the academic year.

Diploma Fee (Charged to graduating students, payable during the second semester)..... 10.

First-year medical students who are also three-year students at Vanderbilt University are required by the College of Arts and Science to pay a \$60 fee.

Students who register for the regular courses in the Medical School must pay the full tuition each year. There will be no exception to this requirement.

Graduate students who enroll in regular courses in the medical curriculum for credit toward an academic degree and later become candidates for the degree of Doctor of Medicine may be required to pay the full tuition indicated above.

Students withdrawing from the University for any reason are not entitled to any return or repayment of tuition, fees, room rent, or any other regular charges or assessments, and the University will not be liable for the return or refund of same.

MICROSCOPES, BOOKS, AND EQUIPMENT

Each student is required to possess a standard four-objective microscope and a suitable substage light.

The minimal cost of books is approximately \$75 a year. Purchases made at the Vanderbilt Book Store are on a cash basis.

All students must acquire hemocytometers and ophthalmoscopes during the second year.

Students also must have clean white laboratory coats.

FINANCIAL ASSISTANCE

Education leading to the degree of Doctor of Medicine requires a careful consideration of financial commitment by the prospective student. Thus, financial planning to meet subsistence and educational costs of a medical education is an important part of the student's planning toward medical school.

Scholarships, fellowships, loans and financial aid awards are available at Vanderbilt. Loans, some scholarships and Vanderbilt Financial Aid awards are made solely on the basis of demonstrated financial need to meet costs basic to the student's subsistence and educational program which cannot be met by the student's personal resources or resources otherwise reasonably available to him. Other scholarships are awarded on a competitive merit basis.

It should be emphasized that financial aid from school sources must be considered a supplement to personal resources rather than the primary source of funds necessary to attend school. Present financial aid programs are not fully meeting financial aid requests of students. Favorable consideration for financial aid is based upon an acceptable application and budgetary statement together with the availability of funds. Our ability to fund approved requests for financial aid depends upon adequate annual Federal funding of the Health Professions Financial Aid Program and the magnitude of gifts for financial aid from alumni and friends of the medical school. Recent experience has been that most approved financial aid requests have been met for items basic to the student's subsistence and education from a combination of sources including the student's personal assets, school sources and others.

The Vanderbilt student is assured that the school will do its best to find or recommend sources sufficient to meet demonstrated financial needs basic to subsistence and education during the period of enrollment. The needy student must also recognize his own responsibility to fund a major portion of the cost of attending medical school, making application for aid from school sources only when other aid is unavailable. Needy students must be prepared to utilize a combination of financial aid sources from both school and nonschool sources to meet acceptable budgets. Financial aid is subject to application and review annually.

Students desiring more specific information about financial aid resources at Vanderbilt University School of Medicine should write to Dr. John E. Chapman, Associate Dean for Education, The Vanderbilt Medical School, Nashville, Tennessee 37203.

Scholarships and Fellowships are described on page 26.

ALPHA KAPPA KAPPA ALUMNI ASSOCIATION SCHOLARSHIP FUND. These funds are made available to students by alumni of the Alpha Kappa Kappa medical fraternity.

THE WILLIAM A. DIMMICK MEDICAL SCHOLARSHIP FUND. This fund has been established by friends to honor Reverend William A. Dimmick. It is to be used for the education of worthy medical students as a revolving scholarship loan fund.

GALE F. JOHNSTON LOAN FUND. The funds donated by Gale F. Johnston at the suggestion of his wife Miriam are to be used as a revolving loan fund for students in the School of Medicine.

THE IKE J. KUHN SCHOLARSHIP. This scholarship is provided by a bequest from the will of Mr. Ike J. Kuhn, and is awarded in the School of Medicine to a worthy boy or girl born and reared in any of the states commonly known as the "Southern States."

LIFE & CASUALTY INSURANCE COMPANY FUND. The funds made available to Vanderbilt University are to be used as a revolving loan fund for students in the School of Medicine.

THE THOMAS L. MADDIN, M.D. FUND. This fund is provided by a bequest from the will of Mrs. Sallie A. C. Watkins in memory of Doctor Thomas L. Maddin to be used by some worthy young man for medical education at Vanderbilt.

THE JAMES PRESTON MILLER TRUST. This trust, left by the will of James P. Miller in memory of his father, James Preston Miller, provides funds to assist in the medical education of deserving young men and women at Vanderbilt University. Residents of Overton County, Tennessee, are to be given first preference, and other residents of Tennessee to be given second preference.

THE PROVIDENT PHARMACEUTICAL LOAN FUND. The funds made available to Vanderbilt University are to be used as a revolving loan fund for students in the School of Medicine.

ROBERT E. SULLIVAN MEMORIAL FUND. Through the generosity of Robert E. Sullivan a fund has been established to assist worthy and deserving medical students in meeting their financial obligations.

THE THOMAS W. RHODES FELLOWSHIP. Funds provided by the will of Georgine C. Rhodes were left to Vanderbilt University for the purpose of establishing one or more fellowships in the School of Medicine.

THE THOMPSON STUDENT SCHOLARSHIP FUND. This fund is to be used as a revolving loan fund for students in the School of Medicine. Preference in making the loans is given to students from middle Tennessee, northern Alabama and southern Kentucky.

THE JOE AND HOWARD WERTHAN FOUNDATION SCHOLARSHIP FUND. The funds made available by this foundation to Vanderbilt University are to be given or loaned to those students in the School of Medicine needing financial assistance.

THE HEALTH PROFESSIONS STUDENT LOAN PROGRAM. The Health Professions Educational Assistance Act of 1963 authorizes the establishment of student loan funds to be administered by the School of Medicine. The maximum amount that can be borrowed during an academic year is \$2,500 based on demonstrated need. Loan applications and information may be obtained from the Associate Dean for Education, School of Medicine.

THE HEALTH PROFESSIONS SCHOLARSHIP PROGRAM. This program is designed to enable talented students from low-income families to undertake the study of medicine. Additional information and application forms may be obtained from the Associate Dean for Education.

Employment Opportunities for Wives

Nashville is a middle-sized city (500,000) affording employment opportunities common to an industrial, business, and educational center. Major employers include Vanderbilt University, two national insurance companies, and the state government. Every attempt is made to find a position within the University for wives of students who have demonstrated skills in business, office routine, laboratory work, or patient care skills such as nursing, x-ray technology, and nursing aides. If interested in a position on the University campus, students should contact the Vanderbilt Employment Center, Baker Building, Twenty-first and West End Avenues, Nashville, Tennessee 37203.

SCHOLARSHIPS AND FELLOWSHIPS

SCHOLARSHIPS

Vanderbilt University School of Medicine has a number of scholarships available to worthy applicants with distinguished scholastic records. Information and application forms may be obtained from the Committee on Fellowships and Scholarships or from the Dean of Medical Students.

JUSTIN POTTER MERIT SCHOLARSHIPS. The Justin Potter Merit Scholarships commemorate Mr. Justin Potter, a Nashville business man, industrialist and financier. These scholarships were established in 1963 by Mr. Potter's family and are awarded by the Committee on Admissions of Vanderbilt University School of Medicine and the Justin Potter Merit Scholarship Committee. They are awarded annually to five applicants who have legal, established residences in any of the following Southern states: Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, and Virginia.

Stipends of \$3,000 annually shall be awarded to successful candidates and, once awarded, shall continue at this rate for four years contingent upon satisfactory performance.

Method of selection of the Justin Potter Scholars is as follows: The Committee on Admissions of Vanderbilt University School of Medicine recommends to the Justin Potter Merit Scholarship Committee candidates who desire this scholarship and merit consideration. Selected candidates are invited to Nashville to visit with the Committee (candidates will be reimbursed for their expenses). The Committee composed of outstanding business men, physicians, and educators will make the final selection, five successful candidates being designated "Justin Potter Merit Scholars."

THE PFIZER LABORATORIES MEDICAL SCHOLARSHIP PROGRAM. This scholarship of one thousand dollars is given each year to a medical student who needs financial assistance and who has outstanding scholastic ability.

ROANE-ANDERSON COUNTY MEDICAL SOCIETY SCHOLARSHIP. A scholarship in the amount of \$500 is allocated to a needy medical student with preference being given to students from Roane, Anderson and Morgan Counties, Tennessee where possible.

J. F. FOX SCHOLARSHIP IN MEDICINE. This scholarship was established in memory of Dr. J. F. Fox, a Vanderbilt graduate, and provides for annual scholarship assistance to students in the School of Medicine based on scholarship promise and financial need.

THE HEALTH PROFESSIONS SCHOLARSHIP PROGRAM. This program is designed to enable talented students from low-income families to undertake the study of medicine. Additional information and application forms may be obtained from the Associate Dean for Education.

STUDENT RESEARCH FELLOWSHIPS

Student research under the sponsorship of members of the faculty of the pre-clinical and clinical departments is endorsed as an integral part of the elective medical curriculum. Fellowships are usually awarded for the summer months or on a part-time basis during the academic year. Current stipends vary from \$750 to \$990 for the summer programs depending upon experience. Funds for fellowship support are available through the Committee on Fellowships and Scholarships on a competitive basis and from individual departments within the Medical School. Funds are provided from a variety of sources, including the United States Public Health Service, Federal Laboratory Division of American Cyanamid Company, Ford Foundation, The Tobacco Industry Research Foundation, The Allergy Foundation of America, and the Middle Tennessee Heart Association. Research projects may be taken as electives for credit but without remuneration. Special arrangements can be made for participation in research programs abroad or in other medical schools within the United States.

HONORS AND AWARDS

FOUNDER'S MEDAL. This medal is awarded to the student in the graduating class of the School of Medicine who has attained the highest average standing in scholarship during four years of study.

ALPHA OMEGA ALPHA. A chapter of this honor medical society was established by charter in the School of Medicine in 1923. Not more than one sixth of the students of the fourth-year class are eligible for membership and only one half of the number of eligible students may be elected to membership during the last half of their third year. This society exists for its purpose the development of high standards of personal conduct and scholarship, and the encouragement of medical research. Students are elected into membership on the basis of their scholarship, character, and originality.

THE BEAUCHAMP SCHOLARSHIP. This scholarship, founded by Mrs. J. A. Beauchamp in memory of her husband who was for many years superintendent of the Central State Hospital in Nashville, is awarded to the student showing the greatest progress in neurology and psychiatry and who otherwise worthy and deserving.

THE BORDEN UNDERGRADUATE RESEARCH AWARD IN MEDICINE. Established in 1945 by the Borden Company Foundation, Inc. this award provides \$500 to the person in the graduating class of the School of Medicine who while enrolled in the School has carried out the most meritorious undergraduate research. Originality and thoroughness of research shall be of primary consideration. Candidates for the award should apply to the Committee on Fellowships and Scholarships for consideration.

THE MERRELL AWARD IN PATHOLOGY. Established in 1953 by the William S. Merrell Company, this award of \$150 is provided annually for the two most outstanding papers on research in the field of pathology by Vanderbilt University medical students. The author of the first place paper will be awarded \$100 and the author of the second place paper, \$50. Candidates for the award should submit their papers to the Committee on Fellowships and Scholarships.

THE ROCHE AWARD. This award, a gold wrist watch provided by Roche Laboratories, is presented to the medical student with the highest cumulative scholastic rank after two years of medical school.

THE ALBERT WEINSTEIN PRIZES IN MEDICINE. Three prizes, established in memory of Albert Weinstein, M.D., are awarded at graduation to senior students who, in the opinion of the faculty of the Department of Medicine, merit recognition for high scholastic attainment and the qualities which characterize the fine physician.

Dr. Albert Weinstein graduated from Vanderbilt University in 1926 and was as Founder's Medalist from Vanderbilt University School of Medicine in 1929. Following training at Vanderbilt and Johns Hopkins he returned

Vanderbilt as Chief Resident in Medicine, 1933-1935, and served as a distinguished member of the faculty and Clinical Professor of Medicine until his death on October 1, 1963. Despite a busy and successful practice, Dr. Weinstein contributed regularly to the medical literature and maintained a major interest in the teaching of medical students. These prizes were established in 1964 by contributions from friends, associates, and former patients of Dr. Weinstein.

DEAN'S AWARD FOR STUDENT RESEARCH PRESENTATION. A prize of \$100 is awarded for the most outstanding research paper presented by a medical student.

BORDEN RESEARCH PRIZE IN MEDICAL NUTRITION. This research prize, established in 1967, will be offered each year as a result of a grant by the Borden Company Foundation, Incorporated. The purpose of the award is to stimulate interest in nutritional problems and research by the young medical profession.

ADMISSION

THE School of Medicine selects its students from those who fulfill one of the following conditions:

1. Graduates of a college or university of recognized standing.
2. Senior in absentia of a college or university of recognized standing who will be granted the Bachelor's degree by their colleges after having completed successfully one year of work in the School of Medicine. A properly accredited statement to this effect from the colleges shall accompany all applications for admission as seniors in absentia. A form is furnished for this purpose.
3. Students of foreign universities of recognized standing who have completed three years of collegiate education may be admitted to the School of Medicine at the discretion of the Committee on Admissions.

Approximately fifty-nine students, both men and women, are admitted to the first year class.

As admission to the School of Medicine is competitive, students will be selected on the basis of the quality of their college work and the general fitness of the applicant for the study of medicine.

MINIMUM REQUIREMENTS

Every candidate must present evidence of having satisfactorily completed during his college course the following minimum requirements, in which one semester hour is the credit value of sixteen weeks' work consisting of one hour of lecture or recitation or at least two hours of laboratory work:

1. *Biology*. Eight semester hours including laboratory work. The course may be general biology, zoology, or zoology and botany, but not more than half may be botany.
2. *Chemistry*. A minimum of 12 semester hours is required. Eight of these must be in general inorganic chemistry including laboratory work. A minimum of 4 semester hours credit in organic chemistry is required covering both aliphatic and aromatic compounds including laboratory work.
3. *Physics*. Eight semester hours are required including laboratory work. It is desirable that emphasis be placed on quantitative laboratory work.
4. *English and Composition*. Six semester hours.

Students are urged to take courses in college which will strengthen their foundation in basic natural and social sciences, mathematics and their cultural background.

MEDICAL COLLEGE ADMISSION TEST

The Medical College Admission Test is given under the auspices of the Association of American Medical Colleges, and is required of applicants to Vanderbilt. It is given twice a year at most universities and colleges.

Since the examination score is used by medical schools in the selection of applicants, students should take the test, at the latest, in the Spring prior to the time application is submitted.

The score made on this examination will be used by the Committee on Admissions in considering applications for admission to the School of Medicine, together with the scholastic record and recommendations.

APPLICATIONS FOR ADMISSION

Application forms may be obtained from the Admissions Committee Office, School of Medicine, Vanderbilt University, Nashville, Tennessee 37203.

Applications for admission may be filed fifteen months in advance of date of entrance. The Committee on Admissions begins its consideration of applicants in September, and will accept new applications until the class is filled.

Successful applicants are required to make a deposit of \$50. This deposit is credited toward the payment of the first tuition, and is returnable until January 15th, in the event the student does not matriculate.

ADMISSION TO ADVANCED STANDING

Applicants who have satisfactorily completed two years of study at approved medical schools may be accepted for admission to the third year class, subject to the following requirements:

1. Application for advanced standing must be filed according to the procedure described for admission to the first year. A deposit of \$50 is required of successful applicants.
2. Applicants must furnish evidence of having satisfied the conditions of admission and of having completed all the work required of students in the class they desire to enter.
3. Applicants must present a certificate of honorable dismissal from the medical school they have attended and be eligible for continuing enrollment in their medical school of origin if they so desire.

REGULATIONS

HONOR CODE

ALL work in this University is conducted under the Honor Code. For the successful operation of the honor system the cooperation of every student is essential. A Student Honor Committee exists for the purpose of investigating cases of violation of this system.

EXAMINATIONS AND PROMOTIONS

Successful completion of the courses of the medical curriculum and scholastic standing are determined by the character of the student's daily work and the results of examinations. Examinations may be written, oral, or practical, and may be held in conjunction with each course or at the end of the academic year. The quality of work of each student is considered, usually at the end of each semester, by a committee composed of the instructors responsible for his more important courses.

Students who fail in two major courses or fail a re-examination in a major course may be required to withdraw from the School. Students who have had no reported failures may be required to withdraw from the School if their work has been of a generally unsatisfactory quality. Students may be given credit for a subject by re-examination, but failures remain on the records, and may be counted as a cause for requesting withdrawal, provided another failure in a major course occurs.

Major Courses are as follows:

First Year—Biochemistry, Gross Anatomy, Histology, and Physiology

Second Year—Methods in Clinical Science, Microbiology, Pathology, and Pharmacology.

Third Year—Medicine, Obstetrics-Gynecology, Pediatrics, and Surgery

Fourth Year—Medicine, Obstetrics-Gynecology, Pediatrics, Psychiatry, and Surgery.

Any student who indicates by his work or his conduct that he is unfit for the practice of medicine may be required to withdraw from the School at any time.

Any student who fails to pass a course will be required to remove the failure before being permitted to enter the courses of the next academic year.

REQUIREMENTS FOR DOCTOR OF MEDICINE DEGREE

Candidates for the degree of Doctor of Medicine must be mature and of good moral character. They must have spent at least four years of study of its equivalent as matriculated medical students. The last two years of this study must have been in this School. They must have completed satisfactorily the medical curriculum, have passed all prescribed examinations, and be free of indebtedness to the University. Students fulfilling

These requirements will be recommended for the degree of Doctor of Medicine.

NATIONAL BOARD EXAMINATIONS

All second-year students are required to take for credit Part I and all fourth-year students are required to take for credit Part II of the National Board Examinations. Part II is given in April and Part I is given in June.

BASIC SCIENCE EXAMINATIONS

Approximately twenty states now require examinations on the basic science subjects (anatomy, bacteriology, chemistry, pathology, and physiology) as a preliminary to medical licensing examinations. Since the various states are not uniform in their requirements a considerable impediment to movement of physicians from state to state by reciprocity is created. Each student is urged to achieve certification in the basic sciences as soon as possible.

EXTRACURRICULAR WORK

Students engaging in outside work must report such activity to the Dean of Students at the beginning of the school year or at any time during the school year that such work is undertaken. In those instances in which the work is considered prejudicial to the student's education, he may be required to discontinue it. Outside work is not allowed in the first and second years.

INSTRUCTION LEADING TO THE M. D. DEGREE

The curriculum is divided into a basic set of required courses taken by all students, and elective courses which may be chosen. Required courses constitute the nucleus of medical education at Vanderbilt; elective courses are an integral part of each student's educational experience in the Medical School, but allow considerable flexibility of individual curricula. Each student is assigned a faculty adviser to aid in the selection of elective courses and the program of electives must be approved by the Associate Dean of Medical Education.

All electives are courses for credit, graded on the same basis as required courses, and are non-remunerative. The following types of courses may be elected: lecture series; specialty clinics; clinical clerkships or research experience, at Vanderbilt or other institutions; Vanderbilt undergraduate and graduate courses.

Two hours each week have been designated for presentation of scholarly work of wide interest, e.g., lectureships, medical society meetings, student papers. The attendance of all students and faculty is expected.

Students are encouraged to participate in the summer research fellowship program.

The Medical School curriculum is scheduled during the conventional University nine months, and is divided on a semester basis.

First Year: Most of the year is spent in the study of anatomy, biochemistry, and physiology. All day Wednesday and Saturday morning (during the second semester) are reserved for study and electives. Electives available to the freshmen cover a wide range of subjects, e.g., Fundamental Principles in Use of Radioisotopes, Topics in General Physiology, Medicine in Families and the Community, Medical Genetics, Principles of Anthropology.

Second Year: Courses include microbiology, pathology, pharmacology, medical statistics, preventive medicine, and psychiatry. Students begin the study of patients during the second semester, when all the clinical departments cooperate in giving the student an introduction to history taking, physical examination, and laboratory study of patients through a series of lectures, demonstrations, and individual practice by the student. A variety of electives may be taken, either on Wednesday or at scattered times throughout the week.

Third Year: Ward clerkships in Medicine, Obstetrics-Gynecology, Pediatrics, and Surgery occupy the third year. Students have close contact with a limited number of selected patients under the supervision of attending physicians and house staff.

Fourth Year: During one semester seniors serve as clinical clerks in Pediatrics and as clerks to ambulatory patients in the Out-Patient Service. Here they have opportunity to see disease in its earlier stages, when many

difficult of diagnosis, under conditions of office practice and with opportunities for follow-up examinations and observation over relatively long periods.

Seniors have an entire semester designated as elective. The opportunities for use of this elective semester include research fellowships in a clinical or pre-clinical department, at Vanderbilt or other institutions; advanced ward clerkships in clinical areas; combinations of a variety of specialty clinics and lecture courses. The flexibility of the fourth year curriculum gives the student maximum opportunity for individual development.

1st YEAR FALL SEMESTER							Schedule of Courses		
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY			
8:00-12:00	Biochemistry	Anatomy		Anatomy	Biochemistry	Anatomy			
1:00-4:00	Biochemistry	Anatomy		Anatomy	Biochemistry				
4:00-5:00		Student-Faculty Hour		Student-Faculty Hour					
1st YEAR SPRING SEMESTER							Schedule of Courses		
HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY			
8:00-12:00	Anatomy	Physiology		Physiology	Anatomy				
1:00-4:00	Anatomy	Physiology		Physiology	Anatomy				
4:00-5:00		Student-Faculty Hour		Student-Faculty Hour					

Elective time is unshaded.

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:00	Pathology					
9:00		Pathology		Pathology	Pathology	Microbiology
10:00						
11:00						
12:00						
1:00	Methods in Clinical Science	Psychiatry		Microbiology	Microbiology	
2:00		Med. Stat.				
3:00		Epidemiology Prev. Med.				
4:00		Student-Faculty Hour	Student-Faculty Hour		Student-Faculty Hour	

1. Elective time is unshaded.
2. Most Sophomores should take 4-5 elective hours each semester.
3. Clinical-Pathological conferences will routinely be given in the Tuesday Student-Faculty Hour.

2nd YEAR SPRING SEMESTER

Schedule of Courses

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:00	Pharmacology	Methods in Clinical Science			Pharmacology	
9:00						Psychiatry
10:00						Pharmacology
11:00				Preventive Medicine		
12:00	LUNCH					
1:00	Methods in Clinical Science	Methods in Clinical Science		Methods in Clinical Science	Pharmacology	
2:00						
3:00						
4:00		Student-Faculty Hour		Student-Faculty Hour	Radiology	

1. Elective time is unshaded.

2. Most Sophomores should take 4-5 elective hours each semester.

3rd YEAR

Schedule of Courses

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
8:00-12:00		Wards:	12 weeks, Medicine 12 weeks, Surgery 6 weeks, Pediatrics 6 weeks, Obstetrics & Gynecology			
1:00-4:00						
4:00 P.M.	24 hrs Surgery 12 hrs Orthopedic Surgery	Student-Faculty Hour	18 hrs Medicine 18 hrs Pediatrics	Student-Faculty Hour	12 hrs Radiology 12 hrs Anesthesiology 12 hrs OB-Gyn	

1. Elective time is unshaded.
2. Minimal elective hours = 0
3. Clinical-pathological conferences will routinely be given in the Tuesday Student-Faculty Hour.

3rd YEAR

Rotation, in groups of one-sixth of class

STUDENT GROUP	1st 6 weeks	2nd 6 weeks	3rd 6 weeks	4th 6 weeks	5th 6 weeks	6th 6 weeks
1		Medicine				
2				Surgery		
3	Pediatrics Ob-Gyn					
4		Ob-Gyn Pediatrics		Medicine		
5						
6	Surgery		Pediatrics Ob-Gyn			
					Surgery	
						Medicine

HOURS	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
A	General Medical Clinic: one morning per week					
8-9						
9-12						
18 wks		Student-Faculty Hr.		Student-Faculty Hr.		
8-9						
B1	Psychiatry 6 wks					
9-12						
1-4						
6 wks				Psychiatry 6 wks		
4-5		Student-Faculty Hr.		Student-Faculty Hr.		
8-9						
B2	General Medical Clinic: one morning per week					
9-12						
1-4						
6 wks		Student-Faculty Hr.		Student-Faculty Hr.		
4-5						
8-9						
B3	Clinics: Pediatrics, 3 afternoons or morn. per week General Medical, 1 morning per week					
9-12						
1-4						
6 wks		Student-Faculty Hr.		Student-Faculty Hr.		
4-5						

1. Elective time is unshaded.

<i>Rotation, in groups of one-sixth of class</i>						
4th YEAR						
Semester A	18 weeks, with General Medical Clinic required one morning per week.					
Semester B*	B ₁ 6 weeks: Psychiatry 18 hours per week B ₂ 6 weeks: General Medical Clinic (1 morning per week) B ₃ 6 weeks: Pediatrics Clinics (3 afternoons or mornings per week) and General Medical Clinic (1 morning per week)					
Student Group	FALL SEMESTER			SPRING SEMESTER		
	1st 6 wks	2nd 6 wks	3rd 6 wks	1st 6 wks	2nd 6 wks	3rd 6 wks
1	A	A	A	B ₁	B ₂	B ₃
2	A	A	A	B ₂	B ₃	B ₁
3	A	A	A	B ₃	B ₁	B ₂
4	B ₁	B ₂	B ₃	A	A	A
5	B ₂	B ₃	B ₁	A	A	A
6	B ₃	B ₁	B ₂	A	A	A

*Semester B also includes OB-Gyn Clinics and 3 Surgery Clinics during year.
 *Includes rotation at night in Emergency Room.

LECTURESHIPS

ALPHA OMEGA ALPHA LECTURE. The Alpha Omega Alpha Honor Medical Society invites each year a scientist of prominence to deliver a lecture before the students, faculty, and local members of the medical profession. The first lecture was given during the school year 1926-1927.

THE BARNEY BROOKS MEMORIAL LECTURESHIP IN SURGERY. In 1952 through the generosity of a Vanderbilt alumnus an annual lectureship was established to honor the memory of Dr. Barney Brooks, formerly Professor of Surgery and Head of the Department and Surgeon-in-Chief of the Vanderbilt University Hospital. As a fitting memorial to Dr. Brooks these lectures have been given by physicians who have made distinguished contributions in clinical or investigative surgery. The first Barney Brooks Memorial Lecture in Surgery was given during the spring of 1953.

THE ABRAHAM FLEXNER LECTURESHIP. In the fall of 1927 Mr. Bernard Flexner of New York City gave \$50,000 to Vanderbilt University to establish the Abraham Flexner Lectureship in the School of Medicine. This lectureship is awarded every two years to a scientist of outstanding attainments who shall spend as much as two months in residence in association with a department of the School of Medicine. The first series of lectures was given in the fall of 1928.

PAULINE M. KING MEMORIAL LECTURESHIP. This lectureship was established in 1962 by Mr. Robert F. King of Klamath River, California, as a memorial to his wife. Each year a distinguished thoracic or cardiovascular surgeon is invited by the Department of Surgery to lecture at Vanderbilt University School of Medicine. The first Pauline M. King Memorial Lecture was given in the spring of 1963.

PAUL DUDLEY LAMSON MEMORIAL LECTURE. This annual lectureship was instituted in 1965 in memory of Dr. Lamson who was Professor of Pharmacology and Chairman of the Department of Pharmacology at Vanderbilt University from 1925 until his retirement in 1952. A prominent pharmacologist is brought to the Vanderbilt campus each year under the sponsorship of the alumni and staff of the Department of Pharmacology.

GLENN A. MILLIKAN MEMORIAL LECTURE. This lectureship was established in 1947 by the members of the then second-year class. It has subsequently received support by means of a capital fund by Dr. Glenn Millikan's father and mother, Dr. Robert A. Millikan and Mrs. Gretna B. Millikan, and friends. Contributions have been made to the fund by members of the founding class and other students. The lectureship is maintained to provide a distinguished lecturer in physiology.

HUGH J. MORGAN VISITING PROFESSORSHIP IN MEDICINE. This visiting professorship was established in 1959 through the generosity of faculty, former house officers, and friends of the late Dr. Hugh J. Morgan who served as Professor of Medicine and Chairman of the Department at Vanderbilt University School of Medicine from 1935 through 1959. As a tribute to Dr. Morgan and his outstanding qualities as a superior clinician, the De-

partment of Medicine invites a distinguished physician to spend one year in residence during which time he assumes the teaching duties of the Professor of Medicine with students, house officers, and faculty. The visiting professorship was awarded in 1959.

THE COBB PILCHER MEMORIAL LECTURE. In 1950 the Pi Chapter of the Phi Chi Medical Fraternity established the Cobb Pilcher Memorial Lecture to honor the memory of Dr. Pilcher, formerly Associate Professor of Surgery, distinguished neurosurgeon, and a member of Phi Chi fraternity. Each year a lecturer of prominence is selected. The first lecture was given in 1950.

INSTRUCTION LEADING TO THE M.D. AND PH.D. DEGREES

Interested students at Vanderbilt are encouraged toward careers in academic medicine. In order to facilitate the development of teachers and medical investigators who are capable in clinical and basic medical sciences, a combined course of study leading to the M.D. and Ph.D. degrees has been instituted. Six to seven calendar years will be required for completion of the combined degree program.

All candidates must meet the requirements of both the medical and graduate schools for matriculation and graduation. Selection of the candidates will be made by the admission committees and deans of the graduate and medical schools. The graduate program of the student will be planned by his major adviser, a member of the graduate faculty, in the usual manner. Most students will enter the program after the sophomore year in medical school, and will complete the course work for both degrees and much of the thesis research before entering the clinical clerkships in the junior year of medical school.

Students accepted for the M.D.-Ph.D. program may receive financial support through their departmental sponsors; in addition, three scholarships per year are awarded by the Fellowships and Scholarships committee. Information about the M.D.-Ph.D. program may be obtained from the Chairman of the Fellowships and Scholarships Committee, Vanderbilt University School of Medicine.

ADVANCED PROFESSIONAL TRAINING AND RESEARCH

The primary responsibility of the School of Medicine is education of medical students. In addition, there are active programs for graduate students in the pre-clinical sciences, for post-doctoral interns and residents and for post-doctoral research trainees. At present, 715 students, trainees, technicians, and aides are receiving instruction at the School.

INTERNSHIP AND RESIDENCY TRAINING

Students preparing for the practice of medicine usually spend one or more years in house staff training. Such experiences at Vanderbilt are particularly varied and well-supervised. Applicants for positions are carefully chosen and make up a competent and stimulating group which has considerable responsibility in medical student teaching.

The faculty of the School of Medicine have professional responsibilities in Vanderbilt, Veterans, and Nashville General Hospitals. Most patients in these hospitals are cared for by members of the intern and resident staff.

Vanderbilt University Hospital is a referral center and consequently has a patient population with complex medical and surgical problems. Nashville General Hospital is a community owned facility in which many of the patients present advanced manifestations of disease. Veterans Administration Hospital is adjacent to the Vanderbilt Medical Center, and is extensively used for student and house staff teaching.

RESIDENCIES AND FELLOWSHIPS

THE HUGH J. MORGAN RESIDENCY IN MEDICINE. In May of 1962, Mr. Julia T. Weld of New York City generously made available a yearly gift to support the Chief Residency in Medicine named after the late Dr. Hugh J. Morgan, Professor of Medicine at Vanderbilt from 1935-1959. The awarding of the residency is announced each fall for the following July. The Hugh J. Morgan Residency allows the Department of Medicine to award an adequate salary to this important faculty position.

DR. COBB PILCHER-WILLIAM HENRY HOWE FELLOWSHIP IN NEUROSURGERY. In December 1945, the William Henry Howe Fellowship in Neurosurgery was established in the School of Medicine of Vanderbilt University. The fellowship was made available to the University by the late Dr. Pilcher and has been continued by the generosity of his family and friends.

POSTDOCTORAL COURSES

Courses in individual departments are made available by special arrangement. These courses are under the direction of the Director of Continuing Education and the head of the department concerned. Courses may

ffered at any time during the year for periods of varying length. Only a limited number of physicians can be admitted to any course. Inquiries should be addressed to Dr. Joseph A. Little, Director of Continuing Education.

Fees for special courses are decided by the Dean and the Director of Continuing Education in cooperation with the head of the department in which the instruction is provided.

COURSES TOWARD MASTER'S AND PH.D. DEGREES

Candidates for the degree of Master of Science or of Doctor of Philosophy may pursue work in the medical sciences given in the Medical School, either in regular courses or in special elective courses, provided such students are accepted by the heads of departments concerned and are registered in the Graduate School of the University. Graduate work in the medical sciences is regulated by the faculty of the Graduate School. Candidates for graduate degrees should apply to the Dean of the Graduate School.

Candidates for the degree of Master of Science in Audiology and Speech Pathology may pursue work in these fields in the Bill Wilkerson Hearing and Speech Center and the School of Medicine. Graduate work in this division is regulated by the faculty of the Graduate School. Candidates should apply to the Registrar of the Graduate School.

ENDOWED RESEARCH CHAIRS

THE JOE AND MORRIS WERTHAN CHAIR OF EXPERIMENTAL MEDICINE. Through the generosity of the Werthan family of Nashville, this professorship was established in 1951 for the purpose of furthering research in the general field of internal medicine. The present holder of the chair is Dr. Elliot V. Newman.

CHAIR OF NUTRITION. In the fall of 1964, the Pet Milk Foundation of St. Louis, Missouri, established at Vanderbilt University School of Medicine a Chair of Nutrition to further research and teaching activities in this vital area of medicine. Dr. William J. Darby, Professor of Biochemistry and Chairman of the Department of Biochemistry and Director of the Division of Nutrition, presently holds the chair.

THE CHAIR OF REPRODUCTIVE BIOLOGY AND FAMILY PLANNING. In December of 1967, the Department of Obstetrics and Gynecology received funds, through the generosity of an anonymous donor, to establish this professorship. It is the purpose of this chair to further research in basic reproductive biology and applied family planning.

ENDOWED RESEARCH FUNDS

THE RACHAEL CARPENTER MEMORIAL FUND. This fund was established in 1933 by a gift of \$5,000 from Mrs. Mary Boyd Carpenter of Nashville.

The income derived from this fund is to be used for education in the field of tuberculosis.

THE BROWNLEE O. CURRY MEMORIAL FUND FOR RESEARCH IN HEMATOLOGY. A memorial fund created by the friends of Brownlee O. Curry, the income from which is being used for the support of research in the field of hematology.

THE JACK FIES MEMORIAL FUND. The sum of \$5,000 was given to Vanderbilt University by Mrs. Hazel H. Hirsch as a memorial to her son, Jack Fies, the income from which is to be used to support research in the important field of neurological surgery. It is hoped that subsequent donations may be made by those who may be interested in creating a larger fund for this phase of research.

THE JOHN B. HOWE FUNDS FOR RESEARCH. In January 1946, the members of the family of the late John B. Howe established two funds in the University to be known as the John B. Howe Fund for Research in Neurosurgery and the John B. Howe Fund for Research in Medicine. The expenditures from the funds for neurosurgery and medicine are administered through the Department of Surgery and the Department of Medicine.

THE MARTHA WASHINGTON STRAUS-HARRY H. STRAUS FOUNDATION, INC. The Foundation provides support for research in the Department of Medicine in the field of cardiovascular diseases.

THE LESLIE WARNER MEMORIAL FUND FOR THE STUDY AND TREATMENT OF CANCER. This fund was established in 1932 in the memory of Leslie Warner of Nashville, Tennessee. It consists of \$7,200, of which \$3,600 was contributed by the nieces and nephews of Mrs. Leslie Warner.

MILITARY AND DISASTER MEDICINE

Vanderbilt University School of Medicine was one of the original medical schools conducting a program of military and disaster medicine under the Medical Education for National Defense plan. Separate courses in military and disaster medicine are not offered. Material on mass casualties, emergency first aid, radiation injury, radiation biology, chemical and germ warfare, and other aspects of military medicine is presented in the course material offered by the Departments of Pharmacology, Preventive Medicine, Medicine, Radiology, and Surgery.

COURSES OF STUDY

SCHOOL OF MEDICINE DEPARTMENTS

Anatomy.....	50
Anesthesiology.....	52
Biochemistry.....	53
Hearing & Speech Sciences.....	57
Medicine.....	60
Microbiology.....	70
Obstetrics & Gynecology.....	72
Orthopedic Surgery.....	75
Pathology.....	77
Pediatrics.....	79
Pharmacology.....	83
Physiology.....	86
Preventive Medicine & Public Health.....	87
Psychiatry.....	92
Radiology.....	97
Surgery.....	99



NOTE: Required medical school courses are numbered 501 to 519. Elective medical school courses are numbered 521 to 599.

Courses in the 500 series make up the curriculum of the medical student. Those courses carrying credit in the Graduate School are indicated by a 300 series number before or after the title. Figures in brackets in 300 series course descriptions indicate semester hours of credit in the Graduate School.

Description of elective courses include the class year to which the course is available, number of clock hours per week, semester offered, and length of course if less than a semester.



Anatomy

JACK DAVIES, M. D., *Professor of Anatomy and Chairman of the Department*

VIRGIL S. LEQUIRE, M.D., *Professor of Anatomy*

JAMES W. WARD, Ph.D., M.D., *Professor of Anatomy*

R. BENTON ADKINS, M.D., *Assistant Professor of Anatomy*

ALVIN M. BURT III, *Assistant Professor of Anatomy*


G. RODMAN DAVENPORT, Ph.D., *Assistant Professor of Anatomy*

ROBERT L. HAMILTON, Ph.D., *Assistant Professor of Anatomy*

LUKE H. MONTGOMERY, *Assistant Professor of Anatomy*

JOHN LANGDON NORRIS, M.D., *Assistant Professor of Anatomy*

BURTON C. STAUGAARD, Ph.D., *Assistant Professor of Anatomy*

 The Department of Anatomy offers courses leading to the Ph.D. degree. Courses described below which are numbered in the 300 series are offered primarily for that program but are open to medical students by special arrangements.

501. HISTOLOGY (322). This course gives the student a familiarity with the normal structure of the principal tissues and organs of the body. Fresh tissues are used wherever possible for the demonstration of normal cellular function, and in analyzing the characteristics of particular cells. SPRING. [4] *Dr. Staugaard and Staff.*

502. GROSS ANATOMY (321). This course is devoted to a systematic dissection of the human body. The instruction is largely individual and the work of the student is made as independent as possible. FALL. [10] *Dr. Adkins and Staff.*

503. NEUROLOGY (323). This course covers the histological aspect of the nervous system, including the structure of nerve cells, fibers and endings, the histology and pathways of the spinal cord, the structure and connection of cerebrospinal and autonomic nerves and ganglia, and the histology of the organs of special sense. SPRING. [4] *Dr. Ward and Staff.*

521. DEVELOPMENTAL BIOLOGY (333). First, Second, and Fourth years. A comprehensive, multidisciplinary study in mammalian developmental biology covering gametogenesis, gamete transport, fertilization and implantation, development and functions of the placenta, uterus, parturition, and lactation. Emphasis will be placed on morphology, endocrinology, and effects of ionizing radiation. This course is presented as a fundamental aspect of biologic science rather than as a medical specialty. (Obstetrics-Gynecology 521.) Two hours per week. SPRING. [4] *Drs. Soupart, Glasser, and Staff.*

522. APPLICATIONS OF EMBRYOLOGY TO CLINICAL PRACTICE. Second and Fourth years. A course in human embryology with special reference to the genesis of congenital defects. Clinical cases will be presented. Two hours per week. FALL. *Drs. Davies and Norris.*

523. ADVANCED NEUROLOGY (324). Second and Fourth years. An intensive systemic study of the relations, structures, and function of the various parts of the central nervous system is made with the aid of gross specimens and dissections, serial sections of brain stems, and experimental demonstrations. The lectures are a guide to the laboratory work and present the type of evidence on which the present conceptions of the nervous system are based. Three hours per week; first fifteen weeks. SPRING. [2] *Dr. Ward and Staff.*

527. LESSONS IN SURGICAL ANATOMY. Fourth year. Weekly review of surgical anatomy for medical students and for interns and surgical residents. Special areas of surgical interest will be reviewed with the aid of prosecutions and demonstrations. Embryological implications will be explained. Two hours per week. FALL. *Dr. Adkins.*

528.1. BIOMEDICAL ELECTRONICS I. First, Second, and Fourth years. A basic course of twelve lectures and demonstrations in electronics for those with little or no experience in the field. Electronic fundamentals including theory of vacuum tubes, solid state devices, amplifiers, etc., are included. One hour per week; first twelve weeks. FALL. *Mr. Montgomery.*

528.2. BIOMEDICAL ELECTRONICS II. First, Second, and Fourth years. Lectures and demonstrations illustrating application of electronic equipment in the biomedical area. This course covers a wide range of instrumentation including special measurement and recording equipment, special stimulators, simple computers ("averagers"), etc. Prerequisite: Biomedical Electronics I. One hour per week; first twelve weeks. SPRING. *Mr. Montgomery.*

581. RESEARCH FELLOWSHIP IN ANATOMY. Fourth year. Research opportunities are available by arrangement in the following: (1) Electron microscopy, (2) Histochemistry and histology, (3) Embryology, (4) Human development. Full time for twelve or eighteen weeks. *Dr. Davies and Staff.*

599. SEMINAR IN DEVELOPMENTAL BIOLOGY. First, Second, and Fourth years. One-hour-weekly seminar including lectures and discussion by the full-time faculty, visiting lecturers, and participating students. (Obstetrics-Gynecology 599.) One hour per week. FALL & SPRING. *Drs. Davies and Glasser.*

527. EXPERIMENTAL METHODS IN NEUROLOGY. Conferences and research upon special phases of the structure and function of the nervous system. This course is designed to meet the needs of students desiring special training in neurology. [1-6] *Dr. Ward.*

529. EXPERIMENTAL METHODS IN HISTOLOGY. Research and conferences in special phases of the techniques and their principles of histology. The work is designed for the particular student's interests and includes general histological methods and special methods such as those of the electron microscope. [1-6] *Dr. Davies and Staff.*

530. SEMINAR IN ANATOMY. SPRING & SUMMER. [1-2] *Staff.*

599. RESEARCH. *Staff.*

Anesthesiology

YILMAZ ERYASA, M.D., *Associate Professor of Anesthesiology and Acting Chairman of the Department*

CHARLES B. PITTINGER, M.D., *Professor of Anesthesiology*

ALEJANDRO BERBA, M.D., *Assistant Professor of Anesthesiology*

JOANNE L. LINN, M.D., *Assistant Professor of Anesthesiology*

BASEL M. MIXON, JR., M.D., *Assistant Professor of Anesthesiology*

PAULA F. CONAWAY SANDIDGE, M.D., *Assistant Professor of Anesthesiology*

GISELA SCHULLER, M.D., *Instructor in Anesthesiology*

ILHAN B. TASKIN, M.D., *Instructor in Anesthesiology*

ILDEFONSO A. ALCANTARA, M.D., *Clinical Instructor in Anesthesiology*

501. ANESTHESIOLOGY. This course for third year students consists of a series of lectures on some aspects of anesthesiology applicable to the general practice of medicine. Among the topics presented will be: preoperative evaluation of the patient; premedication, selection of anesthetic agent and technique; local anesthesia, resuscitation, and oxygen therapy. One hour per week for twelve weeks. *Dr. Eryasa and Staff.*

502. OPERATIVE SURGERY AND ANESTHESIOLOGY. A laboratory course for third year students offered jointly by the Departments of Surgery and Anesthesiology to provide experience in anesthesia and experimental surgery. Students work in groups of four, rotating responsibilities so that each receives experience in anesthesia. (See Surgery 502.) Three hours per week for twelve weeks. *Dr. Eryasa and Staff.*

521. PHARMACOLOGY OF ANESTHESIA (325). Fourth year. A course related to pharmacologic principles involved in the action of anesthetic agents. This will include discussions of: the chemistry of anesthetic agents; physico-chemical principles of absorption, distribution, and elimination; theories of anesthesia; factors modifying drug responses; biotransformation toxicity and modifications of anesthesia under hyperbaric conditions. (Pharmacology 530.) One hour per week. FALL. *Dr. Pittinger*

561. CLERKSHIP IN ANESTHESIOLOGY. Fourth year. Didactic and operating room experience in the conduction of anesthesia, including pre- and post-anesthetic care. Full time, six week units. *Dr. Eryasa and Staff.*

599. ANESTHESIOLOGY SEMINAR. Fourth year. A series of lecture presentations and discussions of basic scientific principles related to anesthesiology. Students may register for one or two semesters. One hour per week. FALL & SPRING. *Dr. Eryasa and Staff.*

Biochemistry

- WILLIAM J. DARBY, M.D., Ph.D., *Professor of Biochemistry and Chairman of the Department; Professor of Nutrition*
- FRANK R. BLOOD, Ph.D., *Professor of Biochemistry*
- STANLEY COHEN, Ph.D., *Professor of Biochemistry*
- JOHN G. CONIGLIO, Ph.D., *Professor of Biochemistry*
- LEON W. CUNNINGHAM, Ph.D., *Professor of Biochemistry*
- WAYLAND J. HAYES, JR., M.D., Ph.D., *Professor of Biochemistry*
- V. N. PATWARDHAN, Ph.D., *Professor of Nutrition*
- WILLIAM N. PEARSON, Ph.D., *Professor of Biochemistry*
- E. NEIGE TODHUNTER, Ph.D., *Visiting Professor of Nutrition*
- OSCAR TOUSTER, Ph.D., *Professor of Biochemistry*
- GEORGE V. MANN, M.D., Sc.D., *Associate Professor of Biochemistry*
- WILLARD R. FAULKNER, Ph.D., *Associate Professor of Biochemistry*
- ARTHUR R. SCHULERT, Ph.D., *Associate Professor of Biochemistry*
- JAN VAN EYS, Ph.D., M.D., *Associate Professor of Biochemistry*
- CONRAD WAGNER, Ph.D., *Associate Professor of Biochemistry (V. A. Hospital)*
- BENJAMIN J. WILSON, Ph.D., *Associate Professor of Biochemistry*
- JAMES P. CARTER, M.D., *Assistant Professor of Nutrition*
- JAMES T. DAVIS, Ph.D., *Assistant Professor of Biochemistry*
- YADASHI INAGAMI, Ph.D., *Assistant Professor of Biochemistry*
- ROBERT A. NEAL, Ph.D., *Assistant Professor of Biochemistry*
- HAROLD H. SANDSTEAD, M.D., *Assistant Professor of Nutrition*
- DAKEN G. WARNOCK, Ph.D., *Assistant Professor of Biochemistry (V. A. Hospital)*
- PREM N. DUA, Ph.D., *Research Associate in Biochemistry*
- SHARNA GHOSAL, Ph.D., *Research Associate in Biochemistry*
- W. WALLACE HAYES, Ph.D., *Research Associate in Biochemistry*
- PETER HORNIG, Ph.D., *Research Associate in Biochemistry*
- H. GAYLE JACOBS, Ph.D., *Research Associate in Biochemistry*
- LUDEK JIROUSEK, Ph.D., *Research Associate in Biochemistry*
- MITSUOKI KAI, M.D., Ph.D., *Research Associate in Biochemistry*
- MILOS STASTNY, Ph.D., *Research Associate in Biochemistry*

The Department of Biochemistry offers courses leading to the Ph.D. degree. Courses described below which are numbered in the 300 series are offered primarily for that program but are open to medical students by special arrangement.

101. BIOCHEMISTRY (321). Lectures on the chemistry and metabolism of carbohydrates, proteins, lipids, nucleoproteins, and on the chemistry and

function of enzymes, vitamins, and other factors related to cellular metabolism and body processes. FALL. [3] *Staff*.

502. BIOCHEMISTRY LABORATORY (322). This laboratory course accompanies Biochemistry 501 and emphasizes chemical, physical, and physiologic aspects of topics presented there. FALL. [4] *Staff*.

521. FUNDAMENTAL PRINCIPLES IN THE USE OF RADIOISOTOPES. First year. A presentation for medical students of fundamental principles of nuclear physics and tracer methodology necessary for understanding the use of radioisotopes in biology and medicine. Lectures will review: elementary nuclear physics; basic principles of tracer methodology; the design of experiments illustrating different types of radioisotopes; safety practices in handling isotopes, and the use of necessary instrumentation. Laboratory work includes experiments with different beta and gamma emitters in typical physiological or biological experiments. Four hours per week; first twelve weeks. Course designed for students who have had no previous experience using radioisotopes. FALL. *Dr. Coniglio*.

522. TOXICOLOGY (336). Second and Fourth years. Lectures, discussion, and assigned reading on the principles of toxicology with emphasis on metabolic and biochemical considerations. Subjects covered include naturally occurring toxicants, mycotoxins, bacterial toxins, chemical additives, residues of agricultural chemicals and other environmental contaminants. Two hours per week. FALL. [2] *Drs. Wilson, Bloom, Hayes, Neal, and Darby*.

523. FUNDAMENTALS OF HUMAN NUTRITION (328). Second and Fourth years. Lectures and assigned readings covering the biochemical basis of nutritional disorders and the application of this information to prevention and management of human disease. Course arranged in conjunction with Nutrition Clinics B-530 which will illustrate and amplify the material discussed in the lectures. (Medicine 523). One hour per week. FALL & SPRING. [1] *Drs. Mann, Carter, van Eys, Sandstead, and Darby*.

524. ADVANCED METABOLISM (334). First, Second, and Fourth years. Lectures and discussions of energy metabolism and regulatory mechanisms. Among the topics to be considered will be: thermodynamics and metabolism of high energy compounds, energy yielding reactions, oxidative phosphorylation, photosynthesis and the tricarboxylic acid cycle. Two hours per week. SPRING. [2] *Drs. Wagner and Warnock*.

526. BIOCHEMISTRY AND DIFFERENTIATION. First, Second, and Fourth years. Formal lectures and student seminars. A course designed to acquaint the student with the biochemical aspects of development and differentiation. One hour per week. SPRING. *Dr. Cohen*. (Not offered 1968/69.)

527. NUTRITIONAL BIOCHEMISTRY (335). Second and Fourth years. A course in comparative nutritional biochemistry with emphasis on the whole animal. Prerequisite: a course in biochemistry or permission of the instructor. Two hours per week. FALL. [2] *Dr. Pearson*. (Not offered 1968/69.)

28.1. CLINICAL BIOCHEMISTRY I. Second and Fourth years. A course correlating basic biochemical principles with the pathophysiology of diseased states. Chemical homeostasis is treated through discussions of the metabolic mechanisms for maintaining this state and of the methodology of evaluating it. Illustrative case reports of typical metabolic derangements are reviewed. (Medicine 524.1.) One hour per week. FALL. *Drs. Faulkner and van Eys.*

28.2. CLINICAL BIOCHEMISTRY II. Second and Fourth years. Attention is directed to the altered intermediary metabolism of inherited disorders and to the development and changes in metabolic pathways during infancy and childhood. The material is presented throughout the course by lectures, seminars, assigned reading and selected patient reviewers. (Medicine 524.2.) One hour per week. SPRING. *Drs. van Eys and Faulkner.*

29. LIPID CHEMISTRY AND METABOLISM (329). Second and Fourth years. Lectures and discussions on the chemistry, metabolism, detection, and separation of fatty acids, glycerides, phospholipids, and sterols. Prerequisite: a course in general biochemistry. Two lectures per week. SPRING. *Dr. Coniglio.* (Not offered 1968/69.)

30. NUTRITION CLINICS. Fourth year. Clinical material demonstrating nutritional problems in causation or management of disease will be presented by the students. The material will illustrate the subjects discussed in the lecture series (B-523). Students may register for either semester although both are recommended. The registrants must have completed one semester or be registered in B-530 concurrently. One hour per week. FALL & SPRING. *Drs. Sandstead, Carter, and van Eys.*

31. RESEARCH FELLOWSHIP IN BIOCHEMISTRY. Fourth year. Research opportunities under the guidance of appropriate staff members in any of the broad areas represented in the Department of Biochemistry. The time and schedule of presentations will be arranged and can be individualized to a considerable extent. Students are encouraged to pursue research on a continuing basis and for a minimum of three months. Longer periods are more desirable. Full time for twelve or eighteen weeks. *Dr. Darby and Staff.*

32. RESEARCH FELLOWSHIP IN NUTRITION. Fourth year. Clinical and metabolic research in man or experimental animals conducted under the direction of members of the staff. Students are encouraged to pursue research on a full-time basis for a minimum of three months. Selected students may participate in studies abroad (in the Middle East or elsewhere) in the current research program of the Division of Nutrition. Full time for twelve or eighteen weeks. *Dr. Darby and Staff.*

33. SPECIAL PROBLEMS IN NUTRITION. First, Second, and Fourth years. Individualized study of advanced topics or research in nutrition. Experimental laboratory and clinical studies will be offered under the guidance of a member of the staff of the Division. Six hours per week. FALL & SPRING. *Drs. Darby, Mann, and Pearson.*

584. PRECEPTORSHIP IN BIOCHEMISTRY. Fourth year. An opportunity for intensive review of basic biochemistry. Students will participate as instructors in the teaching of the course to freshman medical students and at the same time participate in graduate experiences, seminar, and research in the department. Full time for twelve or eighteen weeks. *Dr. Darby and Staff.*

599. BIOCHEMISTRY SEMINAR (327). First, Second, and Fourth year. This is a student seminar designed to familiarize medical and graduate students with current research developments in biochemistry, to afford the students an opportunity to review critically a variety of subjects and to gain experience in presenting and critically appraising such investigations. Prerequisite: a course in fundamental biochemistry. One hour per week. FALL & SPRING. [1] *Dr. Darby and Staff.*

323. SPECIAL PROBLEMS AND EXPERIMENTAL TECHNIQUES. Among the fields available are: (a) advanced work in lipid metabolism, *Dr. Coniglio*; (b) the metabolism of carbohydrates and nucleotides, *Dr. Touster*; (c) protein chemistry, *Dr. Cunningham*; (d) metabolic toxicology, *Dr. Blood*; (e) enzymes of metabolism, *Dr. van Eys*; (f) chemical embryology, *Dr. Cohen*; (g) mineral and vitamin metabolism, *Dr. Pearson*; (h) metabolism of foreign compounds, *Dr. Neal*; and (i) special biochemical preparations. Admission to course, hours, and credit by arrangement. [2-4] *Staff.*

324. USE OF RADIOACTIVE TRACERS IN METABOLISM. This course is an introductory one in the application of radioisotopes to the study of metabolism, and is intended for graduate students in biochemistry, biology, physiology, and related fields. Two lectures and one three-hour laboratory. Prerequisite: permission of instructor. SPRING. [3] *Dr. Coniglio.*

325. MICRO-PHYSIOLOGIC TECHNIQUES IN BIOCHEMISTRY. A course designed to give experience in the techniques of animal experimentation. Lectures, discussions, and demonstrations on care, feeding, injection, and sample collection in small animals. Application of micro techniques of mammalian physiology to biochemistry. Lectures and laboratory. Prerequisite: permission of instructor. SPRING. [3] *Dr. Blood.* (Not offered 1968/69.)

326. BIO-ORGANIC CHEMISTRY. Lectures and discussion on the isolation, structural chemistry, and synthesis of biochemically important substances and on the relation of structure to biological activity. Prerequisite: an advanced course in organic chemistry or permission of instructor. Two lectures per week. FALL. [2] *Dr. Touster.*

333. PROTEIN CHEMISTRY. A course describing the physical and chemical methods employed in the study of macro-molecules of biological importance and the relation of protein structure to protein function. Prerequisite: Biochemistry 321 and elementary physical chemistry or permission of instructor. SPRING. [2] *Drs. Cunningham and Inagami.*

399. RESEARCH. *Staff.*

Hearing & Speech Sciences

FREEMAN MCCONNELL, Ph.D., *Professor of Audiology and Chairman of the Division*

FERRIE CHERRY, M.D., *Associate Professor of Otolaryngology*

RONALD GOLDMAN, Ph.D., *Associate Professor of Speech Pathology*

RAY SANDERS, Ph.D., *Associate Professor of Audiology*

ROBERT COLEMAN, Ph.D., *Assistant Professor of Speech Science*

JOHN C. COOPER, Ph.D., *Assistant Professor of Audiology*

M. ANN GANNAWAY, M.S., *Assistant Professor of Speech Pathology*

KATHRYN B. HORTON, M.S., *Assistant Professor of Speech and Language Pathology*

RUSSELL LOVE, Ph.D., *Assistant Professor of Speech and Language Pathology*

M. CLAIRE COOPER, M.A., *Instructor in Audiology*

MARY E. DOWNING, M.S.S.W., *Instructor in Medical Social Service*

MARTHA E. LYNCH, M.S., *Instructor in Speech Pathology*

ANN B. SITTON, M.S., *Instructor in Clinical Audiology*

The Division of Hearing and Speech Sciences offers work leading to the Master's and the Ph.D. degrees in the following areas: audiology, speech and language pathology, and speech science. Information on regulations and requirements may be found in the Bulletin of the Graduate School. The research, teaching and clinical programs associated with this program are housed in the Bill Wilkerson Hearing and Speech Center adjacent to the Vanderbilt University campus at the corner of Nineteenth Avenue, South, and Edgehill Avenue.

30. ARTICULATION DISORDERS. A study of the etiology, evaluation, and management of articulatory defects in children and adults. FALL. [3]

Miss Gannaway.

31. STUTTERING. A review of the significant research in the field of stuttering, with emphasis on etiology and therapy. Consideration of the management of fluency disturbances. FALL. [3] *Mr. Goldman.*

32. CLEFT PALATE AND RELATED DISORDERS. A study of the etiology, diagnosis and management of speech defects associated with structural anomalies and physiological dysfunction, with major emphasis on cleft palate. FALL. [2] *Mr. Love.*

33. CEREBRAL PALSY AND RELATED DISORDERS. A study of speech disturbances related to neurological dysfunction with major emphasis on cerebral palsy. SPRING. [3] *Mr. Love.*

40. TESTING OF HEARING. A study of the theory and practice of hearing measurement with emphasis on basic pure-tone audiometric techniques.

Consideration of causative factors in hearing loss and evaluation of audiometric results. FALL. [3] *Mr. Cooper.*

241. SPEECH AND LANGUAGE DEVELOPMENT OF THE ACOUSTICALLY HANDICAPPED. A consideration of the theories and problems encountered in the development of speech and language in acoustically handicapped children. SPRING. [3] (Offered on demand.)

245. PRINCIPLES OF SPEECHREADING. Study and analysis of various methods for developing visual communication skills in handling hearing impaired children and adults. FALL. [2] *Miss Cooper.*

246. AURAL REHABILITATION. Principles, methods and electroacoustic instrumentation involved in the use of residual hearing for optimum speech and language functioning in the hearing impaired. SPRING. [2] *Miss Cooper.*

300. ANATOMY AND PHYSIOLOGY OF THE CENTRAL NERVOUS SYSTEM. Lectures and demonstrations designed to acquaint the student with the basic structure and function of the central nervous system. Emphasis on integrative activities as related to both normal and deviate oral communication. [3] (Offered on demand.)

301. ANATOMY AND PHYSIOLOGY OF SPEECH. Structure and function of the neuromuscular system involved in breathing, phonation, resonance and articulation. Emphasis on fundamental physiological principles of speech production. FALL. [2] *Mr. Coleman.*

302. ANATOMY AND PHYSIOLOGY OF HEARING. Structure, function, and pathology of hearing. Psychoacoustic theories. FALL. [2] *Mr. Sanders.*

303. EXPERIMENTAL PHONETICS. Study of research methods, instrumentation, and findings in the field of experimental phonetics. SPRING. [3] *Mr. Coleman.*

304. THE DEVELOPMENT OF SPEECH AND LANGUAGE. A consideration of the nature of language and speech. Communication in animals and man. The stages of normal language development; psycholinguistic, neurophysiological and psychodynamic theories of language acquisition. FALL. [3] *Mr. Love.*

305. DIAGNOSTIC PROCEDURES IN AUDIOLOGY AND SPEECH PATHOLOGY. Diagnostic tests and procedures for children and adults with impaired hearing or defective speech. Techniques for screening areas important to normal speech and language development. Case history techniques. Clinical observation and report writing required. Prerequisite: consent of instructor. FALL. [3] *Mrs. Horton.*

306. LANGUAGE DISORDER OF CHILDREN. A study of the language, behavioral, symptomatology, and treatment of language-impaired children. Consideration of differential diagnostic techniques for aphasia, central and peripheral auditory disorders, mental retardation, and emotional disturbances. SPRING. [3] *Mrs. Horton.*

107. SEMINAR: CHILDHOOD LANGUAGE DISORDERS. An analysis of the disciplines, theories, and practices pertaining to developmental, organic, and psychological language disturbances in children. SUMMER. [3] *Mrs. Horton.*
108. PSYCHOACOUSTIC INSTRUMENTATION IN AUDIOLOGY AND SPEECH. The incorporation of laboratory procedures and electronic instrumentation into the design and conduct of research in audiology and speech science. Consideration of electronic theory, research instrumentation, and electrical and acoustical measurement. FALL. [3] *Mr. Coleman.*
- 11-312. RESEARCH PROBLEMS IN AUDIOLOGY AND SPEECH PATHOLOGY. Recommended for all graduate students in the division who anticipate completion of a doctoral dissertation. [2-2] *Staff.* (To be arranged.)
- 15-316. EXPERIMENTAL OTOLARYNGOLOGY. Clinical and/or research participation in otolaryngology medical clinics, temporal bone bank, vestibular, cochlear physiology, or familial deafness laboratories. FALL & SPRING. [2-2] *Dr. Cherry and Staff.*
21. ADVANCED CLINICAL STUDY AND PRACTICE: SPEECH PATHOLOGY. Assigned readings and written reports combined with participation in the clinical program in speech pathology. Courses may be repeated for credit. FALL, SPRING, SUMMER. [2] *Staff.*
22. ADVANCED CLINICAL STUDY AND PRACTICE: AUDIOLOGY. Assigned readings and written reports combined with participation in the clinical program in audiology. Course may be repeated for credit. FALL, SPRING, SUMMER. [2] *Mrs. Sitton.*
31. APHASIA. A study of the aphasic language disturbances including symptomatology, etiology, differential diagnosis, and training. Emphasis on adult problems. Prerequisite: 230 and 240. SPRING. [3] *Mr. Love.*
34. ALARYNGEAL SPEECH. A study of speech defects resulting from loss of the larynx. Etiology, rehabilitative management, and a review of the pertinent research literature. SUMMER. *Mr. Love.*
35. SEMINAR IN SPEECH PATHOLOGY. Review of significant literature in the field of speech pathology. Directed study in assigned subject areas. SUMMER. [2] *Mr. Goldman.*
36. SEMINAR: VOICE DISORDERS. Study of theories of voice production, with emphasis upon pathology and malfunctions which produce voice defects. Procedures for group and individual management. Prerequisite: 230 and 232. SPRING. [3] *Mr. Coleman.*
40. THE SELECTION AND USE OF HEARING AIDS. A study of the research and theory of clinical selection of hearing aids. The principles of speech audiometry in assessing the usefulness of residual hearing. Clinical observation required. Prerequisite: 240. SPRING. [3] *Mr. Cooper.*

341. SEMINAR IN AUDIOLOGY. Review of significant literature in the field of audiology. Directed study in assigned subject areas. SUMMER. [2] Mr. McConnell.
342. ADVANCED CLINICAL AUDIOLOGY. Special tests and exploratory techniques in audiologic assessment; instrumentation and testing rooms and conduct of the audiologic clinic. SPRING. [3] Mr. Sanders.
343. SEMINAR: MILITARY AND INDUSTRIAL AUDIOLOGY. Hearing conservation principles in the armed forces and in industry. Programs for employee protection and the reduction of noise hazard in the environment. (Not offered in 1968/69.)
347. PSYCHOLOGY AND EDUCATION OF THE DEAF. History of education of the deaf. Study of the research literature on the effects of hearing impairment on the social, intellectual, and psychological development of the individual. Societal reactions to deafness. SPRING. [3] Mr. McConnell.
351. SPECIAL PROBLEMS IN SPEECH PATHOLOGY. Study of areas and problems not included in other courses in speech pathology, chosen to fit the students' interests and the needs of their programs. FALL, SPRING, SUMMER. [Variable credit: 1 to 3 each semester]. Staff.
352. SPECIAL PROBLEMS IN AUDIOLOGY. Study of areas and problems not included in other courses in audiology, chosen to fit the students' interests and the needs of their programs. FALL, SPRING, SUMMER. [Variable credit: 1 to 3 each semester]. Staff.
369. MASTER'S THESIS RESEARCH. [0] Staff.
388. INDEPENDENT STUDY AND READINGS IN SPEECH PATHOLOGY. [3] Staff.
389. INDEPENDENT STUDY AND READINGS IN AUDIOLOGY. [3] Staff.
399. PH.D. DISSERTATION RESEARCH. Staff.

Medicine

- GRANT W. LIDDLE, M.D., *Professor of Medicine and Chairman of the Department*
- THOMAS E. BRITTINGHAM, M.D., *Professor of Medicine*
- WILLIAM J. DARBY, M.D., Ph.D., *Professor of Medicine in Nutrition*
- ROGER M. DES PREZ, M.D., *Professor of Medicine*
- EDUARDO GAITAN, M.D., *Visiting Professor of Medicine*
- ROBERT CARL HARTMANN, M.D., *Professor of Medicine*
- RUDOLPH H. KAMPMEIER, M.D., *Professor of Medicine, Emeritus*
- ALBERT A. KATTUS, M.D., *Visiting Professor of Medicine*
- ANN STONE MINOT, Ph.D., *Professor of Medicine, Emerita*
- ELLIOT V. NEWMAN, M.D., *Joe and Morris Werthan Professor of Experimental Medicine*

STANLEY W. OLSON, M.D., *Professor of Medicine (On leave 1968/70)*
 THOMAS F. PAINE, JR., M.D., *Professor of Medicine*
 JOHN B. YOUMANS, M.D., *Professor of Medicine, Emeritus*
 THOMAS BOWMAN ZERFOSS, M.D., *Professor of Medicine, Emeritus*
 F. TREMAINE BILLINGS, M.D., *Clinical Professor of Medicine*
 LAURENCE A. GROSSMAN, M.D., *Clinical Professor of Medicine*
 SAMUEL S. RIVEN, M.D., C.M., *Clinical Professor of Medicine*
 HARRISON J. SHULL, M.D., *Clinical Professor of Medicine*
 W. DAVID STRAYHORN, M.D., *Clinical Professor of Medicine*
 CLARENCE S. THOMAS, M.D., *Clinical Professor of Medicine*
 A. BERTRAND BRILL, M.D., *Associate Professor of Medicine*
 WILLIAM S. COPPAGE, M.D., *Associate Professor of Medicine*
 OSCAR B. CROFFORD, M.D., *Associate Professor of Medicine; Investigator, Howard Hughes Medical Institute*
 ERIC ENGEL, M.D., *Associate Professor of Medicine*
 RICHARD FRANCE, M.D., *Associate Professor of Medicine*
 H. EARL GINN, M.D., *Associate Professor of Medicine*
 ROBERT A. GOODWIN, M.D., *Associate Professor of Medicine*
 DAVID E. JENKINS, JR., M.D., *Associate Professor of Medicine*
 M. GLENN KOENIG, M.D., *Associate Professor of Medicine*
 DAVID H. LAW, M.D., *Associate Professor of Medicine*
 GEORGE V. MANN, Sc.D., M.D., *Associate Professor of Medicine in Biochemistry*
 JOHN A. OATES, M.D., *Associate Professor of Medicine*
 LOYD H. RAMSEY, M.D., *Associate Professor of Medicine*
 WILLIAM D. SALMON, JR., M.D., *Associate Professor of Medicine*
 BRUCE SINCLAIR-SMITH, M.D., *Associate Professor of Medicine*
 ROBERT T. TERRY, M.D., *Associate Professor of Medicine*
 LAWFORD W. ADAMS, M.D., *Associate Clinical Professor of Medicine*
 THOMAS F. FRIST, M.D., *Associate Clinical Professor of Medicine*
 ALLEN KENNEDY, M.D., *Associate Clinical Professor of Medicine*
 HADISON B. SCOVILLE, JR., M.D., *Associate Clinical Professor of Medicine*
 ROBERT H. ALFORD, M.D., *Assistant Professor of Medicine*
 EDWARD J. BATTERSBY, M.D., *Assistant Professor of Medicine*
 RICHARD E. BRYANT, M.D., *Assistant Professor of Medicine*
 DAVID BUSH, M.D., *Assistant Professor of Medicine*
 JOHN R. COLLINS, M.D., *Assistant Professor of Medicine*
 PHILIP W. FELTS, M.D., *Assistant Professor of Medicine*
 JOHN M. FLEXNER, M.D., *Assistant Professor of Medicine*
 RICHARD FREEMAN, *Assistant Professor of Medicine*
 RAY S. GOODMAN, M.D., *Assistant Professor of Medicine*
 ALAN L. GRABER, M.D., *Assistant Professor of Medicine*
 NOEL C. HUNT, M.D., *Assistant Professor of Medicine*
 WILLIAM W. LACY, M.D., *Assistant Professor of Medicine*
 RELL A. MCGEE, M.D., *Assistant Professor of Medicine*
 CLIFFORD MCKEE, M.D., *Assistant Professor of Medicine*
 ANDREW M. MICHELAKIS, M.D., Ph.D., *Assistant Professor of Medicine*
 WALTER E. NANCE, M.D., *Assistant Professor of Medicine; Markle Scholar*
 DAVID N. ORTH, M.D., *Assistant Professor of Medicine*
 HAROLD H. SANDSTEAD, M.D., *Assistant Professor of Medicine*
 STEPHEN SCHILLIG, M.D., *Assistant Professor of Medicine*
 JAMES D. SNELL, JR., M.D., *Assistant Professor of Medicine*

ANNE SWEENEY, M.A., *Assistant Professor of Medical Social Service*
 SAMUEL S. WRIGHT, M.D., *Assistant Professor of Medicine*
 BENJAMIN J. ALPER, M.D., *Assistant Clinical Professor of Medicine*
 WILLIAM J. CARD, M.D., *Assistant Clinical Professor of Medicine*
 ORRIE A. COUCH, JR., M.D., *Assistant Clinical Professor of Medicine*
 FREDERIC E. COWDEN, M.D., *Assistant Clinical Professor of Medicine*
 ROBERT M. FINKS, M.D., *Assistant Clinical Professor of Medicine*
 FRED GOLDNER, JR., M.D., *Assistant Clinical Professor of Medicine*
 JOHN H. GRISCOM, M.D., *Assistant Clinical Professor of Medicine*
 THOMAS B. HALTOM, M.D., *Assistant Clinical Professor of Medicine*
 AUBREY B. HARWELL, M.D., *Assistant Clinical Professor of Medicine*
 WILDER WALTON HUBBARD, M.D., *Assistant Clinical Professor of Medicine*
 HERMAN J. KAPLAN, M.D., *Assistant Clinical Professor of Medicine*
 RALPH W. MASSIE, M.D., *Assistant Clinical Professor of Medicine*
 HARRY L. PAGE, M.D., *Assistant Clinical Professor of Medicine*
 THOMAS GUV PENNINGTON, M.D., *Assistant Clinical Professor of Medicine*
 W. ANDERSON SPICKARD, M.D., *Assistant Clinical Professor of Medicine*
 JAMES N. THOMASSON, M.D., *Assistant Clinical Professor of Medicine*
 CHARLES B. THORNE, M.D., *Assistant Clinical Professor of Medicine*
 RUSSELL D. WARD, M.D., *Assistant Clinical Professor of Medicine*
 JOHN LANIER WYATT, M.D., *Assistant Clinical Professor of Medicine*
 KAORU ABE, M.D., D.M.Sc., *Instructor in Medicine*
 THOMAS G. ARNOLD, JR., B.S., *Martha Washington Straus-Harry H. Straus*
 Instructor in Biophysics in Medicine
 WINTON D. BATSON, M.S.S.W., *Instructor in Medical Social Service*
 GORDAN M. BESSER, M.D., *Instructor in Medicine*
 BRUCE A. BRIAN, M.D., *Instructor in Medicine*
 YANK D. COBLE, M.D., *Instructor in Medicine*
 O. THOMAS FEAGIN, M.D., *Instructor in Medicine*
 JEAN ROUGHGARDEN FREY, M.D., *Instructor in Medicine*
 JAMES E. HANCHETT, M.D., *Instructor in Medicine*
 ADELAIDE HOHANNES, M.S.S.W., *Instructor in Medical Social Service*
 DONALD P. ISLAND, B.S., *Instructor in Medical Research*
 ROBERT M. JOHNSON, M.D., *Instructor in Medicine*
 NEIL I. KAMINSKY, M.D., *Instructor in Medicine*
 SAMUEL R. MARNEY, JR., M.D., *Instructor in Medicine*
 MARIAN ANN MELLY, B.S., *Instructor in Medical Research*
 ROBERT METCALFE, M.D., *Instructor in Medicine*
 A. STEWART MITCHELL, M.D., *Instructor in Medicine*
 ROBERT C. NORTHCUTT, M.D., *Instructor in Medicine*
 CONSTANTINE POTANIN, M.D., *Instructor in Medicine*
 FRANK M. REMBERT, M.D., *Instructor in Medicine*
 DAVID G. SHAND, M.R.C.P., Ph.D., *Instructor in Medicine*
 MENACHEM S. SHAPIRO, M.D., *Instructor in Medicine*
 JOHN N. STIEL, M.D., *Instructor in Medicine*
 T. EUGENE TEMPLE, M.D., *Instructor in Medicine*
 JOHN R. WOODS, M.D., *Instructor in Medicine*
 ARTHUR RAY ANDERSON, M.D., *Clinical Instructor in Medicine*
 EDWIN B. ANDERSON, M.D., *Clinical Instructor in Medicine*
 H. R. ANDERSON, M.D., *Clinical Instructor in Medicine*
 JAMES E. ANDERSON, JR., M.D., *Clinical Instructor in Medicine*

WILLIAM C. ANDERSON, M.D., *Clinical Instructor in Medicine*
 PAUL H. BARNETT, M.D., *Clinical Instructor in Medicine*
 JACK M. BATSON, M.D., *Clinical Instructor in Medicine*
 ROBERT T. COCHRAN, M.D., *Clinical Instructor in Medicine*
 RAYMOND R. CROWE, M.D., *Clinical Instructor in Medicine*
 FRED M. DOWNEY, JR., M.D., *Clinical Instructor in Medicine*
 IRWIN B. ESKIND, M.D., *Clinical Instructor in Medicine*
 E. WILLIAM EWERS, M.D., *Clinical Instructor in Medicine*
 HOWARD R. FOREMAN, M.D., *Clinical Instructor in Medicine*
 MILTON GROSSMAN, M.D., *Clinical Instructor in Medicine*
 JOSIAH B. HIBBITTS, M.D., *Clinical Instructor in Medicine*
 ROBERT M. HOLLISTER, M.D., *Clinical Instructor in Medicine*
 JOSEPH E. HURT, M.D., *Clinical Instructor in Medicine*
 IRA T. JOHNSON, M.D., *Clinical Instructor in Medicine*
 JOHN P. KINNARD, JR., M.D., *Clinical Instructor in Medicine*
 OTTO MORSE KOCHTITZKY, M.D., *Clinical Instructor in Medicine*
 ALEXANDER C. McLEOD, M.D., *Clinical Instructor in Medicine*
 CULLEN R. MERRITT, M.D., *Clinical Instructor in Medicine*
 CARL E. MITCHELL, M.D., *Clinical Instructor in Medicine*
 FRED D. OWNBY, M.D., *Clinical Instructor in Medicine*
 BRUCE P'POOL, M.D., *Clinical Instructor in Medicine*
 LENOR S. RIBEIRO, M.D., *Clinical Instructor in Medicine*
 MARVIN J. ROSENBLUM, M.D., *Clinical Instructor in Medicine*
 SOL A. ROSENBLUM, M.D., *Clinical Instructor in Medicine*
 ROBERT M. ROY, M.D., *Clinical Instructor in Medicine*
 HERBERT J. SCHULMAN, M.D., *Clinical Instructor in Medicine*
 ABRAHAM C. SHMERLING, M.D., *Clinical Instructor in Medicine*
 LUTHER E. SMITH, M.D., *Clinical Instructor in Medicine*
 W. DAVID STRAYHORN, JR., M.D., *Clinical Instructor in Medicine*
 PAUL R. STUMB, M.D., *Clinical Instructor in Medicine*
 EDWARD L. TARPLEY, M.D., *Clinical Instructor in Medicine*
 W. CARTER WILLIAMS, JR., M.D., *Clinical Instructor in Medicine*
 LAWRENCE K. WOLFE, M.D., *Clinical Instructor in Medicine*
 C. DEAN DRIVER, *Research Associate in Medicine*
 ASHER FARHI, Ph.D., *Research Associate in Medicine*
 THOMAS R. HARRIS, Ph.D., *Research Associate in Medicine*
 JACEK HAWIGER, M.D., *Research Associate in Medicine*
 MALAK B. IBRAHIM, Ph.D., *Research Associate in Medicine*
 EUGENE JOHNSTON, Ph.D., *Research Associate in Medicine*
 TADASHI MINEMURA, M.D., *Research Associate in Medicine*
 AKHARAM R. PATHAK, Ph.D., *Research Associate in Medicine*
 EDWIN G. STANT, Ph.D., *Research Associate in Medicine*
 MARIE T. WASSON, B.S., *Research Associate in Medicine*

DERMATOLOGY

ROBERT N. BUCHANAN, M.D., *Clinical Professor of Dermatology and Head of
 the Division*
 FRANK G. WITHERSPOON, M.D., *Assistant Clinical Professor of Dermatology*
 JAMES R. HAMILTON, M.D., *Clinical Instructor in Dermatology*
 BERNARD J. PASS, M.D., *Clinical Instructor in Dermatology*
 BRUCE P'POOL, M.D., *Clinical Instructor in Dermatology*

NEUROLOGY

WILLIAM M. CLARK, M.D., *Assistant Clinical Professor of Neurology and Acting Head of the Division*

BERTRAM E. SPROFKIN, M.D., *Clinical Professor of Neurology*

CHARLES E. WELLS, M.D., *Associate Professor of Neurology*

ERIC BELL, JR., M.D., *Assistant Clinical Professor of Neurology*

JOHN SLOAN WARNER, M.D., *Clinical Instructor in Neurology*

501. METHODS IN CLINICAL SCIENCE. An interdepartmental course designed to acquaint the student with the techniques, methods, and basic principles necessary to take careful histories, perform thorough physical examinations and to understand and utilize basic laboratory procedures employed in clinical medicine. Students are divided into small tutorial groups for intensive work with patients on the wards at Vanderbilt University Hospital, the Veterans Administration Hospital, and Nashville General Hospital. Similar tutorial groups are utilized in the laboratory where students learn methods for examining urine, blood, sputum, gastric contents, feces, and body fluids. An introduction to neurologic diagnostic methods is included in the course. Additional training is given in special problems which relate to examination of pediatric, surgical, and obstetrical patients. Radiological techniques are correlated with instructional sessions. Correlative sessions are interspersed with the above. In these sessions, methods by which the history, physical examination, and laboratory aids can be used to arrive at diagnosis and decisions regarding further study and treatment are conducted by interdepartmental groups. *Drs. Liddle, Pennington, Hartmann, Minor, and the faculty of the Department of Medicine; Dr. Karzon and members of the Department of Pediatrics; Dr. Foster and members of the Department of Surgery; Dr. Goss and members of the Department of Obstetrics-Gynecology; Dr. Hillman and members of the Department of Orthopedics; Dr. Klavins and members of the Department of Radiology; Dr. Oates and members of the Department of Pharmacology; Dr. Eryasa and members of the Department of Anesthesiology.*

502. CLINICAL CLERKSHIP. One-third of the third year class are assigned to the medical wards for twelve-week periods. During the medical clerkship, time is divided equally between the Vanderbilt University Hospital and the Veterans Administration Hospital. The medical wards at Vanderbilt University Hospital comprise 75 ward beds used in teaching plus an additional 21 beds in the Clinical Research Center. The Veterans Administration Hospital has approximately 80 teaching beds. At Vanderbilt University Hospital these services include patients with diseases of the nervous system and the skin in addition to general medical patients. At the Veterans Administration Hospital there is a separate neurology ward to which clinical clerks are assigned for two weeks during their medical clerkship. In addition, there is an active pulmonary service which functions within the medical service at the Veterans Administration Hospital. Patients are under the care of members of the faculty of medicine. Sub-departmental areas are organized for teaching and clinical research as well as management of patients. The clinical clerkship is regarded as the back bone of the student's training in medicine, and repre-

ents the most intensive in-patient experience offered within the Department. It is believed that learning is most vivid through direct experience with patients, obtaining histories, doing physicals and laboratory studies, amplified by reading and by intensive contact with members of the house staff and teaching staff. Students are given considerable responsibility under the close supervision of the teaching staff. Additional instruction is carried out during rounds with the Chief of Service. In these sessions, clinical clerks present cases for discussion and criticism and the more important fields of internal medicine are covered. Instruction in dermatology consisting of a series of clinics and clinic demonstrations are held once weekly within the Veterans Administration Hospital. Ward work is supplemented by numerous teaching and subspecialty conferences held throughout the academic year. *Drs. Liddle, Brittingham, Clark, Des Prez, Salmon, Coppage, Buchanan, and members of the faculty of the Department of Medicine.*

03. CLINICAL LECTURES AND DEMONSTRATIONS. A series of 18 amphitheater clinics held bimonthly throughout the year. Cases and discussions on diseases of importance in medicine are presented. One hour per week. *Drs. Liddle, Brittingham, and Staff.*

04. MEDICAL OUT-PATIENT CLINIC. During the fourth year, each student is assigned one morning clinic period a week in the out-patient department. This experience gives the fourth year student major responsibilities for patient work-up and care in an environment that provides supervision and consultation from many branches of medicine. The long term care and follow-up of ambulatory patients and further refinement of skills in history taking and physical examination are stressed. During this period the student becomes acquainted with the resources which other services can bring to bear in the cooperative management of patients with chronic disease. *Drs. Spickard, Law, Graber, Flexner, Temple, and Staff.*

05. ELECTIVES IN MEDICINE. The Department of Medicine has many subspecialty divisions. Students in the third and fourth years may elect special clinical research work within any division of the Department of Medicine. In general, these electives follow the lines noted in the courses below. It should be indicated, however, that flexible arrangements can be worked out on an individual basis through consultation with the faculty member who will assume responsibility for supervision and guidance of the student. Such special electives must be cleared through Dr. Liddle and the Associate Dean for Medical Education.

06. FUNDAMENTALS OF HUMAN NUTRITION (328). Second and Fourth years. Lectures and assigned readings covering the biochemical basis of nutritional disorders and the application of this information to prevention and management of human disease. Course arranged in conjunction with Nutrition Clinics B-530 which will be arranged to illustrate and amplify the material discussed in the lectures. (Biochemistry 523.) One hour per week. FALL & SPRING. [1] *Drs. Mann, Carter, van Eys, Sandstead and Darby.*

07. CLINICAL BIOCHEMISTRY I. Second and Fourth years. A course cor-

relating basic biochemical principles with the pathophysiology of disease states. Chemical homeostasis is treated through discussions of the metabolic mechanisms for maintaining this state and of the methodology of evaluating it. Illustrative case reports of typical metabolic derangements are reviewed (Biochemistry 528.1.) One hour per week. FALL. *Drs. Faulkner and van Eys.*

524.2. CLINICAL BIOCHEMISTRY II. Second and Fourth years. Attention is directed to the altered intermediary metabolism of inherited disorders and to the development and changes in metabolic pathways during infancy and childhood. The material is presented throughout the course by lectures, seminars, assigned reading and selected patient reviews. (Biochemistry 528.2.) One hour per week. SPRING. *Drs. van Eys and Faulkner.*

525. CLINICAL HEMATOLOGY. Fourth year. A detailed, correlative clinical laboratory course. Each session will open with presentation of a patient followed by microscopic study, demonstration of pertinent specialized tests, and lastly an informal correlative discussion of the entire disease process. Three hours per week. SPRING. *Drs. Flexner and Hartmann.*

526. CLINICAL PHARMACOLOGY. Fourth year. Lectures and clinical seminars on the pharmacological basis of therapeutics and on the clinical use and evaluation of drugs. (Pharmacology 522.) One hour per week. FALL. *Dr. Oates and Staff.*

527. CLINICAL ELECTROCARDIOGRAPHY. Fourth year. A course of lectures and workshops dealing with the interpretation of clinically important electrocardiographic abnormalities. One hour per week. FALL. *Dr. Battersby.*

528. CORRELATION OF CLINICAL AND PHYSIOLOGIC DATA IN HEART DISEASE. Fourth year. A case of heart disease from the wards will be presented at each session. Auditory and visual aids in the form of electrocardiograms, phonocardiograms, intracardiac pressure tracings, dye dilution curves, and cineangiograms will be used to emphasize the clinical findings. One hour per week. FALL & SPRING. *Dr. France.*

529. TOPICS IN INFECTIOUS DISEASES. Fourth year. A lecture course dealing with selected topics in infectious diseases. This course will stress pathogenesis, host-parasite relationships, diagnosis, and treatment. One hour per week. FALL. *Dr. Koenig and Staff.*

531. INTRODUCTION TO ELECTROCARDIOGRAPHY. Second year. Fundamentals of electrocardiography emphasizing lead systems, vector theory, and the mechanisms of arrhythmias. A programmed text for self-teaching will be provided to each student. One hour per week. FALL. *Dr. Battersby.*

532. LECTURES ON RENAL PATHOPHYSIOLOGY. Second and Fourth years. Twelve informal seminars will concern renal-electrolyte pathophysiology. The first lecture will survey the history of renal physiology and the ambivalence of current attitudes toward the relevance of science. Basic renal physiology and hydrogen ion and electrolyte metabolism will be reviewed.

ed. These parameters will then be related to clinical situations with particular emphasis on sodium, water, and hydrogen ion imbalances. Two hours per week; first twelve weeks. FALL. *Dr. Ginn.*

33. MEDICAL CYTOGENETICS. First and Second years. This course will be oriented toward clinical and research problems approached through cytogenetic methodology in the human. Topics which will be discussed include clinical diagnosis through various methods (mitotic and meiotic cell preparations), relationships between congenital sex chromosome or autosomal anomalies and clinical status; bearing of chromosome studies or genetic counseling; effects of mutagenic agents (radiations; viruses, chemicals) on cell division and chromosome structure; genomic alterations in cancers and leukemias. One hour per week. FALL. *Dr. Engel.*

34. BLOOD BANKING LABORATORY AND CLINICAL SIGNIFICANCE. Fourth year. Six informal seminars and laboratory demonstrations concerned with antibody-antigen reactions relating to blood groups and transfusion, RH genotyping and its relation to hemolytic disease of the newborn, the Coombs test—its laboratory and clinical significance, indications for transfusion and transfusion reactions, immunohematology and blood component therapy. Two hours per week; second six weeks. FALL. *Drs. Jenkins and Hartman, Mrs. Noehlin.*

35. HISTORY OF MEDICINE. First, Second, Third and Fourth years. The general plan of the course is a brief chronological outline, starting with primitive medicine, continuing up through the eighteenth century. This is followed by lectures on special subjects and on outstanding contributors to medicine as Vesalius and Harvey. Toward the end of the year two or more lectures will be devoted to the advances in the nineteenth century. One hour per week. FALL & SPRING. *Drs. Shelley and Adams.*

43. MEDICAL SPECIALTY CLINICS. Fourth year. Clinical experience in the following specialities is available to the student: Allergy, Cardiology, Dermatology, Diabetes, Endocrinology, Gastroenterology, Hematology, Chest. Three hours per week; six week units. *Dr. Liddle and Staff.*

61. CLERKSHIP IN MEDICINE. Fourth year. A clinical clerkship on the wards of Nashville General Hospital for those who wish to extend their third year experience. Under supervision of the faculty and housestaff will include rotation between wards and emergency room. Full time; six week units. *Dr. Paine.*

62. GASTROENTEROLOGY CLERKSHIP. Fourth year. This clerkship offers broad experience in all clinical phases of gastroenterology including diseases of the hepato-biliary system and pancreas. Participation in endoscopy, biopsy procedures and radiology is coupled with evaluation of patients and participation in one of the on-going research projects. Seminars, rounds, and evaluation of current literature are regularly scheduled. Full time; six week units. *Drs. Law, Shull, and Collins.*

563. HEMATOLOGY CLERKSHIP. Fourth year. Active participation in Hematology OPD, journal clubs, seminars, marrow conferences, and ward rounds at Vanderbilt University Hospital, Veterans Administration Hospital, and Nashville General Hospital. Laboratory experience in specialized hematologic, radioisotope and blood banking techniques. Optional research experience. Program can be tailored to needs and desires of individual student. Each student will have an adviser on the senior faculty. Full time; six week units. *Dr. Hartmann.*

565. CLERKSHIP ON CLINICAL RESEARCH CENTER WARD. Fourth year. The Clinical Research Center ward is operating at full strength with 20 beds under the aegis of all divisions of the Hospital. Most of the patients are medical and are a particularly selected and complicated group with a wide variety of diseases. Regular rounds will be made with the house-staff and investigators, and there will be an opportunity to attend the Clinical Research Conferences. Full time; six week units. *Dr. Newman and Staff.*

566. CLERKSHIP IN PULMONARY DISEASES. Fourth year. The basic form of the clerkship will be that of a substitute internship. Student responsibilities will include initial work-up and continuing treatment of new patients under the supervision of the full time staff on the Pulmonary Disease Service, Veterans Administration Hospital, with participation in staff conferences, rounds, pulmonary disease consultations, and (with Dr. Bryant) infectious disease consultations. Full time; six week units. *Dr. Goodwin.*

567. CLERKSHIP IN RENAL PATHOPHYSIOLOGY. Fourth year. This clerkship offers active participation in the evaluation of patients with kidney disease and fluid-electrolyte imbalance, in biopsy procedures, and in renal-electrolyte rounds as well as experience in the hemodialysis program for acute and chronic renal failure. Optional pathophysiology seminars, research experience, and Journal Club. Six week units. FALL & SPRING. *Drs. Ginn and Matter.*

568. CLERKSHIP IN INFECTIOUS DISEASES. Fourth year. During the clerkship the student will evaluate patients with problems of infection on the wards of Vanderbilt University Hospital. He will be an active participant in the management and follow-up of these patients and will attend all the regularly scheduled rounds, conferences, and seminars of the Infectious Disease Division. Full-time; six-week units. *Dr. Koenig.*

569. CLERKSHIP IN NEUROLOGICAL AND PSYCHOLOGICAL MEDICINE. Fourth year. Conjoint clerkship experience in both neurology and psychiatry wards and consultative services at Veterans Administration Hospital, plus full schedule of rounds, conferences, and seminars. Emphasis neurologically will be on principles of examination, diagnosis, and therapy. Emphasis psychiatrically will be on management of psychiatric complications of chronic disease, evaluation of therapy and common psychiatric problems, and rehabilitation. (Psychiatry 564). Full-time, six week units. *Dr. Wells, and Clark.*

Research opportunities are available in all divisions of the Department of Medicine for selected students. Certain specific opportunities are outlined below.

81. RESEARCH FELLOWSHIPS IN INFECTIOUS DISEASES. Fourth year. A program consisting of approximately 70 per cent time on a research project, 30 per cent in clinical work with problems related to infection. Full time for twelve or eighteen weeks. *Dr. Koenig and Staff.*

82. RESEARCH FELLOWSHIP IN SELECTED METABOLIC AND ENDOCRINE DISEASES. Fourth year. Course covers selected topics in endocrinology and metabolism by means of an assigned reading program, laboratory work, clinical demonstration, and seminar. The student has an opportunity to examine and discuss patients and perform appropriate laboratory procedures utilizing enzymatic, colorimetric, spectrophotometric, isotopic, chromatographic and bioassay techniques. A weekly seminar reviews the assigned reading in the area of a single disease or group of related disorders of metabolism. Full time for six weeks. *Drs. Salmon and Coppage.*

83. RESEARCH FELLOWSHIP IN QUANTITATIVE CLINICAL CARDIOLOGY. Fourth year. The students accepted for this course must be interested in the study of cardiovascular disease and will be incorporated during their elective period into the full activities of this Division. Projects will include: (1) Instruction in elementary hemodynamics and intracardiac pressure wave analysis; (2) Acquisition of basic techniques such as arterial needle puncture, right heart catheterization, familiarization with standard physiological recording equipment; (3) Participation in work conferences and ward consultations. Twelve hours per week, for six or twelve weeks. *Dr. Sinclair-Smith.*

84. RESEARCH FELLOWSHIP IN NUCLEAR MEDICINE. Fourth year. Problems in hematology and new applications of radioisotopes in medicine will be selected in accordance with the student's interest and background. Twelve hours per week, or full time for twelve weeks. *Dr. Brill.*

85. RESEARCH FELLOWSHIP IN CLINICAL PHYSIOLOGY. Fourth year. Students interested in participating in any research project being conducted by the staff members of the Division of Clinical Physiology (cardiac, pulmonary, and renal) are offered training on a selective basis. These fellowships provide undergraduate trainees with excellent early exposure and experience in the foundation and methodology of research work. Full time for twelve or eighteen weeks. *Dr. Newman and Staff.*

87. RESEARCH FELLOWSHIP IN GASTROENTEROLOGY. Fourth year. Students are offered the opportunity of participating in the on-going research studies of the Division of Gastroenterology involving investigations in gastric secretion, intestinal absorption, protein metabolism and bilirubin metabolism. Full time for twelve or eighteen weeks. *Drs. Law and Collins.*

88. RESEARCH FELLOWSHIP IN HEMATOLOGY. Fourth year. A program consisting of approximately 80 per cent time on a specific research project

and 20 per cent time in correlative clinical work. Full time for twelve or eighteen weeks. *Dr. Hartmann and Staff.*

598. SEMINARS AND SELECTED TOPICS IN THE HISTORY OF MEDICINE. Fourth year. Students will participate in a seminar-type discussion of events and personalities in the history of medicine, each six week period being distinct from others. One hour per week. FALL & SPRING. *Drs. Adams and Shelley.*

599. MEDICINE SEMINAR. Fourth year. Discussion with the house staff and fellows of cases selected to focus on the major acute problems of hospitalized patients. Students will prepare case presentations, perform pre-assigned and elective reading, and participate in discussions aimed at a deeper understanding of pathophysiologic mechanisms and principles of treatment, as well as a practical approach to management. Two hours per week. FALL & SPRING. *Chief Medical Residents, Drs. Shaffner, Crews, and Staff.*

Microbiology

JOHN H. HASH, Ph.D., *Associate Professor of Microbiology and Acting Chairman of the Department*

SIDNEY P. COLOWICK, Ph.D., *American Cancer Society-Charles Hayden Foundation Professor of Microbiology*

SIDNEY HARSHMAN, Sc.D., *Associate Professor of Microbiology*

JOHN P. ROBINSON, Ph.D., *Associate Professor of Microbiology*


WILLIAM M. MITCHELL, M.D., Ph.D., *Assistant Professor of Microbiology*

MARYDA COLOWICK, M.S., *Instructor in Microbiology*

MADAN GOIL, Ph.D., *Research Associate in Microbiology*

JOSEPH KORINEK, M.D., *Research Associate in Microbiology*

FRANCES C. WOMACK, Ph.D., *Research Associate in Microbiology*

 The Department of Microbiology offers courses leading to the Ph.D. degree. Courses described below which are numbered in the 300 series are offered primarily for that program but are open to medical students by special arrangement.

501. MICROBIOLOGY (324). Lectures and laboratory exercises. The important bacterial, mycotic, parasitic, and viral infections are considered from the standpoint of etiology, epidemiology, pathogenesis, immunology, and laboratory diagnosis. Ten hours of lectures, seminars, and laboratory exercises. Prerequisite: Biochemistry 501-502 or equivalent. FALL. [*Staff.*]

521. ADVANCED TOPICS IN MICROBIOLOGY (328). Second and Fourth year. Consists of a lecture series of selected topics of advanced nature in: (a) regulation of bacterial metabolism; (b) bacterial and viral structure; (c)

immunochemistry; (d) enzymology. The content is changed completely from year to year. Students may take the course no more than three times. Prerequisite: 501. Two hours per week. SPRING. [2] Staff.

572. LECTURES ON RESEARCH PROGRESS IN MOLECULAR BIOLOGY (350a-350b). Second and Fourth years. A course co-sponsored by the Departments of Microbiology, Physiology, and Molecular Biology, in which members of these and other departments present their own research activities in relation to current problems in their field. First semester: biophysical aspects will be stressed, including the application of modern physicochemical techniques to studies of macromolecules and enzyme action. Second semester: physiological aspects will be stressed, including the molecular basis of the function of specialized tissues, and the mechanisms for metabolic control of gene action and multi-enzyme systems. First and second semesters may be taken independently. FALL & SPRING. [2-2]

581. EXPERIMENTAL METHODS IN MICROBIOLOGY (327). Second and Fourth years. A rotating program of laboratory work concerned with: (a) regulation of bacterial metabolism, (b) structural studies on bacteria, bacterial and mammalian viruses, (c) techniques in immunochemistry involving antibody synthesis, mechanism of antibody-antigen reaction and assay of antibody reactions, (d) enzyme studies involving physicochemical properties, kinetics, thermodynamics and mechanisms of action. Prerequisite: 501. Six hours per week. FALL & SPRING. Staff.

582. RESEARCH FELLOWSHIP IN MICROBIOLOGY. Fourth year. A research fellowship with one member of the staff, involving an intensive study in one of the areas listed under course 581. Full time for twelve or eighteen weeks. FALL, SPRING, OR SUMMER. Staff.

531. SPECIAL SEMINARS. Selected topics of current interest. [1] Staff.

599. RESEARCH. Staff.

Obstetrics & Gynecology

DONALD A. GOSS, M.D., *Professor of Obstetrics and Gynecology and Chairman of the Department*

JOHN S. ZELENIK, M.D., *Professor of Obstetrics and Gynecology*

JOHN C. BURCH, M.D., *Professor of Gynecology, Emeritus*

FRANK E. WHITACRE, M.D., *Professor of Obstetrics and Gynecology, Emeritus*

D. SCOTT BAYER, M.D., *Clinical Professor of Obstetrics and Gynecology*

G. SYDNEY McCLELLAN, M.D., *Clinical Professor of Obstetrics and Gynecology*

EDWIN LEA WILLIAMS, M.D., *Clinical Professor of Obstetrics and Gynecology*

STANLEY R. GLASSER, Ph.D., *Associate Professor of Obstetrics and Gynecology*

(Research)

PIERRE SOUPART, M.D., Ph.D., *Associate Professor of Obstetrics and Gynecology*

(Research)

- EVERETT M. CLAYTON, JR., M.D., *Associate Clinical Professor of Obstetrics and Gynecology*
- WILLARD O. TIRRILL, M.D., *Associate Clinical Professor of Obstetrics*
- ANGUS M. G. CROOK, M.D., *Assistant Professor of Obstetrics and Gynecology*
- DAVID L. DI PIETRO, Ph.D., *Assistant Professor of Obstetrics and Gynecology (Research)*
- MARIE-CLAIRE ORGBIN-CRIST, Ph.D., *Assistant Professor of Obstetrics and Gynecology (Research)*
- LARRY ARNOLD, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- RUSSELL T. BIRMINGHAM, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- ROGER B. BURRUS, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- ROBERT L. CHALFANT, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- GEORGE B. CRAFTON, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- JAMES WOOD ELLIS, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- B. KIMBROUGH HIBBETT III, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- JAMES W. JOHNSON, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- RALPH R. KLING, JR., M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- ROLAND D. LAMB, M.D., *Assistant Clinical Professor of Gynecology*
- HORACE T. LAVELY, JR., M.D., *Assistant Clinical Professor of Gynecology*
- HOMER M. PACE, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- ROY W. PARKER, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- ROBERT C. PATTERSON, JR., M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- C. GORDON PEERMAN, JR., M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- SIDNEY C. REICHMAN, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- HOUSTON SARRATT, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- ROBERT H. TOSH, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- THOMAS F. WARDER, M.D., *Assistant Clinical Professor of Obstetrics and Gynecology*
- HARRY BAER, M.D., *Clinical Instructor in Obstetrics and Gynecology*
- JAMES M. BRAKEFIELD, M.D., *Clinical Instructor in Obstetrics and Gynecology*
- BENJAMIN H. CALDWELL, JR., M.D., *Clinical Instructor in Obstetrics and Gynecology*
- CHARLES M. GILL, M.D., *Clinical Instructor in Obstetrics and Gynecology*
- PAUL A. GREEN, JR., M.D., *Clinical Instructor in Obstetrics and Gynecology*
- ROBERT GRIFFON, M.D., *Clinical Instructor in Obstetrics and Gynecology*
- CHARLIE JOE HOBODY, M.D., *Clinical Instructor in Obstetrics and Gynecology*
- CHARLES H. HUDDLESTON, M.D., *Clinical Instructor in Obstetrics and Gynecology*
- ORRIN LESTER JONES, JR., M.D., *Clinical Instructor in Obstetrics and Gynecology*

JAMES B. MILLIS, M.D., *Clinical Instructor in Obstetrics and Gynecology*
PHILLIP NICHOLAS, M.D., *Clinical Instructor in Obstetrics and Gynecology*
WILLIAM D. SUMPTER, JR., M.D., *Clinical Instructor in Obstetrics and Gynecology*
ARTHUR SUTHERLAND, M.D., *Clinical Instructor in Obstetrics and Gynecology*
NORMAN E. WITTHAUER, M.D., *Clinical Instructor in Obstetrics and Gynecology*

502. CLINICAL CLERKSHIP. One-sixth of the third year class is assigned for one-third of a semester. An introductory experience in inpatient obstetrics and gynecology is obtained. Approximately one-third of the experience will be at the Nashville General Hospital. *Drs. Goss, Crook, and Johnson.*

521. DEVELOPMENTAL BIOLOGY. First, Second, and Fourth years. A comprehensive, multidisciplinary study in mammalian developmental biology and reproductive physiology. This course is presented as a fundamental aspect of biologic science and includes discussion of such topics as: gametogenesis, ovulation (hypothalamic-hypophysial interrelationships), fertilization, implantation, placentation (functional and morphological), induction, organogenesis, maternal-fetal relationships, fetal endocrinology, parturition, and lactation. Two hours of lecture per week. *SPRING.* (Anatomy 521.) *Drs. Soupart, Glasser, and Staff.*

522. OBSTETRICAL AND GYNECOLOGICAL PATHOLOGY. Fourth year. A series of laboratory exercises in which the gross and microscopic characteristics of the more important obstetrical and gynecological conditions are demonstrated. (Pathology 526.) One hour per week. *FALL.* *Drs. Johnson, Thomison, and Parker.*

523. SEX COUNSELING. Third and Fourth years. This interdepartmental course aims to give students a better understanding of psycho-sexual problems so that they may gain competence in counseling patients. It will include such topics as pre-marital counseling; impotence and frigidity; "perversions" (including homosexuality); child sexuality; standards of sexual behavior. (Surgery 527, Psychiatry 531.) One hour per week. *FALL.* *Drs. Rbamy, Cappannari, Goss, and Glasser.*

524. HUMAN SEXUALITY. First and Second years. The purpose is to introduce the first or second year medical student to the physiological, psychological and sociological information relating to all phases of human sexual behavior. The content of the course will include considerations of reproductive physiology, human sexual response, family planning, sexual attitudes, behavior and myths, sexual aberrations and the interaction of sexuality and society. This course is intended to serve as a prerequisite to Surgery 527, Sex Counseling. (Surgery 528, Psychiatry 533.) One hour per week. *SPRING.* *Drs. Cappannari, Glasser, Rbamy, and others.*

541. OBSTETRICS CLINIC. Fourth year. All obstetrical patients are seen in this clinic. Includes initial work-up, management, and postpartum check-ups. Ordinarily, all new patients have a student work-up which is checked by the house officer or consultant. Three hours per week; six-week units. *FALL & SPRING.*

542. GYNECOLOGY CLINIC. Fourth year. Both new Gyn. and follow-up patients are seen-during this period. New Gyn. patients are worked-up by the students and checked by the house officer or consultant. During this time, post-operative cases are also seen. Three hours per week; six week units. FALL & SPRING.

543. OBSTETRICAL AND GYNECOLOGICAL CLINICS. Fourth year. Experience in the following clinics is available to the student: Tumor, Medical Obstetric, Endocrine and Infertility, RH Obstetrical, or Routine. These clinics count toward Ob-Gyn requirements for graduation. Three hours per week; six-week units. FALL & SPRING. *Staff.*

561. CLERKSHIP IN OBSTETRICS AND GYNECOLOGY. Fourth year. Clinical clerkship in Obstetrics-Gynecology at Vanderbilt University Hospital or Nashville General Hospital. Inpatient and outpatient services on both obstetrics and gynecology, night call on rotational basis. Weekly clinical and pathology conferences. Full time; six-week units. *Drs. Goss, Crook Johnson, and Staff.*

581. RESEARCH FELLOWSHIP IN OBSTETRICS AND GYNECOLOGY. Fourth year. Students may work with any member of the faculty on a problem relating to experimental aspects of reproductive biology. The laboratories and animal quarters of the department will be made available to the student. A written and oral report of the research will be required. Twelve hours per week; six-week units. *Dr. Glasser and Staff.*

582. CLINICAL RESEARCH IN OBSTETRICS AND GYNECOLOGY. Fourth year. Students will work with a member of the faculty on any problem relating to the diagnosis or treatment of an obstetrical-gynecological disease. Research will be carried out in the library, medical records room, outpatient and inpatient areas, and laboratories of the department. A written and oral report of the research will be required. Three hours per week; six week units. *Staff.*

599. SEMINAR IN DEVELOPMENTAL BIOLOGY. First, Second, and Fourth years. Weekly seminar including lectures and discussion by the full-time faculty, visiting lecturers, and participating students. (Anatomy 599) One hour per week. FALL & SPRING. *Drs. Glasser and Davies.*

Orthopedic Surgery

J. WILLIAM HILLMAN, M.D., *Professor of Orthopedic Surgery and Chairman of the Department*

S. BENJAMIN FOWLER, M.D., *Clinical Professor of Orthopedic Surgery*

EUGENE M. REGEN, M.D., *Clinical Professor of Orthopedic Surgery*

ARTHUR LEROY BROOKS, M.D., *Associate Professor of Orthopedic Surgery*

GEORGE K. CARPENTER, M.D., *Associate Clinical Professor of Orthopedic Surgery*
Emeritus

JOHN F. CONNOLLY, M.D., *Assistant Professor of Orthopedic Surgery*
 CHARLES W. EMERSON, JR., M.D., *Assistant Professor of Orthopedic Surgery*
 ELSEBETH KAHN, M.S.W., *Assistant Professor of Social Service*
 J. JEFFERSON ASHBY, M.D., *Assistant Clinical Professor of Orthopedic Surgery, Emeritus*
 DON L. EYLER, M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 ARNOLD HABER, JR., M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 JERRY CHEEK HUNT, M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 JOHN R. JONES, M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 A. BRANT LIPSCOMB, M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 ANDREW H. MILLER, M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 THOMAS F. PARRISH, M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 EUGENE M. REGEN, JR., M.D., *Assistant Clinical Professor of Orthopedic Surgery*
 HARRY BUGEL, M.D., *Instructor in Orthopedic Surgery*
 ROBERT V. RUSSELL, M.D., *Instructor in Orthopedic Surgery*
 JOE G. BURD, M.D., *Clinical Instructor in Orthopedic Surgery*
 GEORGE K. CARPENTER, JR., M.D., *Clinical Instructor in Orthopedic Surgery*
 G. WILLIAM DAVIS, JR., M.D., *Clinical Instructor in Orthopedic Surgery*
 CHARLES M. HAMILTON, M.D., *Clinical Instructor in Orthopedic Surgery*
 FRANK E. JONES, M.D., *Clinical Instructor in Orthopedic Surgery*
 LAWRENCE P. LAUGHLIN, M.D., *Clinical Instructor in Orthopedic Surgery*
 JOHN M. MILLER, M.D., *Clinical Instructor in Orthopedic Surgery*
 E. DEWEY THOMAS, M.D., *Clinical Instructor in Orthopedic Surgery*
 JOHN M. WAMPLER, M.D., *Clinical Instructor in Orthopedic Surgery*

501. METHODS IN CLINICAL SCIENCE: INTRODUCTION TO ORTHOPEDIC SURGERY. A series of lectures is presented in association with the course Methods in Clinical Science. Emphasis is placed upon the examination of the musculoskeletal system, assessment of normal and abnormal gait, standard measurement and recording of ranges of joint motion and muscle strength. Case presentations illustrate the basic mechanism of deformity and disability. SPRING. *Dr. Hillman and Staff.*

502. INTRODUCTION TO CLINICAL ORTHOPEDIC SURGERY. A series of twelve lectures is presented in the third year, covering traumatic and non-traumatic musculoskeletal conditions. Emphasis is placed upon the physiologic approach to the treatment of these problems. SPRING. *Dr. Hillman and Staff.*

503. ORTHOPEDIC INPATIENT SERVICE. During the third year surgical clerkship, there are ten-day assignments of groups of two students to the Orthopedic Ward of the Hospital. Combined resident-student rounds are held each day with attending staff. (See Surgery 502.) *Dr. Hillman and Staff.*

504. ORTHOPEDIC OUTPATIENT SERVICE. Outpatient experience in Ortho-

pedic Surgery is coordinated with the general surgery and other clinics (See Surgery 504.)

521. EMERGENCY CARE OF THE INJURED. Fourth year. This course on emergency care of the injured includes discussion and demonstration of all major concepts of care of the injured. It is a multidepartmental course coordinated by Orthopedic Surgery. It is particularly designed to fill the gap of the current curriculum in a systematic and concentrated review of the care of major injuries. It is also slanted toward both military and civilian problems. One hour per week. SPRING. *Dr. Hillman, Staff, and representatives of other departments.*

543. ORTHOPEDIC SURGERY SPECIALTY CLINICS. Fourth year. Experience in the following specialty clinics is available to the student: Cerebral Palsy, Hand, Crippled Children. Three hours per week, six-week units. *Dr. Hillman and Staff.*

561. CLERKSHIP IN ORTHOPEDIC SURGERY. Fourth year. An intensive clinical experience in Orthopedic Surgery including inpatient, outpatient and operating room assignments. Supervision is by the resident staff and the Orthopedic Department staff. The clerk will participate in the full activities of the department and may be assigned to: 1) Children's Orthopedics (State Crippled Children's Clinics and Vanderbilt), 2) Nashville General Hospital, Veterans Administration Hospital and Vanderbilt University Hospital. Full time; six week units. *Dr. Hillman and Staff.*


562. REHABILITATION CLERKSHIP. Fourth year. This clerkship is an integral part of the rehabilitation teaching program. Participation in programs providing long-term multidisciplinary medical care for inpatients and outpatients. Includes attendance at Birth Defects Clinic, Amputee Clinic, Cerebral Palsy Clinic, Arthritis Clinic, field trips to the Bill Wilkerson Hearing and Speech Clinic and the State Vocational Rehabilitation Service, plus weekly seminars on practical aspects of rehabilitation. The medical conditions which require team type care are demonstrated. In addition, the effective functioning of medical and paramedical participants will be in evidence. (Preventive Medicine 561.) Twelve hours per week; six week units. *Dr. Hillman and Staff.*

563. NON-CLERKSHIP IN ORTHOPEDIC SURGERY. First, Second, Third, and Fourth years. This clerkship is designed for the student who is interested in fields other than Orthopedic Surgery but who would participate in the areas of joint activity between Orthopedic Surgery and related departments. For example, the clerkship might encompass all the radiologic studies which occur in Orthopedic Surgery during the period of the clerkship and would give the student an opportunity to participate in the areas of mutual activity. Similar arrangements may be worked out with any particular area of interest. It is topic and patient oriented rather than along the traditional lines of departmental service responsibility. Full time or part time, six week units. *Dr. Hillman and Staff.*

581. RESEARCH FELLOWSHIP IN ORTHOPEDIC SURGERY. Fourth year. An opportunity for supervised experience in research related to the musculo-skeletal system. Elements of project design and methods of assessment, development and application of laboratory equipment, controlled small animal experience, and background correlative study will be emphasized. Currently active research projects in areas of biomechanics of bone, biochemical-biomechanical correlation, acute circulatory disorders in the extremities, scoliosis, and fat embolism are suggested topics, although other projects of particular interest to the fellow are equally acceptable. Each student will be given individual supervision by a staff member. Full time for twelve or eighteen weeks. *Dr. Hillman and Staff.*

Pathology

- JOHN L. SHAPIRO, M.D., *Professor of Pathology and Chairman of the Department*
 ROBERT D. COLLINS, M.D., *Professor of Pathology*
 VIRGIL S. LEQUIRE, M.D., *Professor of Experimental Pathology*
 BARTON MCSWAIN, M.D., *Professor of Surgical Pathology*
 FRANK R. BLOOD, Ph.D., *Associate Professor of Pathology*
 WILLIAM J. CHEATHAM, M.D., *Associate Professor of Pathology*
 ROBERT G. HORN, M.D., *Associate Professor of Pathology*
 WILLIAM A. DEMONBREUN, M.D., *Associate Clinical Professor of Pathology, Emeritus*
 BERTRAM E. SPROFKIN, M.D., *Associate Clinical Professor of Neuropathology*
 JOHN BROWN THOMISON, M.D., *Associate Clinical Professor of Pathology*
 FRANK C. WOMACK, M.D., *Associate Clinical Professor of Pathology*
 GEORGE BARNEY, D.V.M., *Assistant Professor of Comparative Pathology*
 RICHARD D. BUCHANAN, M.D., *Assistant Professor of Pathology*
 ALY FAHMY, M.D., *Assistant Professor of Pathology*
 RUFUS JACK FREEMAN, M.D., *Assistant Professor of Pathology (Military leave of absence)*
 MARY E. GRAY, Ph.D., *Assistant Professor of Experimental Pathology*
 HAROLD L. MOSES, M.D., *Assistant Professor of Pathology*
 HARRY G. BROWNE, M.D., *Assistant Clinical Professor of Pathology*
 THOMAS C. LITTLEJOHN, M.D., *Assistant Clinical Professor of Forensic Pathology*
 FRED W. RYDEN, M.D., Ph.D., *Assistant Clinical Professor of Pathology*
 CHANDRA MUKHERJI, M.D., *Instructor in Pathology*
 SHIRLEY SCHUFFMAN, B.A., *Instructor in Pathology, Electron Microscopy*
 HENRY A. WILKINSON, M.D., *Instructor in Pathology*
 ANDREW L. WILLIAMS, M.D., *Instructor in Pathology*
 JERRY K. HUMPHREYS, M.D., *Clinical Instructor in Pathology*
 JAMES M. PHYTHON, M.D., *Clinical Instructor in Pathology*

 The Department of Pathology offers courses leading to the Master's and the Ph.D. degrees.

501. GENERAL AND SPECIAL PATHOLOGY (321). General and special pathology presented by lectures, demonstrations, discussions, and laboratory work. Gross and microscopic lesions characteristic of various diseases are studied and correlated. The class assists with post-mortem examinations performed during the course. [10] *Dr. Shapiro and Staff.*

521. PATHOLOGY OF DISEASES OF LABORATORY ANIMALS. Second and Fourth years. A course providing training in the interpretation of lesions in experimental animals, designed particularly to aid in recognition and interpretation of natural diseases which could influence results and to evaluate laboratory animals as to their suitability for experimental purposes. One hour per week; six week units. *Dr. Barney.*

522. NEUROPATHOLOGY AND ITS CLINICAL CORRELATION. First, Second, and Fourth years. In a series of weekly lectures and clinic-pathologic demonstrations the anatomic, physiologic, and pathologic aspects of nervous system disease will be integrated. Designed for medical students at any level. One hour per week. SPRING. *Dr. Sprofskin.*

523. VIRAL DISEASES OF IMPORTANCE TO MAN. Second and Fourth years. Major viral diseases of importance to man, their pathogenesis, pathology, and laboratory diagnosis will be discussed in a series of lectures and seminars. One hour per week. SPRING. *Drs. Cheatham and Ryden.*

524. GROSS PATHOLOGY OF THE NERVOUS SYSTEM. Second and Fourth years. A limited number of students will be accepted for participation in the weekly examination of current specimens obtained at necropsy and subsequent study of the pertinent microscopic specimens. One hour per week. FALL & SPRING. *Dr. Sprofskin.*

525. SURGICAL PATHOLOGY. Third year. Each session is initiated by a lecture to be followed by presentation of pertinent microscopic lesions and roentgenograms. In the laboratory, fresh gross specimens and loan collections of slides are studied under supervision of resident and senior staff. The course correlates the clinical manifestations and the gross and microscopic changes of the common surgical diseases. (Surgery 521.) Three hours per week for year. *Dr. McSwain and Staff.*

526. OBSTETRICAL AND GYNECOLOGICAL PATHOLOGY. Fourth year. A series of lectures and laboratory exercises concerning the more important gross and microscopic lesions of the female reproductive system. The morphologic and functional aspects of the lesions and their clinical significance are emphasized. (Obstetrics-Gynecology 522.) One hour per week. FALL. *Drs. Thomison and Parker.*

527. TROPICAL DISEASES. Fourth year. To stimulate interest in global medicine, the pathogenesis and diagnosis of infectious diseases (primarily

tropical and subtropical in distribution) will be emphasized. Two hours per week. SPRING. *Drs. Thomison and Ryden.*

561. CLERKSHIP IN PATHOLOGY. Fourth year. Senior students will participate in all departmental activities, with responsibility in teaching and autopsy service. Investigative work as desired. Full time; six week units. *Dr. Shapiro and Staff.*

581. RESEARCH FELLOWSHIP IN ELECTRON MICROSCOPY. Fourth year. Techniques of electron microscopy as applied to specific research problems in pathology. Full time for twelve or eighteen weeks. *Dr. Horn.*

582. RESEARCH FELLOWSHIP IN PATHOLOGY (399). Fourth year. Opportunities for research are offered to properly qualified students. Hours by arrangement. *Staff.*

Pediatrics

DAVID T. KARZON, M.D., *Professor of Pediatrics and Chairman of the Department*

AMOS CHRISTIE, M.D., *Professor of Pediatrics*

RANDOLPH BATSON, M.D., *Professor of Pediatrics*

JAMES C. OVERALL, M.D., *Clinical Professor of Pediatrics*

WILLIAM D. DONALD, M.D., *Associate Professor of Pediatrics*

JOSEPH A. LITTLE, M.D., *Associate Professor of Pediatrics*

SARAH H. SELL, M.D., *Associate Professor of Pediatrics*

MILDRED STAHLMAN, M.D., *Associate Professor of Pediatrics*

DONALD J. STEDMAN, Ph.D., *Associate Professor of Pediatrics*

JOE M. STRAYHORN, M.D., *Associate Clinical Professor of Pediatrics*

WILLIAM O. VAUGHAN, M.D., *Associate Clinical Professor of Pediatrics*

THOMAS S. WEAVER, M.D., *Associate Clinical Professor of Pediatrics*

WILLIAM F. FLEET, M.D., *Assistant Professor of Pediatrics*

ROBERT C. FRANKS, M.D., *Assistant Professor of Pediatrics*

DOROTHY JEAN TURNER, M.D., *Assistant Professor of Pediatrics*

JAN VAN EYS, Ph.D., M.D., *Assistant Professor of Pediatrics*

LUTHER A. BEAZLEY, M.D., *Assistant Clinical Professor of Pediatrics*

EUGENE L. BISHOP, JR., M.D., *Assistant Clinical Professor of Pediatrics*

HEARN G. BRADLEY, M.D., *Assistant Clinical Professor of Pediatrics, Emeritus*

HARRY M. ESTES, M.D., *Assistant Clinical Professor of Pediatrics*

DAN S. SANDERS, JR., M.D., *Assistant Clinical Professor of Pediatrics*

CHARLES GORDON RENNICK SELL, M.B., B. Chiv., *Assistant Clinical Professor of Pediatrics*

RONALD THIELE, M.P.H., M.D., *Assistant Clinical Professor of Pediatrics*

WILLIAM BROWN WADLINGTON, M.D., *Assistant Clinical Professor of Pediatrics*

ETHEL WALKER, M.D., *Assistant Clinical Professor of Pediatrics*
 ERLE E. WILKINSON, M.D., *Assistant Clinical Professor of Pediatrics*
 JAMES CARTER, M.D., *Instructor in Pediatrics*
 LINDSAY K. BISHOP, M.D., *Clinical Instructor in Pediatrics*
 ROBERT EDWARD BURR, M.D., *Clinical Instructor in Pediatrics*
 E. THOMAS CARNEY, D.D.S., *Clinical Instructor in Pediatrics*
 SAM W. CARNEY, JR., M.D., *Clinical Instructor in Pediatrics*
 NORMAN M. CASSELL, M.D., *Clinical Instructor in Pediatrics*
 ERIC MARTIN CHAZEN, M.D., *Clinical Instructor in Pediatrics*
 ROBERT COHEN, M.D., *Clinical Instructor in Pediatrics*
 WILLIAM M. DOAK, M.D., *Clinical Instructor in Pediatrics*
 RAY L. DUBUISSON, M.D., *Clinical Instructor in Pediatrics*
 PHILIP C. ELLIOTT, M.D., *Clinical Instructor in Pediatrics*
 JOHN P. FIELDS, M.D., *Clinical Instructor in Pediatrics*
 CHARLES HIRSHBERG, M.D., *Clinical Instructor in Pediatrics*
 ROBERT H. HUTCHESON, JR., M.D., *Clinical Instructor in Pediatrics*
 WILLIAM C. KING, D.M.D., *Clinical Instructor in Pediatrics*
 LEONARD J. KOENIG, M.D., *Clinical Instructor in Pediatrics*
 JOSEPH F. LENTZ, M.D., *Clinical Instructor in Pediatrics*
 SOL L. LOWENSTEIN, M.D., *Clinical Instructor in Pediatrics, Emeritus*
 DEWEY G. NEMEC, M.D., *Clinical Instructor in Pediatrics*
 HARVEY SPARK, M.D., *Clinical Instructor in Pediatrics*
 JOSEPH STERANKA, M.D., *Clinical Instructor in Pediatrics*
 JACK TURNER SWAN, M.D., *Clinical Instructor in Pediatrics*
 RICHARD P. TABER, M.D., *Clinical Instructor in Pediatrics*
 ARVILLE WHEELER, M.D., *Clinical Instructor in Pediatrics*
 THOMAS B. ZERFOSS, JR., M.D., *Clinical Instructor in Pediatrics*

501. METHODS IN CLINICAL SCIENCE: INTRODUCTION TO PEDIATRICS. As an integral part of the course Methods in Clinical Science, a series of lectures will be given in the second year. These lectures will prepare the students for their clinical experiences in the third year. Additionally, students are rotated through the department in small tutorial groups. SPRING. *Dr. Karzon and Staff.*

502. CLINICAL CLERKSHIP. One-sixth of the third year class is assigned to the Pediatric wards for six weeks. Bedside instruction is given and patients are studied, emphasis being placed on the structure and function of the normal child. Physical diagnosis and variations from the normal and their prevention are considered. *Drs. Karzon, Little, and Staff.*

503. PEDIATRIC OUTPATIENT SERVICE. During the Senior year, the class spends six weeks in a planned program in the Pediatric Outpatient Clinics. Patients, including well babies in a special clinic, are assigned to students who record histories, make physical examinations, and carry out diagnostic

and immunization procedures. Diagnosis and treatment are considered. Students rotate through special Pediatric clinics. *Dr. Karzon.*

504. CLINICAL LECTURES AND DEMONSTRATIONS. A series of eighteen Amphitheater Clinics held biweekly throughout the year. Cases and discussions on diseases of importance in pediatrics are presented. *Dr. Karzon and Staff.*

521. SIGNPOSTS OF HUMAN GROWTH AND DEVELOPMENT. First year. A series of demonstrations on growth of children using ward and clinic material. Deviations from the normal growth pattern and congenital abnormalities will be shown. One hour per week; six week units. *Dr. Karzon and Staff.*

522. LECTURE SERIES IN PEDIATRICS. Fourth year. Lectures will cover the spectrum of diseases in the pediatric age group including a discussion of prenatal period, the newborn child, growth and development, and nutrition of infants and children. The preventive aspects of pediatrics are discussed. Focus is primarily on the normal child as a basis for the study of the diseases of children. One hour per week. FALL & SPRING. *Dr. Karzon and Staff.*

524. PEDIATRIC PATHOPHYSIOLOGY. Second and Fourth years. Lecture course concerning the special problems of the newborn child, alterations in normal physiology produced by various disease states, cardiac diseases, endocrine, renal, and metabolic disorders. One hour per week; last twelve weeks. FALL. *Drs. Franks and Stahlman.*

525. PEDIATRIC SURGICAL PROBLEMS. Fourth year. A combined course offered by the departments of Surgery and Pediatrics utilizing patient demonstrations and didactic lectures. Diagnosis, preoperative preparation, surgery, and postoperative care will be stressed. Course may be elected for units of six weeks to all year. (Surgery 525.) One hour per week. FALL & SPRING. *Drs. Little and Scott.*

527. PEDIATRIC WARD WALK. Fourth year. The most interesting and instructive cases currently on the Pediatrics Wards will be shown each week. Diagnostic and therapeutic problems will be discussed. May elect one or more periods. One hour per week; six week units. *Dr. Little and Staff.*

528. RECENT ADVANCES IN PEDIATRIC INFECTIOUS DISEASES. Second, Third, and Fourth years. A lecture course in clinical infectious diseases of children emphasizing the recent advances in common diseases, unusual diseases, and special problems. Patients and special laboratory demonstrations will be shown when applicable. One hour per week. SPRING. *Drs. Sell, Turner, and Fleet.*

543. PEDIATRIC SPECIALITY CLINICS. Fourth year. Experience in the following speciality clinics is available to the student: Mental Retardation, Practical Pediatrics, Allergy, Endocrine and Metabolic, and Seizure. Three hours per week; six week units.

561. CLERKSHIP IN PEDIATRICS. Fourth year. The student shall serve as Extern on the wards at Vanderbilt University Hospital or Nashville General Hospital. He shall have all associated responsibilities, including attendance at conferences. Full time; six week units. *Drs. Karzon and Donald.*

562. CLERKSHIP IN NEWBORN CARE. Fourth year. Students will be instructed three afternoons a week in the special care involved in the supervision of newborns. Prerequisite (or concomitant): Pediatric Pathophysiology (Pediatrics 524). Six hours per week; six week units. *Dr. Stahlman.*

581. RESEARCH FELLOWSHIP IN NEWBORN PHYSIOLOGY. Fourth year. Fellowship offering a concentrated experience in the newborn nursery and the laboratory. For students with special interest in the field of newborn physiology. Full time for twelve or eighteen weeks. *Dr. Stahlman.*

582. RESEARCH FELLOWSHIP IN PEDIATRIC INFECTIOUS DISEASE. Fourth year. Fellowship on special problems in infectious disease in pediatrics. Special techniques, including immunofluorescent techniques, in clinical microbiology included. Full time for six to twelve weeks. FALL & SPRING. *Dr. Sell.*

Pharmacology

ALLAN D. BASS, M.S., M.D., *Professor of Pharmacology and Chairman of the Department*

MILTON T. BUSH, Ph.D., *Professor of Pharmacology*

WOLF-DIETRICH DETTBARN, M.D., *Professor of Pharmacology*

MURRAY HEIMBERG, Ph.D., M.D., *Professor of Pharmacology*

LEON HURWITZ, Ph.D., *Professor of Pharmacology*

FRIDOLIN SULSER, M.D., *Professor of Pharmacology*

JOHN E. CHAPMAN, M.D., *Associate Professor of Pharmacology*

ERWIN J. LANDON, M.D., Ph.D., *Associate Professor of Pharmacology*

JOHN A. OATES, M.D., *Associate Professor of Pharmacology*

CHARLES B. PITTINGER, M.D., *Associate Professor of Pharmacology*

B. V. RAMA SASTRY, D.Sc., Ph.D., *Associate Professor of Pharmacology*

DANIEL M. BUXBAUM, Ph.D., *Assistant Professor of Pharmacology*

JOHN CAVANAUGH, Ph.D., M.D., *Assistant Professor of Pharmacology*

JOHN W. CHAMBERS, Ph.D., *Assistant Professor of Pharmacology*

FLORIS DE BALBIAN VERSTER, M.S., Ph.D., *Assistant Professor of Pharmacology*

JAMES V. DINGELL, M.S., Ph.D., *Assistant Professor of Pharmacology*

ANDREW MICHELAKIS, Ph.D., M.D., *Assistant Professor of Pharmacology*

G. ALAN ROBISON, M.S., Ph.D., *Assistant Professor of Pharmacology*

IRA WEINSTEIN, Ph.D., *Assistant Professor of Pharmacology*
 HENRY G. WILCOX, Ph.D., *Assistant Professor of Pharmacology*
 ELAINE SANDERS-BUSH, Ph.D., *Instructor in Pharmacology*
 WILLIAM E. FANN, M.D., *Instructor in Pharmacology*
 O. THOMAS FEAGIN, M.D., *Instructor in Pharmacology*
 JOHN GRIFFITH, M.D., *Instructor in Pharmacology*
 PAUL D. JOINER, Ph.D., *Instructor in Pharmacology*
 HOWARD A. KLAUSNER, Ph.D., *Instructor in Pharmacology*
 DAVID G. SHAND, Ph.D., M.D., *Instructor in Pharmacology*
 KIM DAYANI, M.D., *Research Associate in Pharmacology*
 MARIA P. HONRUBIA, M.D., *Research Associate in Pharmacology*
 M. KOHOUT, C.Sc., *Research Associate in Pharmacology*
 W. BOLTON SMITH, M.S., *Research Associate in Pharmacology*
 CHARLES W. VAN WAY, M.D., *Research Associate in Pharmacology*
 LARRY T. WELCH, Ph.D., *Research Associate in Pharmacology*

The Department of Pharmacology offers courses leading to the Master's and Ph.D. degrees. Courses described below which are numbered in the 300 series are offered primarily for that program but are open to medical students by special arrangement.

501. PHARMACOLOGY (321). Lectures in which the reaction of the human organism to chemical substances is taken up in a systematic manner, and typical reactions demonstrated by animal experiments. Laboratory exercises in which the student has an opportunity to become familiar with pharmacological techniques. Five lectures a week and nine hours of laboratory work a week. SPRING. [8] *Dr. Bass and Staff.*

522. CLINICAL PHARMACOLOGY. Fourth year. Lectures and clinical seminars on the pharmacological basis of therapeutics and on the clinical use and evaluation of drugs. (Medicine 526.) One hour per week. FALL. *Dr. Oates.*

523. THE RELATIONSHIP OF CHEMICAL STRUCTURE TO PHARMACOLOGICAL ACTION (323-1). Fourth year. Discussion and demonstration of correlations between pharmacological action and molecular structure of organic substances, with special reference to the physical-chemical properties of these substances. Three and a half hours per week. SPRING. [2] *Dr. Bush.*

524. AUTONOMIC PHARMACOLOGY (323-3). Fourth year. The mechanisms of storage and release of catecholamines and acetylcholine will be discussed. Lectures on drugs modifying autonomic function through an action of hormone synthesis, storage, release, or direct combination with tissue enzymes or receptors will be given. Two hours per week. FALL. [2] *Drs. Bass and Sastry.*

525. PHARMACOLOGY OF ANTICANCER AND ANTIMICROBIAL AGENTS. The relationship between the biology of the mammalian and microbial cell to

the selective action of chemotherapeutic agents will be discussed with emphasis placed on the biological basis of chemotherapy. As fundamental background the first part of the course will survey the chemistry and biology of nucleic acids and the concept of antimetabolites to nucleic acids. The pharmacology of representative chemotherapeutic agents will then be presented in detail along with consideration of special problems of resistance and toxicity. SPRING. [2] *Drs. Landon and Weinstein.* (Not offered 1968/69.)

526. MECHANISM OF DRUG ACTION (322). Second and Fourth years. Lectures and seminars will be held for students interested in acquiring a knowledge of the biochemical and physicochemical mechanisms involved in drug action. This will include: (1) drug-receptor interactions, (2) the biochemical basis of drug therapy. FALL. [2] *Dr. Hurwitz.* (Not offered 1968/69.)

527. PSYCHOPHARMACOLOGY. Three separate but related courses will emphasize the neuropharmacological, neurophysiological, neurochemical, and psychological aspects of psychotropic drugs. Besides presenting current theories on the mode of action of psychotherapeutic drugs, the use of these agents as tools to investigate brain function will also be considered. The significance of available biochemical, pharmacological, and behavioral data, with regard to possible psychopathological processes in man, will be critically reviewed. Prerequisite: Anatomy 335. Individual courses offered include:

1. PHARMACOLOGY OF PSYCHOTROPIC DRUGS. [2] *Drs. Sulser and Dingell.* (Not offered 1968/69.)

2. NEUROCHEMICAL BASIS OF BEHAVIOR. SPRING 1969. [2] *Drs. de Balbian Verster, Robison, and Buxbaum.*

3. PSYCHOLOGICAL ANALYSIS OF DRUG ACTION. FALL 1968. [2] *Drs. Tapp and Bettinger.*

528. ENDOCRINE PHARMACOLOGY (323-2). Second and Fourth years. Emphasis placed on the mechanism of action of hormones and chemical agents used as substitutes for physiologically occurring hormones. Drugs used to modify action, synthesis, and release of natural hormones will be discussed. Two hours per week. FALL. [2] *Dr. Heimberg and Staff.* (Not offered 1968/69.)

530. PHARMACOLOGY OF ANESTHESIA (325). Fourth year. A course related to pharmacologic principles involved in the action of anesthetic agents. This will include discussions of: the chemistry of anesthetic agents; physico-chemical principles of absorption, distribution, and elimination; theories of anesthesia; factors modifying drug responses; biotransformation toxicity and modifications of anesthesia under hyperbaric conditions. (Anesthesiology 521). One hour per week. FALL. [1] *Dr. Pittinger.*

531. TECHNIQUES IN NEUROPHARMACOLOGY OF THE CENTRAL NERVOUS SYSTEM. Second and Fourth years. An instrumental analysis course which will demonstrate the use of equipment and techniques employed in the

evaluation of drugs which modify function of the central nervous system. The course will cover primarily fundamental biochemical and physiological techniques as applied to neuropharmacology. Prerequisite: Biochemistry 501-502 or Biochemistry 326. Five hours per week. SPRING. [2] *Dr. de Balbian Verster.*

581. RESEARCH FELLOWSHIP IN PHARMACOLOGY. Fourth year. The various areas of Pharmacology including Clinical Pharmacology. Full time for twelve or eighteen weeks. FALL & SPRING. *Dr. Bass.*

598. SEMINAR IN PSYCHOPHARMACOLOGY (331a-331b). An interdepartmental seminar involving the Departments of Pharmacology, Psychology, Psychiatry, and Anatomy. The topics covered relate to etiology of mental illness, behavioral psychology, and mechanism of action of drugs which are employed both as psychomimetic agents and psychotherapeutic agents. One hour per week. FALL & SPRING. [1-1] *Staff.*

599. SEMINAR IN PHARMACOLOGY (330a-330b). Fourth year. Admission to course by arrangement. One hour per week. FALL & SPRING. [1-1] *Staff.*

399. RESEARCH. Experimental and theoretical aspects of the mechanism of action of chemical substances on cell, tissue, and organ function, especially in the following areas: cardiac pharmacology, cancer chemotherapy, antimetabolites as chemotherapeutic agents, metabolic fate of narcotic and tranquilizing drugs, design and synthesis of new molecules as possible chemotherapeutic substances. FALL & SPRING. Hours and credit by arrangement. *Staff.*

Physiology

CHARLES RAWLINSON PARK, M.D., *Professor of Physiology and Chairman of the Department*

H. C. MENG, M.D., Ph.D., *Professor of Physiology*

ROBERT L. POST, M.D., *Professor of Physiology*

EARL W. SUTHERLAND, JR., M.D., *Professor of Physiology*

REGINALD W. BUTCHER, Ph.D., *Associate Professor of Physiology; Investigator, Howard Hughes Medical Institute*

JOHN H. EXTON, M.D., Ph.D., *Associate Professor of Physiology; Investigator, Howard Hughes Medical Institute*

JANE H. PARK, Ph.D., *Associate Professor of Physiology*

G. H. SMITH, Ph.D., *Visiting Associate Professor of Physiology*


EDWARD J. BATTERSBY, M.D., *Assistant Professor of Physiology*

OSCAR CROFFORD, M.D., *Assistant Professor of Physiology; Investigator, Howard Hughes Medical Institute*

JOEL G. HARDMAN, Ph.D., *Assistant Professor of Physiology*

REN JYE HO, Ph.D., *Assistant Professor of Physiology*

TETSURO KONO, Ph.D., *Assistant Professor of Physiology*
 DAVID M. REGEN, Ph.D., *Assistant Professor of Physiology; Investigator, Howard Hughes Medical Institute*
 PHILIP W. FELTS, M.D., *Instructor in Physiology*
 ROGER JOHNSON, Ph.D., *Instructor in Physiology*
 HECTOR BUSCHIAZZO, M.D., *Research Associate in Physiology*
 PERLA BUSCHIAZZO, M.D., *Research Associate in Physiology*
 M. S. CABUT, Ph.D., *Research Associate in Physiology*
 M. GHOSAL, Ph.D., *Research Associate in Physiology*
 CSABA HEGYVARY, M.D., *Research Associate in Physiology*
 SHOJI KUME, M.D., Ph.D., *Research Associate in Physiology*
 MICHIO UI, Ph.D., *Research Associate in Physiology*

 The Department of Physiology offers courses leading to the Ph.D. degree. Courses described below which are numbered in the 300 series are offered primarily for that program but are open to medical students by special arrangement.

501. PHYSIOLOGY (321). This course consists of lectures, conferences, and laboratory work, designed to cover the essentials in physiology for first year medical students. It or its equivalent is also required of all graduate students majoring in physiology. SPRING. [8] *Dr. Park and Staff.*

521. TOPICS IN GENERAL PHYSIOLOGY. First year. The course will start with the basic cellular processes of accumulation, membrane transport, bioelectric potentials, contraction, and secretion from the point of view of elementary applied physical chemistry. The discussion will extend to the operation of these processes in the function of erythrocytes, nerves, sensory receptors, muscles, glands, and excretory organs. When applicable the mechanism of the hormonal control of these cells will be included. One hour per week. SPRING. *Dr. Post.*

522. LECTURES ON RESEARCH PROGRESS IN MOLECULAR BIOLOGY (350a-350b). Second and Fourth years. A course co-sponsored by the Departments of Microbiology, Physiology, and Molecular Biology, in which members of these and other departments present their own research activities in relation to current problems in their field. First semester: biophysical aspects will be stressed, including the application of modern physicochemical techniques to studies of macromolecules and enzyme action. Second semester: physiological aspects will be stressed, including the molecular basis of the function of specialized tissues, and the mechanisms for metabolic control of gene action and multi-enzyme systems. (Microbiology 522.) First and second semesters may be taken independently. Two hours per week. FALL & SPRING. [2-2]

581. RESEARCH FELLOWSHIP IN PHYSIOLOGY. Fourth year. Opportunities will be available in the fields of membrane transport and intermediary

metabolism and in the hormonal control of these processes. Full time for twelve or eighteen weeks. *Dr. Park.*

582. **ADVANCED PHYSIOLOGY (323).** Second and Fourth years. This course deals with special topics in physiology and consists of laboratory work and conferences. Prerequisite: 501 or equivalent. Hours and credit by arrangement. *Dr. Park and Staff.*

322. **PHYSIOLOGICAL TECHNIQUES AND PREPARATIONS.** A course designed for advanced students. Hours and credit by arrangement. *Dr. Park and Staff.*

399. **RESEARCH.** *Staff.*

Preventive Medicine & Public Health

ROBERT W. QUINN, M.D., C.M., *Professor of Preventive and Social Medicine and Chairman of the Department*

RICHARD O. CANNON, M.D., *Professor of Hospital Administration*

ALVIN E. KELLER, M.D., *Clinical Professor of Preventive Medicine and Public Health, Emeritus*

LESLIE A. FALK, M.D., D.Phil., *Associate Clinical Professor of Preventive Medicine*

RUTH M. HAGSTROM, M.D., *Assistant Professor of Preventive Medicine*

LEWIS B. LEFKOWITZ, JR., M.D., *Assistant Professor of Preventive Medicine*

ANNE SWEENEY, M.A., *Assistant Professor of Medical Social Service*

W. CARTER WILLIAMS, M.D., M.P.H., *Assistant Professor of Preventive Medicine and Public Health*

JOSEPH M. BISTOWISH, M.D., *Assistant Clinical Professor of Preventive Medicine and Public Health*

C. B. TUCKER, M.D., M.P.H., *Assistant Clinical Professor of Preventive Medicine and Public Health*

THERESA SCOTT CARTER, M.S.S.W., *Instructor in Medical Social Service*

DOROTHY J. TURNER, M.D., *Instructor in Preventive Medicine*

RAYMOND R. CROWE, M.D., *Clinical Instructor in Preventive Medicine and Public Health*

FRED M. DOWNEY, M.D., *Clinical Instructor in Preventive Medicine and Public Health*

JAMES E. GOLDSBERRY, M.D., *Clinical Instructor in Preventive Medicine and Public Health*

JOHN HEINTZELMAN, M.D., *Clinical Instructor in Preventive Medicine and Public Health*

WILDER WALTON HUBBARD, M.D., *Clinical Instructor in Preventive Medicine and Public Health*

THOMAS W. HUNTER, M.A., *Clinical Instructor in Preventive Medicine and Public Health*

CON O. T. BALL, *Research Associate in Preventive Medicine*

PANUEL NYE LOWRY, M.A., *Research Associate in Preventive Medicine*

BIostatISTICS

CHARLES F. FEDERSPIEL, Ph.D., *Associate Professor of Biostatistics and Director of the Division*

FRANK C. CLARK, Ph.D., *Assistant Professor of Biostatistics*

ANN DILLON, M.S.P.H., *Assistant Clinical Professor of Biostatistics*

HOMER A. SPRAGUE, M.P.H., *Instructor in Biostatistics*

YAW CHIN HO, M.A., *Research Associate in Biostatistics*

501. EPIDEMIOLOGY: GENERAL PRINCIPLES. Basic principles are presented in a series of lectures during the first semester of the second year. Medical statistics is taught during the same semester and these two courses complement each other. The approach in epidemiology is to acquaint the students with the general principles of epidemiology dealing with the agent, host, and environmental factors, their interrelationships, and influence on health and disease. The aim is to get the student to think in broad epidemiological terms of his patients and their problems, be they physical, emotional, or socioeconomic. One hour per week; first ten weeks. FALL. *Drs. Quinn, Lefkowitz, and Hagstrom.*

502. MEDICAL STATISTICS. Designed to acquaint the second year student with the elements of statistical reasoning as applied to medical problems. Topics include: Formulation of hypotheses; design of clinical and laboratory experiments; methods of collection and tabulation of data; analysis-of-variance techniques and nonparametric methods; methodology of short- and long-term medical studies; evaluation and use of vital statistics data. The course is organized around the presentation of examples from the literature. Twenty-one hours. FALL. *Dr. Federspiel and Mr. Sprague.*

503. PRINCIPLES OF PUBLIC HEALTH AND PREVENTIVE MEDICINE. A course of lectures intended to provide the second year student with the preventive point of view in the practice of medicine, to make him aware of the major health problems and of the changing nature of major health problems, and to acquaint him with the organized forces working for the advancement of public health. The following subjects are among those considered: epidemiology, etiology, modes of transmission and methods of prevention and control of communicable diseases; vital statistics; maternal and infant hygiene; the venereal disease problem; the more common occupational diseases; civilian defense and disaster control; school hygiene; principles of housing; water supplies and sewage disposal, and population problems. Clinical preventive medicine is emphasized in relation to cardiovascular diseases, diabetes, cancer, and the problems of geriatrics are presented. Stress is placed on principles in public health administration at international, national, state, and local levels and their relation to the practitioner of medicine. Twenty-one hours. FALL & SPRING. *Dr. Quinn and Staff.*

521. MEDICINE IN FAMILIES AND THE COMMUNITY. First year. Three afternoons are spent in discussion-seminars on the relevance of the practice of preventive medicine to continuing and comprehensive care. Medical care is emphasized from the point of view of individualized consideration of patients for the maintenance of good health and rehabilitation from ill health, taking account of family factors and general community environment. Comprehensive care means health promotion; prevention of disease through immunization and health education; maternal and infant health guidance, and periodic health evaluation; early diagnosis and treatment; disability limitation; and rehabilitation. Case presentations and discussion of families with medical problems illustrating the points above will be made in another three afternoons. Field visits are made to the Bill Wilkerson Hearing and Speech Center, Metropolitan Health Department, Senior Citizens' Center (seminar on aging), and Central State Hospital (Geriatrics Pavillion). Medical economics, current and passed medical legislation, are presented in appropriate detail. Three hours per week, last twelve weeks. FALL. *Dr. Quinn and Staff and Division of Human Behavior.*

522. APPLIED EPIDEMIOLOGY. Second year. The principles of epidemiology are applied to the study of infectious, non-infectious, and chronic diseases and conditions such as accidents. Factors influencing the occurrence and distribution of various diseases and conditions are studied with the ultimate objective of developing programs for their prevention and control. Application of epidemiologic methods are demonstrated by means of exercises and problems. Tuberculosis, rheumatic fever, syphilis, and chronic bronchitis are taken as examples of chronic diseases which have a profound physical, emotional, economic, and social effect on the patient, his family, and the community. The epidemiology and natural history of these illnesses are considered in detail, with case presentations, and discussion of prevention and control. One hour per week. SPRING. *Drs. Quinn, Federspiel, Lefkowitz, Hagstrom, and Williams.*

523.1. BIOMETRY I. Third and Fourth years. Discussion of the analysis of data arising from laboratory experimentation in the biological and medical sciences. Emphasis is placed on general biological models and inference based on analysis of variance techniques. Particular attention is given to methods of multiple comparisons, the single degree of freedom, and the assumptions underlying analysis of variance. Three hours per week. FALL. *Dr. Federspiel.*

523.2. BIOMETRY II. Third and Fourth years. Advanced topics in analytical methods for data resulting from biological research. Various experimental designs and their corresponding models and analyses are discussed. Other topics include random, fixed, and mixed models; variance components; multiple regression techniques; and covariance. Three hours per week. SPRING. Prerequisite: Preventive Medicine 523.1. *Dr. Clark.*

525. POPULATION PROBLEMS AND FAMILY PLANNING. First, Second, and Fourth years. This course is an introduction to population problems and family planning. It includes the causes of overpopulation and under-

population; the problems created by overpopulation, in relation to food supply and nutrition, environmental sanitation and education. The biology of human reproduction, adaptation, and selection, sex practices, and population change are considered in as much detail as possible. The course ends with consideration of community and individual methods for limiting family size. One hour per week, last twelve weeks. FALL & SPRING. *Drs. Quinn, Cappannari, and Rhamy.*

526. VITAL STATISTICS AND MEDICAL RECORDS. First, Second, Third, and Fourth years. Health data sources including censuses, vital statistics, morbidity reporting, the National Health Survey, special studies, problems in handling health data, classification, standardization of rates, life tables and the person-period concept. Two hours per week. FALL. *Miss Dillon.*

527. CLINICAL TRIALS AND MEDICAL SURVEYS. Third and Fourth years. Design, execution, and analysis of clinical trials; interpretation of results. Observational surveys and experimental trials. Examination and criticism of relevant literature. Two hours per week. SPRING. *Dr. Federspiel.*

528. THEORY OF SAMPLING. Third and Fourth years. Development of sampling methods with emphasis on sample selection from human populations, construction of frames, choice of sampling unit, stratified sampling, subsampling and double-sampling designs, ratio, and regression estimates. Three hours per week. SPRING. *Mr. Sprague.*

529. SAMPLING PROJECT. Third and Fourth years. To be elected concurrently with Theory of Sampling. May be carried out in conjunction with other departments, medical school faculty, or local agencies such as the Metropolitan Planning Commission. One hour per week. SPRING. *Staff.*

530. BIOASSAY. Fourth year. Statistical techniques employed in assessing the potency of biologic compounds through the use of living organisms. Two hours per week. Prerequisite: Preventive Medicine 523.2 or equivalent. SPRING. *Dr. Federspiel.*

531. THE PHYSICIAN IN PERSPECTIVE. First, Second, Third, and Fourth years. A survey of the relationship of the physician to the world in which he lives, as viewed by scholars in the humanities, law, religion, and the natural and social sciences.

This series of lectures is sponsored by the Department of Preventive Medicine and Public Health and is open to all medical and nursing students, members of their faculties, hospital house staff, and visiting staff.

Members of the faculties of the University and distinguished visitors who are concerned with matters touching on the field of health will present their viewpoints and trace the foundations of their approaches. Opportunities for questions and controversy will be available. One hour per week. SPRING. *Drs. Lefkowitz, Chapman, and Staff.*

541. INTRODUCTION TO COMPREHENSIVE MEDICAL CARE. First year. There will be two introductory sessions dealing with student-family relations

and the kind of interviewing appropriate for home visits. Each student will be assigned one family from the roster of the Vanderbilt Family Clinic (see Preventive Medicine 542). He will visit this family at their home three times during the semester. He will discuss his first visit with a clinical adviser and later visits with a panel of advisers including public health nurses and social workers and classmates. The advisers will be selected from faculty members of the Department. At the end of the semester several sessions will be devoted to presentations and discussions of families of particular teaching value. Students completing this course will be offered the opportunity to continue family visits for the remainder of their years at Vanderbilt. Two additional assignments will be given as an introduction to community health. Each student will accompany a visiting nurse from the Metropolitan Health Department on a regular visit to a home-bound patient. He will also receive an orientation to the Family Planning Service of Metropolitan Nashville and observe a Family Planning Clinic in operation. Two hours per week. SPRING. *Drs. Quinn, Lefkowitz, Hagstrom, Turner, Johnson, and Chapman.*

542. CLINICAL EXPERIENCES IN FAMILY AND COMMUNITY MEDICINE. Fourth year. This elective will consist of six or twelve afternoon sessions once a week, to be spent in the Vanderbilt Family Clinic, the Venereal Disease Clinics of Vanderbilt Hospital and the Metropolitan Health Department, the Visiting Nurse Service of the Metropolitan Health Department, and the family planning clinics of the Metropolitan Health Department. The proportion of time to be spent in each of these units may be selected by the student electing this course, and should be prearranged with the Department of Preventive Medicine.

In the Family Clinic, students will participate in the long-term, comprehensive care of selected families. They will have the opportunity to serve, in a clinical capacity, families they may have studied in the elective course Introduction to Comprehensive Medical Care, P.M. 541. The experience in venereal diseases will include seeing patients with diagnostic problems at Vanderbilt Hospital, patients with acute syphilis and gonococcal infections at the Health Department and experience in the modern epidemiologic and case finding measures in current use. Students will make home visits with public health nurses from the Metropolitan Health Department who are furnishing home nursing services prescribed by the patient's physician. The students will receive orientation to the Family Planning Program of the Metropolitan Health Department and will participate in one of the Family Planning Clinics. Certain hospitalized and clinic patients who have problems within the scope of this teaching program will be the subjects of group discussions. Three hours per week for six-week units. *Drs. Quinn, Lefkowitz, Hagstrom, Turner, Johnson, Cappannari, and Chapman.*

561. REHABILITATION CLERKSHIP. Fourth year. This clerkship is an integral part of the rehabilitation teaching program directed by Dr. Kampmeier. Participation in programs providing long-term multidisciplinary medical care for inpatients and outpatients. Includes attendance at Birth Defect Clinic, Amputee Clinic, Cerebral Palsy Clinic, Arthritis Clinic, Field trips to the Bill Wilkerson Hearing and Speech Center and the State Vocational Rehabilitation Service, plus weekly seminars on practical aspects of re-

habilitation. The medical conditions which require team-type care are demonstrated. In addition, the effective functioning of medical and paramedical participants will be in evidence. (Orthopedic Surgery 562.) Twelve hours per week; six-week units. Drs. Hillman, Quinn, Brooks, Kampmeier, Saunders, and Alper.

Psychiatry

- WILLIAM F. ORR, M.D., *Professor of Psychiatry and Chairman of the Department*
RUE L. CROMWELL, Ph.D., *Professor of Psychology in Psychiatry*
FRANK H. LUTON, M.D., *Professor of Psychiatry, Emeritus*
CHARLES E. GOSHEN, M.D., *Associate Professor of Psychiatry*
JAMES W. WARD, Ph.D., M.D., *Associate Professor of Anatomy in Psychiatry*
WARREN W. WEBB, Ph.D., *Associate Professor of Clinical Psychology*
JOSEPH WEINREB, M.D., *Associate Professor of Psychiatry*
CHARLES E. WELLS, M.D., *Associate Professor of Psychiatry*
OTTO BILLIG, M.D., *Associate Clinical Professor of Psychiatry*
VIRGINIA KIRK, Ph.D., *Associate Clinical Professor of Clinical Psychology, Emeritus*
BASIL T. BENNETT, M.D., *Assistant Professor of Psychiatry*
HELEN M. BROWNING, M.S.S.W., *Assistant Professor of Psychiatric Social Work*
C. WILLIAM DECKNER, Ph.D., *Assistant Professor of Clinical Psychology*
WILLIAM E. FANN, M.D., *Assistant Professor of Psychiatry*
JOHN D. GRIFFITH, M.D., *Assistant Professor of Psychiatry*
ALEX E. HARVEY, M.D., *Assistant Professor of Psychiatry*
RICHARD F. MARTIN, Ph.D., *Assistant Professor of Clinical Psychology*
MIRIAM McHANEY, *Assistant Professor of Psychiatric Social Work*
TALAAT MOHAMED, M.D., *Assistant Professor of Psychiatry*
SARAH H. SELL, M.D., *Assistant Professor of Pediatrics in Psychiatry*
MILDRED C. TATE, M.S.S., *Assistant Professor of Psychiatric Social Work*
LAVERGNE WILLIAMS, M.S.S.W., *Assistant Professor of Psychiatric Social Work*
JOHN A. WILSON, M.D., *Assistant Professor of Psychiatry*
ROBERT W. ADAMS, JR., M.D., *Assistant Clinical Professor of Psychiatry*
HENRY B. BRACKIN, JR., M.D., *Assistant Clinical Professor of Psychiatry*
CHARLES CORBIN, JR., M.D., *Assistant Clinical Professor of Psychiatry*
H. JAMES CRECRAFT, M.D., *Assistant Clinical Professor of Psychiatry*
ALBERT R. LAWSON, M.D., *Assistant Clinical Professor of Psychiatry*
LEONARD MORGAN, Ph.D., *Assistant Clinical Professor of Clinical Psychology*
ROBERT REED, M.D., *Assistant Clinical Professor of Psychiatry*
CHARLES B. SMITH, M.D., *Assistant Clinical Professor of Psychiatry*
FRANK W. STEVENS, M.D., *Assistant Clinical Professor of Psychiatry*
NAT T. WINSTON, M.D., *Assistant Clinical Professor of Psychiatry*

BOB L. ATKISON, Ph.D., *Instructor in Clinical Psychology*
 ERLINE GORE, M.S.N., *Instructor in Nursing in Psychiatry*
 DOROTHY HUNTER, M.S.S.W., *Instructor in Psychiatric Social Work*
 VERGIL L. METTS, M.D., *Instructor in Psychiatry*
 ABNER R. OVERDEER, Ph.D., *Instructor in Clinical Psychology*
 VIRGINIA RACKER, R.N., *Instructor in Nursing in Psychiatry*
 JANICE ELAINE RICKETSON, M.S.S.W., *Instructor in Psychiatric Social Work*
 GEORGE E. SPAIN, M.S.S.W., *Instructor in Psychiatric Social Work*
 NELL WEBB, B.S.N., *Instructor in Nursing in Psychiatry*
 ERIC BELL, JR., M.D., *Clinical Instructor in Psychiatry*
 MAURICE HYMAN, M.D., *Clinical Instructor in Psychiatry*
 HAROLD W. JORDAN, M.D., *Clinical Instructor in Psychiatry*
 KENT KYGER, M.D., *Clinical Instructor in Psychiatry*
 LOUIS SAMPSON, M.D., *Clinical Instructor in Psychiatry*
 WILLIAM R. C. STEWART, M.D., *Clinical Instructor in Psychiatry*
 WILLIAM TRAGLE, M.D., *Clinical Instructor in Psychiatry*
 MARGARET G. EVANS, Ph.D., *Lecturer in Psychoanalysis*
 JOAN M. HELD, M.A., *Research Associate in Psychiatry*
 AMIEL H. SOLOMON, M.A., Ed.D., *Research Associate in Psychiatry*

HUMAN BEHAVIOR

STEPHEN C. CAPPANNARI, Ph.D., *Associate Professor of Human Behavior and Head of the Division*
 JOHN PATE, Ed.D., *Associate Professor of Human Behavior*
 RICHARD BRUEHL, Ph.D., *Instructor in Human Behavior*

501. PSYCHIATRY. This course acquaints the second year student with the inner forces at the disposal of each person in his adjustment to past as well as present experience. With this as a basis, the various clinical psychiatric syndromes are presented, their treatment and prevention outlined. FALL & SPRING. *Dr. Orr and Staff.*

502. PSYCHIATRY AND MEDICINE. A component part of the third year Medical Clerkship. Small group meetings are held in which the personality problems of patients with demonstrable disease are discussed. (See Medicine 502.) *Drs. Orr and Brittingham.*

503. PSYCHIATRY CLERKSHIP. A six-week block of time in which adults and children with various psychiatric problems are studied in an inpatient and outpatient setting by fourth year students. Patient care, ward rounds, conferences, and seminars in psychiatry, psychology, social work, and rehabilitation. *Dr. Orr and Staff.*

521. ROLE THEORY AND THE DOCTOR-PATIENT RELATIONSHIP. First and Second years. In this an examination of doctor-patient relationship in

terms of role theory and set theory, special emphasis is placed upon personal intervention in crisis situations. One hour per week. FALL. Drs. Orr and Cappannari.

522. HUMAN DEVELOPMENT, EMBRYOLOGY OF PERSONALITY. First year. The course, taught in seminar, explores means by which the newborn infant may be molded by sociocultural devices into a communicative human being. Demonstrations of newborn and infantile behavior will serve as bases for discussions. Two hours per week. SPRING. Drs. Orr, Cappannari, Sell, Weinreb, and Staff.

523. PERSONALITY EVALUATION AND MEASUREMENT. Second and Fourth years. Introduction to historical background and theoretical rationale of personality measurement. Methods used in the construction and standardization of widely used test procedures (intelligence, personality, CNS functioning). Intensive experience in the administration, scoring, and interpretation of selected test procedures. Two hours per week. SPRING. Drs. Webb and Cromwell.

525. UNSOLVED PROBLEMS OF MEDICINE AND SOCIETY. Fourth year. Concerns the relationship of the physician to the legal and social regulatory processes. Also an inquiry into the extent of physicians' present and possible involvement in treatment and prevention of narcotics addiction, delinquency, criminality, alcoholism. Lectures from School of Law, Departments of Sociology, Preventive Medicine, Psychiatry. Two hours per week. SPRING. Drs. Orr and Cappannari, and Mr. Warden.

527. MAN AND HIS WORKS. Fourth year. This course is open to selected fourth-year students interested in the effects of culture, past and present, upon man, and the forces and stresses that have produced the culture. This course will be an informal supper meeting, and students' wives are invited to attend. Drs. Orr and Cappannari.

529. PRINCIPLES OF ANTHROPOLOGY. First and Second year. This course in aspects of general anthropology is especially designed for medical students who have had no previous formal training in anthropology. Subjects to be covered include biological evolution of man and the development of races, emergence of language and culture, problems and significance of crosscultural comparisons in human behavior, man considered as animal and human. One hour per week. SPRING. Dr. Cappannari.

530. PRINCIPLES OF COMMUNITY PSYCHIATRY. Fourth year. This course is designed to give the student a working knowledge of important sociocultural aspects of mental health and illness. The course includes a survey of mental health needs of the community; a survey of community organization and planning; a review of salient epidemiological research in mental illness; principles of crisis theory and preventive intervention; and a survey of methods in mental health consultation. Two hours per week; twelve week units. FALL & SPRING. Dr. Reed.

531. SEX COUNSELING. Third and Fourth years. This interdepartmental course aims to give students a better understanding of psycho-sexual pro-

blems so that they may gain competence in counseling patients. It will include such topics as pre-marital counseling; impotence and frigidity; "perversions" (including homosexuality); child sexuality; standards of sexual behavior. (Surgery 527, Obstetrics and Gynecology 523.) One hour per week. FALL. *Drs. Rhamy, Cappannari, Goss, and Glasser.*

532. POPULATION PROBLEMS AND FAMILY PLANNING. First, Second and Fourth years. This course is an introduction to population problems and family planning. It includes the causes of overpopulation and underpopulation; the problems created by overpopulation in relation to food supply and nutrition, environmental sanitation and education. The biology of human reproduction adaptation, and selection, sex practices, and population change are considered in as much detail as possible. The course ends with consideration of community and individual methods for limiting family size. (Preventive Medicine 525.) One hour per week, last 12 weeks. FALL & SPRING. *Drs. Quinn, Cappannari, and Rhamy.*

533. HUMAN SEXUALITY. First and Second years. The purpose is to introduce the first or second year medical student to the physiological, psychological, and sociological information relating to all phases of human sexual behavior. The content of the course will include considerations of reproductive physiology, human sexual response, family planning, sexual attitudes, behavior and myths, sexual aberrations and the interaction of sexuality and society. This course is intended to serve as a prerequisite to Surgery 527. One hour per week. SPRING. (Surgery 528, Obstetrics and Gynecology 524.) *Drs. Cappannari, Glasser, Rhamy, and others.*

541. PRINCIPLES OF PSYCHOTHERAPY. Fourth year. A limited number of ambulatory patients are followed by the student for psychotherapy. Each student is assigned a supervisor. Each patient interview is taken up in discussion session with the supervisor. Emphasis is placed on basic principles and techniques of psychotherapeutic management of patient in general medical practice. Six hours per week. FALL & SPRING. *Drs. Orr and Adams.*

561. CLERKSHIP IN ADULT PSYCHIATRY. Fourth year. This clerkship complements the experiences the student has had at Central State Hospital and in the Outpatient Clinic. Here students have an opportunity to study carefully a few patients to gain understanding of the dynamics of the patient's illness. Full time; six week units. *Dr. Reed and Staff.*

562. CLERKSHIP IN PSYCHOLOGICAL CORRELATES OF BEHAVIOR. Fourth year. Parallel observations of behavior of a hospitalized patient in interview, group therapy, occupational and recreational therapy, and intensive batteries of psychological tests designed to explain observed phenomena. Six hours per week; six week units. *Dr. Martin.*

563. CLERKSHIP IN CHILD PSYCHIATRY. Fourth year. Observation and participation in all aspects of the psychiatric evaluation of a child, survey of diagnostic groups and special social problems (e.g., the foster child, the delinquent child), methods of treatment, including work with parents,

consultation with schools and social agencies, observation of the therapeutic milieu in an inpatient setting. Nine hours per week; six week units. *Drs. Weinreb, Crecraft, and Corbin.*

564. CLERKSHIP IN NEUROLOGICAL AND PSYCHOLOGICAL MEDICINE. Fourth year. Conjoint clerkship experience in both neurology and psychiatry wards and consultative services at Veterans Administration Hospital, plus full schedule of rounds, conferences, and seminars. Emphasis neurologically will be on principles of examination, diagnosis, and therapy. Emphasis psychiatrically will be on management of psychiatric complications of chronic disease, evaluation of therapy and common psychiatric problems, and rehabilitation. (Medicine 569.) Full-time, six week units. *Drs. Wells and Clark.*

581. FOUNDATIONS OF BEHAVIOR RESEARCH. First, Second and Fourth years. An introduction to the basic areas of research on human behavior. Initial experience in design and completion of psychiatry research projects. This course will be a prerequisite for students who wish to take a semester in Psychiatric Research PS-582. Four hours per week. FALL. *Dr. Cromwell.*

582. METHODS IN PSYCHIATRIC RESEARCH. Fourth year. Introductory experience in the use of controlled research methodology and statistical analysis as applied to psychiatric and behavioral research. Prerequisite: Foundations of Behavioral Research PS-581. Four hours per week. SPRING. *Drs. Cromwell and Webb.*

Radiology

EUGENE C. KLATTE, M.D., *Professor of Radiology and Chairman of the Department*

HENRY BURKO, M.D., *Professor of Radiology*

JOSEPH H. ALLEN, M.D., *Associate Professor of Radiology*

A. BERTRAND BRILL, M.D., *Associate Professor of Radiology*

WILLIAM L. CALDWELL, M.D., *Associate Professor of Radiology*

VERNON A. VIX, M.D., *Associate Professor of Radiology*

GRANVILLE W. HUDSON, M.D., *Associate Clinical Professor of Radiology*

WILLIAM R. BAKER, Ph.D., *Assistant Professor of Radiology*

JOEL S. BEDFORD, Ph.D., *Assistant Professor of Radiology*

EDMUND R. BRANTLY, M.D., *Assistant Professor of Radiology*

THOMAS R. DUNCAN, M.D., *Assistant Professor of Radiology*

JANET K. HUTCHESON, M.D., *Assistant Professor of Radiology*

EDWARD V. STAAB, M.D., *Assistant Professor of Radiology*

HEUN Y. YUNE, M.D., *Assistant Professor of Radiology*

JOHN BEVERIDGE, M.D., *Assistant Clinical Professor of Radiology*

BURTON P. GRANT, M.D., *Assistant Clinical Professor of Radiology*

MINYARD D. INGRAM, M.D., *Assistant Clinical Professor of Radiology*
 JOSEPH M. IVIE, M.D., *Assistant Clinical Professor of Radiology*
 BEN R. MAYES, M.D., *Assistant Clinical Professor of Radiology*
 EUGENE JOHNSTON, Ph.D., *Instructor in Radiology*
 ROBERT J. KING, B.S., *Instructor in Radiology*
 WILLIAM TILLMAN, M.D., *Instructor in Radiology*
 WILLIAM T. FARRAR, M.D., *Clinical Instructor in Radiology*
 CLIFTON E. GREER, M.D., *Clinical Instructor in Radiology*
 WILLIAM M. HAMILTON, M.D., *Clinical Instructor in Radiology*
 ROBERT J. LINN, M.D., *Clinical Instructor in Radiology*
 JOHN R. OLSON, M.D., *Clinical Instructor in Radiology*
 RICHARD P. OWNBEY, M.D., *Clinical Instructor in Radiology*
 W. FAXON PAYNE, M.D., *Clinical Instructor in Radiology*
 BURTON SILBERT, M.D., *Clinical Instructor in Radiology*
 JOHN M. TANNER, M.D., *Clinical Instructor in Radiology*
 EDWARD C. WHEELER, M.D., *Clinical Instructor in Radiology*

For first-year medical students, roentgen anatomy lectures are presented at the time of dissection of various systems.

501. METHODS IN CLINICAL SCIENCE: INTRODUCTION TO RADIOLOGY. A series of lectures and demonstrations are given to introduce the student to the use of radiographic methods in the study of various organ systems. Methodology in radiology is stressed. The course will also include an introduction to the utilization of radiant energy in the treatment of cancer. One hour per week. SPRING. *Dr. Klatt and Staff.*

502. RADIOLOGY. For third-year students. Lectures and demonstrations with discussions of radiation hazards, radiographic diagnosis, and some therapy clinics. One hour per week for twelve weeks. FALL. *Staff.*

521. INTRODUCTION TO RADIOBIOLOGY. First and Second years. Topics will be radiation physics, chemistry, and biochemistry; radiopathology; radiosensitization; radioprotection; and other radiobiologic principles. Information on the cancerigenic and mutagenic effects of radiation will be presented, and the application of these radiobiologic data to clinical radiotherapy will be discussed. Elaboration of potential areas of worthwhile investigation in this field is planned in conclusion. A simple radiobiologic experiment will be assigned to groups of 2 or 3 students each. One hour per week. SPRING. *Drs. Caldwell and Bedford.*

522. INTRODUCTION TO COMPUTER SCIENCE. First, Second, Third, and Fourth years. Fundamentals of computer systems and utilization will be presented. Opportunity to gain first hand experience with an operating system will be provided. No basic knowledge of computer programming will be presumed.

One hour of the course each week will be devoted to the presentation of fundamental mathematical techniques necessary for data analysis in digital computers. The second hour will be devoted to a systematic presentation of the fundamentals of digital computers, and systems, programming, and examples of biomedical applications. Applications will be drawn from ongoing research in different departments at Vanderbilt and will feature speakers from elsewhere who will discuss computer applications in which they have made fundamental contributions. Two hours per week. SPRING.
Dr. Brill and Staff.

561. CLERKSHIP IN RADIOLOGY. Fourth year. The student will rotate through the various divisions of the department. He will be considered as a Junior Resident, will assist in procedures, and will attend all radiology conferences. Time will be made available for the study of cases in the teaching file library. Full time; six week units. *Dr. Klatt and Staff.*

599. SEMINAR IN RADIOTHERAPY AND RADIOBIOLOGY. Fourth year. This discussion course will be restricted in size to no more than eight or ten mature students. Considerable assigned reading, primarily pertinent literature references, will be required of the participants. Results of cancer treatment by various methods will be evaluated. Particular attention will be paid to the significance of data reported in the selected references; selection of cases, methods of reporting results, side effects and complications of treatment, and other pertinent facets are to be discussed. Such discussion should allow a better understanding of treatment problems in oncology. Critical review of fundamental radiobiologic principles will be confined to several of the final discussions. One hour per week. FALL.
Drs. Caldwell and Bedford.

Surgery

- H. WILLIAM SCOTT, JR., M.D., *Professor of Surgery and Chairman of the Department*
JOHN H. FOSTER, M.D., *Professor of Surgery*
BARTON McSWAIN, M.D., *Professor of Surgery*
ROLLIN A. DANIEL, JR., M.D., *Clinical Professor of Surgery*
BEVERLY DOUGLAS, M.D., D.Sc., *Clinical Professor of Surgery, Emeritus (Plastic)*
LEONARD W. EDWARDS, M.D., *Clinical Professor of Surgery, Emeritus*
HAROLD A. COLLINS, M.D., *Associate Professor of Surgery*
WALTER G. GOBBEL, JR., M.D., *Associate Professor of Surgery*
DUNCAN A. KILLEN, M.D., *Associate Professor of Surgery*
JOHN L. SAWYERS, M.D., *Associate Professor of Surgery*
BENJAMIN F. BYRD, JR., M.D., *Associate Clinical Professor of Surgery*
W. ANDREW DALE, M.D., *Associate Clinical Professor of Surgery*
WALTER L. DIVELEY, M.D., *Associate Clinical Professor of Surgery*

J. LYNWOOD HERRINGTON, JR., M.D., *Associate Clinical Professor of Surgery*
 JAMES A. KIRTLEY, JR., M.D., *Associate Clinical Professor of Surgery*
 ROBERT L. McCracken, M.D., *Associate Clinical Professor of Surgery*
 DOUGLAS H. RIDDELL, M.D., *Associate Clinical Professor of Surgery*
 LOUIS ROSENFELD, M.D., *Associate Clinical Professor of Surgery*
 DAUGH W. SMITH, M.D., *Associate Clinical Professor of Surgery, Emeritus*
 R. BENTON ADKINS, JR., M.D., *Assistant Professor of Surgery*
 WILLIAM M. COCKE, JR., M.D., *Assistant Professor of Surgery (Plastic)*
 ISABELLA COLLINS, M.D., *Assistant Professor of Surgery*
 VERNON H. REYNOLDS, M.D., *Assistant Professor of Surgery*
 WILLIAM C. ALFORD, M.D., *Assistant Clinical Professor of Surgery*
 EDMUND W. BENZ, M.D., *Assistant Clinical Professor of Surgery*
 CLOYCE F. BRADLEY, M.D., *Assistant Clinical Professor of Surgery*
 GEORGE R. BURRUS, M.D., *Assistant Clinical Professor of Surgery*
 GEORGE E. DUNCAN, M.D., *Assistant Clinical Professor of Surgery*
 WILLIAM H. EDWARDS, M.D., *Assistant Clinical Professor of Surgery*
 PARKER D. ELROD, M.D., *Assistant Clinical Professor of Surgery*
 JOHN L. FARRINGER, JR., M.D., *Assistant Clinical Professor of Surgery*
 JAMES C. GARDNER, M.D., *Assistant Clinical Professor of Surgery, Emeritus*
 SAM YOUNG GARRETT, M.D., *Assistant Clinical Professor of Surgery*
 CARL N. GESSLER, M.D., *Assistant Clinical Professor of Surgery*
 HERSCHEL A. GRAVES, JR., M.D., *Assistant Clinical Professor of Surgery*
 JACKSON HARRIS, M.D., *Assistant Clinical Professor of Surgery*
 GEORGE W. HOLCOMB, M.D., *Assistant Clinical Professor of Surgery*
 KENNETH JACOBS, M.D., *Assistant Clinical Professor of Surgery*
 MALCOLM R. LEWIS, M.D., *Assistant Clinical Professor of Surgery*
 OSCAR NOEL, M.D., *Assistant Clinical Professor of Surgery*
 DAVID R. PICKENS, JR., M.D., *Assistant Clinical Professor of Surgery*
 GREER RICKETSON, M.D., *Assistant Clinical Professor of Surgery (Plastic)*
 ROBERT N. SADLER, M.D., *Assistant Clinical Professor of Surgery*
 NATHANIEL S. SHOFNER, M.D., *Assistant Clinical Professor of Surgery, Emeritus*
 HARRISON H. SHOULDERS, JR., M.D., *Assistant Clinical Professor of Surgery*
 WILLIAM S. STONEY, M.D., *Assistant Clinical Professor of Surgery*
 SIRKLAND W. TODD, JR., M.D., *Assistant Clinical Professor of Surgery (Plastic)*
 CHARLES C. TRABUE, M.D., *Assistant Clinical Professor of Surgery*
 RACHEL K. YOUNGER, B.A., *Instructor in Surgical Research*
 STANLEY BERNARD, M.D., *Clinical Instructor in Surgery*
 ROBERT L. BOMAR, JR., M.D., *Clinical Instructor in Surgery*
 KENNETH L. CLASSEN, M.D., *Clinical Instructor in Surgery*
 HAROLD C. DENNISON, JR., M.D., *Clinical Instructor in Surgery*
 BENJAMIN FISHER, M.D., *Clinical Instructor in Surgery*
 JAMES H. FLEMING, JR., M.D., *Clinical Instructor in Surgery (Plastic)*
 ROY G. HAMMONDS, M.D., *Clinical Instructor in Surgery*

ROBERT HARDIN, M.D., *Clinical Instructor in Surgery*
JAMES P. LESTER, M.D., *Clinical Instructor in Surgery*
CHARLES W. MACMILLAN, M.D., *Clinical Instructor in Surgery (Plastic)*
M. CHARLES McMURRAY, M.D., *Clinical Instructor in Surgery*
JOE M. MILLER, M.D., *Clinical Instructor in Surgery*
I. ARMISTEAD NELSON, M.D., *Clinical Instructor in Surgery*
JEFFERSON C. PENNINGTON, M.D., *Clinical Instructor in Surgery*
ROY J. RENFRO, M.D., *Clinical Instructor in Surgery*
JOHN K. WRIGHT, M.D., *Clinical Instructor in Surgery (On leave)*

ORAL SURGERY

H. DAVID HALL, D.D.S., *Professor of Oral Surgery and Head of the Division*
ROBERT B. BOGLE, JR., D.D.S., *Clinical Professor of Oral Surgery*
E. THOMAS CARNEY, D.D.S., *Associate Clinical Professor of Oral Surgery*
RODNEY M. PHILLIPS, D.D.S., *Assistant Professor of Oral Surgery*
FRED H. HALL, D.D.S., *Assistant Clinical Professor of Oral Surgery, Emeritus*
ELMORE HILL, D.M.D., *Assistant Clinical Professor of Oral Surgery*
CHARLES J. LADD, D.D.S., *Assistant Clinical Professor of Oral Surgery*
EDWARD H. MARTIN, D.M.D., *Assistant Clinical Professor of Oral Surgery*
FRED M. MEDWEDEFF, D.D.S., *Assistant Clinical Professor of Oral Surgery*
JAMES B. BAYLOR, D.D.S., *Clinical Instructor in Oral Surgery*
FRANK H. DEPIERRI, JR., D.M.D., *Clinical Instructor in Oral Surgery*
BARNETT J. HALL, D.D.S., *Clinical Instructor in Oral Surgery*
WILLIAM C. KING, D.M.D., *Clinical Instructor in Oral Surgery*
L. WILLARD PARKER, D.M.D., *Clinical Instructor in Oral Surgery*

NEUROLOGICAL SURGERY

WILLIAM F. MEACHAM, M.D., *Clinical Professor of Neurological Surgery and Head of the Division*
CULLY A. COBB, JR., M.D., *Associate Clinical Professor of Neurological Surgery*
JOE M. CAPPS, M.D., *Assistant Clinical Professor of Neurological Surgery*
ARNOLD MEIROWSKY, M.D., *Assistant Clinical Professor of Neurological Surgery*
C. DAVID SCHEIBERT, M.D., *Assistant Clinical Professor of Neurological Surgery*
ARTHUR G. BOND, M.D., *Clinical Instructor in Neurological Surgery*
JAMES W. HAYS, M.D., *Clinical Instructor in Neurological Surgery*

OPHTHALMOLOGY

JAMES H. ELLIOTT, M.D., *Professor of Ophthalmology and Head of the Division*
HENRY CARROLL SMITH, M.D., *Clinical Professor of Ophthalmology, Emeritus*
GEORGE W. BOUNDS, JR., *Associate Clinical Professor of Ophthalmology*
FOWLER HOLLABAUGH, M.D., *Associate Clinical Professor of Ophthalmology*
KATE SAVAGE ZERFOSS, M.D., *Associate Clinical Professor of Ophthalmology, Emeritus*

JOHN STEVENS ANDREWS, JR., Ph.D., *Assistant Professor of Ophthalmology*
 ABRAHAM P. CHEIJ, M.D., *Assistant Clinical Professor of Ophthalmology*
 L. ROWE DRIVER, M.D., *Assistant Clinical Professor of Ophthalmology*
 WALLACE H. FAULK, JR., M.D., *Assistant Clinical Professor of Ophthalmology*
 G. ALLEN LAWRENCE, M.D., *Assistant Clinical Professor of Ophthalmology*
 PHILIP L. LYLE, M.D., *Assistant Clinical Professor of Ophthalmology*
 FRED A. ROWE, M.D., *Assistant Clinical Professor of Ophthalmology*
 JOHN B. BOND III, M.D., *Clinical Instructor in Ophthalmology*
 JAMES P. LODEN, M.D., *Clinical Instructor in Ophthalmology*
 LEE ROY MINTON, M.D., *Clinical Instructor in Ophthalmology*
 J. RALPH RICE, M.D., *Clinical Instructor in Ophthalmology*

OTOLARYNGOLOGY

JERRIE CHERRY, M.D., *Professor of Otolaryngology and Head of the Division*
 GUY M. MANESS, M.D., *Clinical Professor of Otolaryngology, Emeritus*
 PERRY F. HARRIS, M.D., *Assistant Professor of Otolaryngology*
 CLYDE ALLEY, JR., M.D., *Assistant Clinical Professor of Otolaryngology*
 J. THOMAS BRYAN, M.D., *Assistant Clinical Professor of Otolaryngology*
 JERRALL P. CROOK, M.D., *Assistant Clinical Professor of Otolaryngology*
 HERBERT DUNCAN, M.D., *Assistant Clinical Professor of Otolaryngology*
 W. G. KENNON, JR., M.D., *Assistant Clinical Professor of Otolaryngology*
 WILLIAM E. GREER, M.D., *Instructor in Otolaryngology*
 LARSON DALE BECK, M.D., *Clinical Instructor in Otolaryngology*
 ANTHONY DRAKE CASPARIS, M.D., *Clinical Instructor in Otolaryngology*
 CHRIS B. FOSTER, M.D., *Clinical Instructor in Otolaryngology*
 WILLIAM THOMAS MOORE, M.D., *Clinical Instructor in Otolaryngology*
 ROBERT C. OWEN, M.D., *Clinical Instructor in Otolaryngology*
 THOMAS E. SIMPKINS, JR., M.D., *Clinical Instructor in Otolaryngology*

UROLOGY

ROBERT K. RHAMY, M.D., *Professor of Urology and Head of the Division*
 H. EARL GINN, *Associate Professor of Urology*
 HARRY S. SHELLEY, M.D., *Associate Professor of Urology, Emeritus*
 EDWARD HAMILTON BARKSDALE, M.D., *Associate Clinical Professor of Urology, Emeritus*
 CHARLES E. HAINES, JR., M.D., *Associate Clinical Professor of Urology*
 OSCAR CARTER, M.D., *Assistant Clinical Professor of Urology*
 ALBERT P. ISENHOUR, JR., M.D., *Assistant Clinical Professor of Urology*
 TOM E. NESBITT, M.D., *Assistant Clinical Professor of Urology*
 PHILLIP P. PORCH, JR., M.D., *Assistant Clinical Professor of Urology*
 JOHN M. TUDOR, M.D., *Assistant Clinical Professor of Urology*
 ROBERT H. EDWARDS, M.D., *Clinical Instructor in Urology*
 ROBERT E. McCLELLAN, M.D., *Clinical Instructor in Urology*

501. METHODS IN CLINICAL SCIENCE. An interdepartmental course designed to acquaint the student with the techniques, methods, and basic principles necessary to take careful histories, perform thorough physical examinations, and to understand and utilize basic laboratory procedures employed in clinical medicine. Students are divided into small tutorial groups for intensive work with patients on the wards at Vanderbilt University Hospital, the Veterans Administration Hospital, and Nashville General Hospital. Similar tutorial groups are utilized in the laboratory where students learn methods for examining urine, blood, sputum, gastric contents, feces, and body fluids. An introduction to neurologic diagnostic methods is included in the course. Additional training is given in special problems which relate to examination of pediatric, surgical, and obstetrical patients. Radiological techniques are correlated with instructional sessions. Correlative sessions are interspersed with the above. In these sessions, methods by which the history, physical examination and laboratory aids can be used to arrive at diagnosis and decisions regarding further study and treatment are conducted by interdepartmental groups. *Drs. Liddle, Pennington, Hartmann, Minor, and the faculty of the Department of Medicine; Dr. Karzon and members of the Department of Pediatrics; Dr. Foster and members of the Department of Surgery; Dr. Goss and members of the Department of Obstetrics-Gynecology; Dr. Klatt and members of the Department of Radiology; Dr. Shapiro and members of the Department of Pathology; members of the Departments of Anatomy, Pharmacology, and Biochemistry.*

502. CLINICAL CLERKSHIP. For twelve weeks each student in the third year class is assigned to the surgical divisions of the Vanderbilt University Hospital. Under the direction and supervision of the staff, the student takes histories, does physical examinations and assists the staff in the diagnostic evaluation and clinical management of assigned patients. Half of each student's period of clinical work is in general surgery, including thoracic, cardiovascular and pediatric services. The other six weeks of the clinical assignment provide brief but concentrated rotations to services in orthopedics, neurosurgery, urology, ophthalmology, and otolaryngology. These rotations provide exposure to a variety of patients with problems in general surgery and in the special fields of surgery. Teaching rounds are held daily by members of the staff. Students go with their patients to the operating rooms where they are observers and assistants to the staff in surgery, the surgical specialties, and anesthesiology. Instruction in anesthesiology is given during operating room assignments by the members of that department. An integral part of this clerkship is the weekly three hour assignment in operative surgery and anesthesiology conducted in the S. R. Light Laboratory for Surgical Research by the Department of Surgery in collaboration with the Department of Anesthesiology. *Dr. Scott.*

503. SURVEY OF SURGERY. A series of clinical presentations and lectures are given which are designed to present a broad view of the clinical field of surgery. Illustrative case presentations are made by third year surgical clerks. These discussions stress the correlation between basic biological structure and function, pathologic alterations and clinical manifestations. One hour per week for twenty-four weeks. FALL & SPRING. *Dr. Scott.*

504. SURGICAL OUTPATIENT SERVICE. Each fourth year student is assigned in rotation for six weeks to the surgical outpatient department of the Vanderbilt University Hospital. Here they serve as assistants in the outpatient clinics of general surgery, orthopedic surgery, and the tumor clinic. Various members of the surgical staff are in attendance to instruct the students in their work and discuss with them the diagnosis and treatment of the patients. *Drs. McSwain, Reynolds, and Hillman.*

521. SURGICAL PATHOLOGY. Third year. Each session is initiated by a lecture to be followed by presentation of pertinent microscopic lesions and roentgenograms. In the laboratory, fresh gross specimens and loan collections of slides are studied under supervision of resident and senior staff. The course correlates the clinical manifestations and the gross and microscopic changes of the common surgical diseases. (Pathology 525) Three hours per week for year. *Dr. McSwain and Staff.*

522. PRINCIPLES OF PLASTIC SURGERY. Fourth year. Instruction in the principles underlying the practice of plastic surgery and their application to the correction of deformities, and problems of reconstruction. Patients before and after operation will be used for study of methods and results. Includes a brief review of important research in this specialty. One hour per week. FALL. *Dr. Ricketson.*

523. CANCER. Fourth year. This is an inter-departmental course with few didactic presentations. Patients showing success or failure in the treatment of cancer are presented. Taught by members of the faculty of 5 clinical and 2 pre-clinical departments. May be taken both semesters. One hour per week. FALL & SPRING. *Dr. McSwain.*

524. DENTAL MEDICINE. Fourth year. Lectures and discussions of those aspects of dentistry which have an important bearing on the practice of medicine. When applicable patients and case histories will be presented. Course content will depend somewhat on the medical interest of students. One hour per week. SPRING. *Dr. Hall.*

525. PEDIATRIC SURGICAL PROBLEMS. Fourth year. A combined course from the Departments of Surgery and Pediatrics utilizing patient demonstrations and didactic lectures. The diagnosis, preoperative preparation, surgery, and postoperative care will be stressed. Course may be elected for units of six weeks to all year. (Pediatrics 525.) One hour per week. FALL & SPRING. *Drs. Scott and Little.*

526. BASIC COURSE IN OPHTHALMOLOGY. Second and Third years. Consists of lectures on the theoretical and practical aspects of ophthalmology. Lectures include sensory and motor pathways which govern vision and ocular movements, refractive errors, and a host of ocular diseases, e.g., corneal diseases, glaucoma, uveitis, and retinal detachment. One hour per week. SPRING. *Dr. Elliott and Staff.*

527. SEX COUNSELING. Third and Fourth years. This interdepartmental course aims to give students a better understanding of psycho-sexual prob-

lems so that they may gain competence in counseling patients. It will include such topics as pre-marital counseling; impotence and frigidity; "perversions" (including homosexuality); child sexuality; standards of sexual behavior. (Psychiatry 531, Obstetrics and Gynecology 523.) One hour per week. FALL. *Drs. Rbamy, Cappannari, Goss, and Glasser.*

528. HUMAN SEXUALITY. First and Second years. The purpose is to introduce the first or second year medical student to the physiological, psychological and sociological information relating to all phases of human sexual behavior. The content of the course will include considerations of reproductive physiology, human sexual response, family planning, sexual attitudes, behavior and myths, sexual aberrations and the interaction of sexuality and society. This course is intended to serve as a prerequisite to Surgery 527, Sex Counseling. (Psychiatry 533, Obstetrics and Gynecology 524.) One hour per week. SPRING. *Drs. Cappannari, Glasser, Rbamy, and others.*

543. SURGICAL SPECIALTY CLINICS. Fourth year. Clinical experience in the following specialities is available to the student:

Neurosurgery, General Surgery, Otolaryngology, Tumor, Tumor Chemotherapy, Vascular, Postoperative Care, Plastic Surgery, Minor Surgery, Urology, and Ophthalmology. Three hours per week; six week units. *Dr. Scott and Staff.*

561. CLERKSHIP IN SURGERY. Fourth year. Students work under supervision of the surgical staff and resident in the diagnosis and treatment of patients with general and thoracic surgical problems. Will not involve patients studied by members of the third year class. Ward rounds daily. At Veterans Administration Hospital or Nashville General Hospital. Full time; six week units. *Drs. Gobbel and Sauyers.*

562. CLERKSHIP IN NEUROLOGICAL SURGERY. Fourth year. The student works with the resident staff on the neurosurgical service at Vanderbilt University Hospital participating in the diagnosis and management of patients with neurosurgical problems. Daily ward rounds. Full time; six week units. *Dr. Meacham.*

563. CLERKSHIP IN CARDIOVASCULAR SURGERY. Fourth year. Provides experience in the diagnosis of cardiovascular disease, preoperative assessment, operative treatment and postoperative management. Includes participation in research activities as applied to cardiovascular surgery. Full time; six week units. *Dr. Collins.*

564. CLERKSHIP IN UROLOGY. Fourth year. The student works with the resident staff on the urologic service at Veterans Administration Hospital participating in the diagnosis and management of patients with urologic problems. Daily ward rounds. Full time; six week units. *Dr. Rbamy.*

565. CLERKSHIP IN OTOLARYNGOLOGY. Fourth year. The student works with the surgical staff and resident on the ENT service at Vanderbilt Uni

versity Hospital participating in the diagnosis and management of patients with otolaryngologic problems. Ward rounds daily. Full time; six week units. *Dr. Cherry.*

566. CLERKSHIP IN PEDIATRIC SURGERY. Fourth year. An opportunity for students to work on the Pediatric-Surgical floor, caring for children in pre-operative, operative, and post-operative periods and attending both pediatric and surgical conferences. Full time; six week units. *Dr. Scott.*

567. CLERKSHIP IN CANCER CHEMOTHERAPY. Fourth year. Inpatient, outpatient, and laboratory experience with chemotherapy methods and agents at Vanderbilt University Hospital. Full time; six week units. *Dr. Reynolds.*

568. SURGICAL PATHOLOGY AND NEOPLASTIC DISEASE. Fourth year. Work with the Director of the Surgical-Pathology Laboratory and the fellow in Oncology in the Surgical-Pathology Laboratory and the Tumor Clinics. Fifteen hours per week; six week units. *Dr. McSwain.*

569. CLERKSHIP IN OPHTHALMOLOGY. Fourth year. This course consists of ward work as well as experience in the operating room for students who may choose to specialize in Ophthalmology. Six hours per week; six week units. *Dr. Elliott and Staff.*

581. LABORATORY RESEARCH IN SURGERY. Fourth year. Principles of surgical research and care are presented with the performance of procedures and conduct of investigative studies in collaboration with the full-time staff of the Department of Surgery. A detailed written report will summarize the investigative studies. At Veterans Administration Hospital or Vanderbilt University Hospital. Full time for six weeks. May be taken in afternoons for twelve weeks. *Drs. Foster and Gobbel.*

REGISTER OF STUDENTS

1968-69

FIRST-YEAR CLASS

Landon Butler Anderson, Jr. (B.A., Vanderbilt)	Celina, Tenn.
Ralph Ivan Barr (B.A., Vanderbilt)	Hopkinsville, Ky.
Bill Gene Bell (B.A., Vanderbilt)	Dickson, Tenn.
Frederic Tremaine Billings III (B.A., Princeton)	Nashville, Tenn.
Hans-Georg Otto Bock (B.A., Vanderbilt)	Tullahoma, Tenn.
Neil Art Breslau (B.S., Brooklyn College)	Brooklyn, N. Y.
Marjorie Nell Burgess (B.S., Birmingham Southern)	Trussville, Ala.
Steven James Burnham (Sr. in Absentia, Vanderbilt)	Charlotte, N. C.
Joe Moffatt Chisolm (B.A., Vanderbilt)	Memphis, Tenn.
Brian Cole (B.A., Oklahoma City University)	Altus, Okla.
Richard Alan Davidson (B.A., Vanderbilt)	Lantana, Fla.
James Daniel Dillon, Jr. (B.A., Vanderbilt)	Nashville, Tenn.
Robert Clayton Erickson II (B.S., Harding College)	Canton, Ohio
Thomas Ralph Fuller, Jr. (A.B., Duke)	Johnson City, Tenn.
Richard Lee Gallagher (B.A., The University of the South)	Houston, Texas
James Henry Gilfoil IV (B.S., Louisiana State University)	Lake Providence, La.
Zachary Dale Goodman (B.A., Vanderbilt)	Ft. Lauderdale, Fla.
Edward Rodman Green (Sr. in Absentia, Little Rock)	Little Rock, Ark.
Benson Harvey, Jr. (B.A., Vanderbilt)	Chattanooga, Tenn.
Thomas Eugene Hanes (B.A., Vanderbilt)	Atlanta, Ga.
James Brevard Haynes, Jr. (B.A., Vanderbilt)	Murfreesboro, Tenn.
Russell Bruce Hubbard (B.A., West Virginia)	Wheeling, W. Va.
Toyohisa Ishii (Sr. in Absentia, Central State College)	Oklahoma City, Okla.
Ronnie Andrew Kaler (B.S., Murray State)	Paducah, Ky.
Louis Jay Katzman (B.S., Wisconsin)	Bronx, N. Y.
James Moore Keightley, Jr. (B.A., Vanderbilt)	Harrodsburg, Ky.
William Benjamin Kibler (B.A., Vanderbilt)	Louisville, Ky.
Edmund Pond Lawrence, Jr. (B.S., Washington & Lee)	Louisville, Ky.
Carl Allen Levy (B.A., Washington)	University City, Mo.
Ira Eugene Lew (B.S., Colorado)	Providence, R. I.
Kenneth Frederick Luckmann (B.A., Johns Hopkins)	Westfield, N. J.
Ronald Morgan Massey (B.A., Tulane)	Macon, Ga.
George Patrick Maxwell (B.A., Vanderbilt)	Nashville, Tenn.
Albert Whitfield Morriss, Jr. (B.A., Vanderbilt)	Tyler, Texas
Charles Brant Pehrey (B.A., Texas)	Austin, Texas
Gary Elliott Penner (B.A., Kansas)	Stoors, Conn.
William Marshall Petrie (B.A., Vanderbilt)	Louisville, Ky.
Ronnie Neal Rice (B.S., Austin Peay)	Clarksville, Tenn.
William Wright Robertson, Jr. (B.A., Southwestern at Memphis)	Mayfield, Ky.
Arthur Allen Rosenblatt (B.A., Vanderbilt)	N. Miami, Fla.
Martin Schmukler (B.A., New York)	Flushing, N. Y.
Don Albert Schweiger (B.S., Duke)	Portsmouth, Va.
William Lewis Smead (B.A., Amherst)	Nashville, Tenn.
Frank Wilson Stevens, Jr. (B.A., Vanderbilt)	Nashville, Tenn.
Robert John Stine (B.A., Williams College; M.A.T., Harvard)	Maryville, Tenn.
Robert Barnett Strecker (B.S., Wisconsin)	Neosho, Mo.
Jonathan Nicholas Terhune (B.A., Murray State)	Murray, Ky.
David Lawrence Tharpe (B.S., Furman)	Nashville, Tenn.
Ervin Magnus Thompson (B.A., Yale)	Mobile, Ala.
Edmond Franklin Tipton (B.A., Vanderbilt)	Nashville, Tenn.
Henry Alan Unger (B.S., Miami)	North Bay Village, Fla.

Roger Bruce Vogelfanger (B.S., Cornell)	Springfield, Va.
James Alex Waldron, Jr. (B.A., Hendrix)	New Orleans, La.
William Dean Wehunt (B.S., Mercer)	Sumter, S. C.
Ralph Edward Wesley (A.B., Kentucky)	Carlisle, Ky.
James Hayes Whiteside (B.A., Vanderbilt)	Glasgow, Ky.
Betty Jean Williams (B.A., Oklahoma)	Pond Creek, Okla.
Robert Emmett Winton (A.B., North Carolina)	Raleigh, N. C.
Dennis Clifford Workman (B.A., Vanderbilt)	Sarasota, Fla.

SECOND YEAR CLASS

Arthur Cory Andreasen (B.S., Purdue)	Louisville, Ky.
Gary Lynn Barker (B.A., Kentucky)	Appalachia, Va.
Kendall Townes Blake (A.B., Princeton)	Jackson, Miss.
Sidney Wiggins Bondurant (B.S., Mississippi State)	Forest, Miss.
Robert Blain Boswell (B.A., The University of the South)	Montgomery, Ala.
Daniel Doyle Canale, Jr. (A.B., Notre Dame)	Memphis, Tenn.
William Linus Clarke (B.A., Duke)	University Park, Md.
Thomas Sterling Claiborne, Jr. (B.A., Vanderbilt)	Atlanta, Ga.
Robert Mason Coleman, Jr. (A.B., Kentucky)	Hopkinsville, Ky.
Donald Slider Crumbo (B.A., Kentucky)	New Albany, Ind.
Joe Campbell Culbertson (B.S., Midwestern)	Chico, Texas
John Lucian Davis (B.A., Vanderbilt)	Jackson, Miss.
William Watlington Dow (B.A., Vanderbilt)	Meridian, Miss.
Emanuel Oury Doyne (B.A., Vanderbilt)	Nashville, Tenn.
Frank Mangrom Eggers II (B.S., Maryville College)	Maryville, Tenn.
Carl Willard Emmons, Jr. (B.A., Oklahoma)	Midwest City, Okla.
David Marc Gershenson (B.A., Pennsylvania)	Fairfield, Ill.
Edward Marvin Gotlieb (A.B., Duke)	Atlanta, Ga.
Roland Edward Gower (B.A., Tennessee Technological)	Nashville, Tenn.
Cheryl Milam Greene (B.A., Vanderbilt)	Jacksonville, Fla.
Edwin Leon Grogan II (B.S., Murray State)	Murray, Ky.
Peter Lawrence Grossman (B.S., Williams College)	Milwaukee, Wisc.
John Chrisman Hawk III (B.S., Davidson)	Charleston, S. C.
Carol Ann Hengeveld (B.A., Calvin College)	Grand Rapids, Mich.
Warren Arthur Hiatt, Jr. (B.S., Mississippi)	Magnolia, Miss.
Joseph Wilson Huston (B.S., Washington & Lee)	New Orleans, La.
Richard Liming Jordan (B.A., Mississippi)	Kosciusko, Miss.
Charles S. L'Hommedieu (B.S., USAF Academy)	Fort Lauderdale, Fla.
Rodney Alan Lorenz (A.B., Washington)	Decatur, Ill.
Kenneth Margolis (B.A., Rutgers)	Highland Park, N. J.
John Douglas Matthew (B.S., Clemson)	N. Charleston, S. C.
James Wallace Mathewson (B.S., Duke)	Lyndonville, N. Y.
Jane Ann Mays (B.A., Oklahoma College of Liberal Arts)	Leupp, Ariz.
Roy Allen Meals (B.A., Rice)	Shawnee Mission, Kan.
Kenneth Ira Miller (B.A., Vanderbilt)	Fort Lauderdale, Fla.
Stanley Morehead (B.A., Vanderbilt)	Mayfield, Ky.
David Hoover Morgan (B.A., Vanderbilt)	Williamsburg, Ky.
William Gregory Morgan III (B.A., Kentucky)	Owensboro, Ky.
Wallace Ware Neblett III (B.A., The University of the South)	Greeneville, Miss.
Michael Joseph Newton (B.A., Pennsylvania)	Bridgeport, Conn.
Richard Randolph Oldham (B.S., U. S. Naval Academy)	Cincinnati, Ohio
Brandon Olson (B.S., Washington)	Seattle, Wash.
Richard David Olson (B.A., Rice)	Chevy Chase, Md.
William David Patterson (B.A., The College of Wooster)	Maryville, Tenn.
James Thurman Pyron (B.A., Oklahoma)	Hobart, Okla.
Paul Alan Ruskin (B.A., North Carolina)	Kensington, Md.
Eugene Trueman Saiter (B.A., Kentucky)	Louisville, Ky.
Lathan Edwards Settle (B.A., Kentucky)	Princeton, Ky.

Special Student

George Merrill Shore (B.S., Emory)	Jacksonville, Fla.
Gregory James Skarulis (B.S., St. John's)	Woodhaven, N. Y.
John Gary Slater (B.A., Vanderbilt)	Birmingham, Mich.
William Webster Tomford (A.B., North Carolina)	Memphis, Tenn.
Robert John Trace (B.S., Dickinson College)	Camp Hill, Pa.
Kenneth Frank Tullis (B.A., Southwestern)	Memphis, Tenn.
Harrison Douglas Turner (B.S., Tennessee)	Tulahoma, Tenn.
John Albert Turner (B.S., Georgia)	Columbus, Ga.
Stanley Edward Von Hofe (B.S., Clemson)	Simpsonville, S. C.
Betty Derrellene Walton (B.A., Vanderbilt; M.A., Johns Hopkins)	Hohenwald, Tenn.
Melborne Austin Williams (B.S., Western Kentucky State)	Bowling Green, Ky.
John Anthony Worrell (B.S., McNeese)	Lake Charles, La.

THIRD YEAR CLASS

William Confer Alder (A.B., Lafayette)	Harrisburg, Pa.
Paul Seabrook Ambrose (B.S., Davidson)	Knoxville, Tenn.
Howard Joseph Aylward, Jr. (A.B., Boston)	St. Louis, Mo.
William Brennan Baine (A.B., Princeton)	Washington, D. C.
Thomas Word Bennett (B.A., David Lipscomb)	Nashville, Tenn.
Charles Roger Bentz (A.B., Franklin)	Berne, Ind.
*Thomas Poindexter Bersot (A.B., Kentucky)	Louisville, Ky.
Judy Faye Burroughs (B.A., Berea)	Knoxville, Tenn.
Sam Frank Carter III (B.A., Vanderbilt)	Birmingham, Ala.
Glenn Ray Carwell (B.A., Centre)	Bowling Green, Ky.
Clark Robert Cobble (B.A., Vanderbilt)	Nashville, Tenn.
Gerald Dykes Cordell (B.A., David Lipscomb)	College Park, Ga.
John Howey Crothers (B.A., Pepperdine)	Nashville, Tenn.
Mark Alan Cunningham (B.S., Tennessee)	Knoxville, Tenn.
Frederick B. Emerson, Jr. (B.A., Alfred; Ph.D., Cornell)	East Alton, Ill.
Robert Branch Faber (B.A., Vanderbilt)	Memphis, Tenn.
John Orus Fitts (A.B., Kentucky)	Pineville, Ky.
David Elliot Fleischer (B.S., Washington & Lee)	Louisville, Ky.
Richard Lewis Foss (B.S., Davidson)	Lindale, Ga.
Steven Allan Goldstein (B.A., Vanderbilt)	Louisville, Ky.
Harold Amos Hatcher, Jr. (B.S., Tennessee Technological)	Nashville, Tenn.
Robert Loyd Hendley (B.S., Georgia Institute of Technology)	Decatur, Ga.
Marvin Ward Hinds (B.A., Vanderbilt)	Stamford, Texas
Aubrey Johnston Hough, Jr. (B.A., Hendrix)	Little Rock, Ark.
Herman Arthur Jenkins (B.S., Marshall)	Glenwood, W. Va.
Douglas Larkin Jones (B.A., Vanderbilt)	Clarksville, Tenn.
Hilliard Earl Jordan, Jr. (B.A., Mississippi)	Kosciusko, Miss.
Lusanne Craddock Lilly (B.A., Murray State)	Murray, Ky.
Stephen Barry Lyons (B.E.E., Polytechnic Institute of Brooklyn; Ed.M., Tufts)	Roslyn, Long Island, N. Y.
Ralph James Mabry, Jr. (B.A., Vanderbilt)	Chattanooga, Tenn.
*Robert William Mahley (B.S., Maryville College)	Goodlettsville, Tenn.
*Lawrence Edward Mallette (B.A., Vanderbilt)	Memphis, Tenn.
Conn Michael McConnell (B.S., Tennessee)	Nashville, Tenn.
Thomas Aaron McKenzie III (B.S., Davidson)	Winston-Salem, N. C.
Charles Joseph Phifer (B.E., Vanderbilt)	McMinnville, Tenn.
James Travis Rhea (B.S., Yale)	Paris, Tenn.
Bruce Wanner Romick (B.A., Vanderbilt)	Signal Mountain, Tenn.
*Philip Marks Rosenbloom (B.A., Vanderbilt)	Detroit, Mich.
Stephen Edwin Rostan (B.S., Davidson)	Valdese, N. C.
Foster Jerome Sanders (B.A., Virginia)	Louisville, Ky.
William James Schneider (B.S., Stetson)	Miami, Fla.
John Joseph Secondi (A.B., Princeton)	Spartanburg, S. C.
Robert Taylor Segraves (B.A., Vanderbilt)	Texarkana, Texas

*Special Student

Indran Selvaratnam (A.B., Merrimack College)	Kelaniya, Ceylon
Frank Durham Stegall (A.B., Emory)	Lindale, Ga.
Stephan Jay Sweitzer (B.S., Washington & Lee)	Louisville, Ky.
John Leeman Tarpley (B.A., Vanderbilt)	Jackson, Miss.
Rowland Pleasant Vernon, Jr. (B.A., Louisiana Polytechnic Institute)	Tioga, La.
Robert Harvey Walkup, Jr. (B.A., Centre)	McAllen, Texas
David Hager Waller (B.A., Vanderbilt)	Hamilton, Ohio
Kenneth Richard Wasson (B.A., Vanderbilt)	Paris, Tenn.
Levi Watkins (B.S., Tennessee A & I State)	Montgomery, Ala.
Thomas Clayton Whitworth (B.A., David Lipscomb)	Murfreesboro, Tenn.
Daniel Keith Winstead (B.A., Cincinnati)	Cincinnati, Ohio
*Robert Emerson Wood (B.S., Stetson)	Nashville, Tenn.
Robert Summers Young, Jr. (B.S., Kentucky)	Lexington, Ky.

FOURTH YEAR CLASS

Egbert Vernon Anderson, Jr. (B.S., Davidson)	Pensacola, Fla.
William Joseph Anderson (B.A., Vanderbilt)	Jackson, Miss.
Robert Jay Andrew (B.A., Washington)	University City, Mo.
Robert Burton Barnett (B.A., Vanderbilt)	Chattanooga, Tenn.
John Burr Bassel, Jr. (B.A., Vanderbilt)	Cocoa Beach, Fla.
James Arthur Bentley, Jr. (B.A., Vanderbilt)	Old Hickory, Tenn.
Sidney Anderson Berry III (B.A., Vanderbilt)	Lebanon, Tenn.
*Glenn Harwell Booth (B.A., Williams College)	Memphis, Tenn.
*Arthur Eastwood Broadus (B.A., Washington & Lee)	Knoxville, Tenn.
Thomas Milburn Brown, Jr. (B.A., Vanderbilt)	Harriman, Tenn.
Greer Albert Busbee III (B.A., Vanderbilt)	Atlanta, Ga.
Thomas McColl Chesney (B.A., Pennsylvania)	Knoxville, Tenn.
Cully Alton Cobb (B.A., Vanderbilt)	Nashville, Tenn.
Richard Erwin Dixon (A.B., Princeton)	Nashville, Tenn.
Douglas Alan Finnegan (B.A., Kentucky)	Louisville, Ky.
Harvey Sid Fishbein (B.S., Queens)	Flushing, N. Y.
James Moore Foster (B.A., Vanderbilt)	St. Albans, W. Va.
Robert Stanley Francis (B.A., Vanderbilt)	Tulsa, Okla.
John Wolcott Garratt (B.S., Purdue)	Battle Ground, Ind.
George William Glazebrook, Jr. (B.A., Kentucky)	Lebanon, Ky.
Alan Douglas Glick (B.A., Vanderbilt)	Nashville, Tenn.
James Philip Goolsby (B.A., Centre)	Louisville, Ky.
James Harold Growdon (B.A., Vanderbilt)	Little Rock, Ark.
Keith William Hagan (B.S., Kentucky)	Louisville, Ky.
John Herbert Harris, Jr. (B.A., Vanderbilt)	Jasper, Tenn.
Norman Donald Hasty (B.A., Rice)	Shelbyville, Tenn.
Bruce Emerson Herron (B.A., Southwestern at Memphis)	Jackson, Tenn.
Robert Wright Higginbotham (B.S., Arizona)	Birmingham, Ala.
Everette Irl Howell (B.S., Mississippi State)	State College, Miss.
Ellen Elizabeth Hrabovsky (B.S., George Peabody)	Nashville, Tenn.
John Clifford Johnson, Jr. (B.A., Vanderbilt)	Elizabethton, Tenn.
Clifford Allen Lakin (B.A., Duke)	Miami Beach, Fla.
Thomas Joseph Lustberg (B.S., University of Cincinnati)	Cincinnati, Ohio
Robert Karl Mercier (B.S., Mt. Union)	Canton, Ohio
Kenny Wayne Messman (B.A., Milligan)	Joppa, Md.
Douglas Park Mitchell (A.B., Yale)	Owensboro, Ky.
James Ernest Mitchell, Jr. (B.A., Vanderbilt)	Bolivar, Tenn.
Mark Kent Moore (B.A., Bethany Nazarene)	Bradley, Ill.
Lawrence Raymond Penner, Jr. (B.A., Kansas; A.M., Ph.D., Illinois)	Storrs, Conn.
James Hargrave Powell (B.S., Virginia Polytechnic Institute)	St. Petersburg, Fla.
*John Marion Rainey (B.A., Vanderbilt)	Pensacola, Fla.
Wyatt Easterling Rousseau (B.A., Vanderbilt)	Jackson, Miss.
Mary Pullig Schultz (B.S., Louisiana)	Clinton, La.

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Larry Dee Scott (B.S., Davidson)	Kirkwood, Mo.
Anne Marie Shute (B.S., Barnard College)	Jackson, Tenn.
Robert Thomas Snowden (B.S., Stetson)	Jacksonville, Fla.
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David Carroll Waggoner (B.A., Vanderbilt)	Nashville, Tenn.
David Hughes Walker (B.A., Davidson)	Nashville, Tenn.
Jackson B. White IV (B.A., Vanderbilt)	Nashville, Tenn.
Harold James Wiesman, Jr. (B.A., Vanderbilt)	Evansville, Ind.
Edwin Oliver Williamson II (B.A., Vanderbilt)	Princeton, Ky.
Ronald Bruce Workman (B.S., Alabama)	Decatur, Ala.
Vernon Thomas Worrall III (B.S., Davidson)	Nashville, Tenn.

INTERNSHIPS

Class of June 1968

<i>Name</i>	<i>Type of Internship</i>
Howard Marion Alig..... Indiana University Medical Center, Indianapolis, Indiana	Medicine
Ronald Lee Alt..... Indiana University Medical Center, Indianapolis, Indiana	Surgery
Joseph Sprott Atkinson..... Johns Hopkins Hospital, Baltimore, Maryland	Osler Medical
Remsen Stewart Bauknight..... University of Michigan Affiliated Hospital, Ann Arbor, Michigan	Straight Surgery
George Carter Bell..... Louisville General Hospital, Louisville, Kentucky	Surgery
David Edgar Blanton, Jr..... Vanderbilt University Hospital, Nashville, Tennessee	Pediatrics
James Dickson Bomboy, Jr..... Parkland Memorial Hospital, Dallas, Texas	Medicine
William Henry Brewer..... University of Virginia Hospital, Charlottesville, Virginia	Rotating
Ponce DeLeon Bullard, Jr..... Army Medical Services-Tripler, Honolulu, Hawaii	Rotating
Raymond Franklin Burk, Jr..... Vanderbilt University Hospital, Nashville, Tennessee	Medicine
Thomas Way Campbell..... William A. Shands Hospital, Gainesville, Florida	Medicine
Patricia Wall D'Encarnacao.....	
Leonidas Washington Dowlen, Jr..... Vanderbilt University Hospital, Nashville, Tennessee	Surgery
Robert Currin Dunkerley, Jr..... Vanderbilt University Hospital, Nashville, Tennessee	Medicine
James Ray Dzur..... University of Kentucky Hospital, Lexington, Kentucky	Medicine
Arthur Benedict Gallun..... Milwaukee County Hospital, Milwaukee, Wisconsin	Medicine
Michael Arthur Gilchrist..... Yale-New Haven Medical Center, New Haven, Connecticut	Pediatrics
Archibald Clinton Hewes, Jr..... Barnes Hospital, St. Louis, Missouri	Pathology
George Baker Hubbard, Jr..... State University of Iowa Hospital, Iowa City, Iowa	Surgery
David Rex Hunter..... State University of Iowa Hospital, Iowa City, Iowa	Medicine
James Granbery Killebrew, Jr..... Vanderbilt University Hospital, Nashville, Tennessee	Surgery
Jefferson Davis Kyle..... Indiana University Medical Center, Indianapolis, Indiana	Surgery
Charles Burke Maino..... San Diego County University Hospital, San Diego, California	Straight Surgery

Charles Earl Martin	Surgery
Vanderbilt University Hospital, Nashville, Tennessee	
John Robert Mather	Rotating
University of Oregon Medical Center, Portland, Oregon	
Carolyn Leach McIntyre	Medicine
Vanderbilt University Hospital, Nashville, Tennessee	
John Parker Mickle	Straight Surgery
Peter Bent Brigham Hospital, Boston, Massachusetts	
Jerry Ray Mitchell	Medicine
Vanderbilt University Hospital, Nashville, Tennessee	
Stephen Philip Mowry	Medicine
Vanderbilt University Hospital, Nashville, Tennessee	
Rebekah Ann Naylor	Surgery
Parkland Memorial Hospital, Dallas, Texas	
Elise Moss Neeld	Medicine
Emory University Hospital, Atlanta, Georgia	
John William Nuckolls	Medicine
Vanderbilt University Hospital, Nashville, Tennessee	
Thomas William Orcutt	Surgery
Vanderbilt University Hospital, Nashville, Tennessee	
Soja Park	Pediatrics
Vanderbilt University Hospital, Nashville, Tennessee	
James Benajah Phillips III	Surgery
University of Michigan Affiliated Hospital, Ann Arbor, Michigan	
James Sterling Price	Pediatrics
Vanderbilt University Hospital, Nashville, Tennessee	
Godela Reisig	Medicine
Vanderbilt University Hospital, Nashville, Tennessee	
Allen Lee Schlamp	Rotating
Butterworth Hospital, Grand Rapids, Michigan	
Robert Lee Schweitzer	Rotating
Naval Hospital, Portsmouth, Virginia	
James Alfred Settle, Jr.	Medicine
University of Kentucky Hospital, Lexington, Kentucky	
Robert Alvin Sewell	Surgery
Vanderbilt University Hospital, Nashville, Tennessee	
George Edward Smith	Straight Surgery
Cincinnati General Hospital, Cincinnati, Ohio	
Hugh Nelson Smith	Surgery
University of California, San Francisco, California	
Stewart Phillip Smith, Jr.	Medicine
Indiana University Medical Center, Indianapolis, Indiana	
Peter John Townes	Medicine
Vanderbilt University Hospital, Nashville, Tennessee	
Marvin Haber Vickers, Jr.	Surgery
Parkland Memorial Hospital, Dallas, Texas	
Nicholas Andre Viner	Medicine-Surgery
Greenwich Hospital, Greenwich, Connecticut	
Larry Gale Willis	Obstetrics and Gynecology
Vanderbilt University Hospital, Nashville, Tennessee	
William Clenney Yankowsky	Surgery
Indiana University Medical Center, Indianapolis, Indiana	
Sara Elizabeth Zieverink	Pathology
Vanderbilt University Hospital, Nashville, Tennessee	

MEDALS, PRIZES, AND SCHOLARSHIPS

For the Year 1967-1968

FOUNDER'S MEDAL FOR SCHOLARSHIP. Endowed by Commodore Cornelius Vanderbilt and given ever since to the graduate standing first in his class.

JOSEPH SPROTT ATKINSON.....Macon, Ga.

BEAUCHAMP SCHOLARSHIP. Endowed, and awarded in the School of Medicine to the Department of Psychiatry.

THOMAS WAY CAMPBELL.....Dandridge, Tenn.

BORDEN UNDERGRADUATE RESEARCH AWARD IN MEDICINE. Awarded for the most meritorious undergraduate research in the medical field.

JERRY RAY MITCHELL.....Providence, Ky.

THE MERRELL AWARD IN PATHOLOGY. Awarded annually for outstanding research papers by Vanderbilt University medical students in the field of Pathology.

JAMES PHILIP GOOLSBY.....Louisville, Ky.

ROBERT WILLIAM MAHLEY.....Goodlettsville, Tenn.

THE ALBERT WEINSTEIN PRIZE IN MEDICINE. Established in memory of Albert Weinstein, M.D., and awarded to the senior student who has demonstrated high scholastic attainment and qualities which characterize the fine physician. *Award shared by:*

JOSEPH SPROTT ATKINSON.....Macon, Ga.

ROBERT CURRIN DUNKERLEY, JR.....Nashville, Tenn.

REBEKAH ANN NAYLOR.....Fort Worth, Texas

DEAN'S AWARD FOR STUDENT RESEARCH PRESENTATION. Awarded for most outstanding research paper presented by a medical student.

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Arthur Eastwood Broadus*.....Knoxville, Tenn.
Robert Currin Dunkerley, Jr.....Nashville, Tenn.
John Parker Mickle.....Rock Hill, S. C.
Rebekah Ann Naylor.....Fort Worth, Texas
James Benajah Phillips III*.....Chattanooga, Tenn.
Robert Alvin Sewell.....Franklin, Tenn.
Peter John Townes.....Nashville, Tenn.
Marvin Haber Vickers.....Birmingham, Ala.
William Clenney Yankowsky.....Huntsville, Ala.

*Elected in Third Year

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William Joseph Anderson.....Jackson, Miss.
Bruce Emerson Herron.....Jackson, Tenn.
Wyatt Easterling Rousseau.....Jackson, Miss.

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