1953

Washington University School of Medicine bulletin, 1953

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WASHINGTON UNIVERSITY

ARTHUR HOLLY COMPTON, Ph.D., Sc.D., LL.D.
Chancellor of the University

All Schools, except Medicine, Dentistry, and Nursing, are located on the Main Campus, at Lindell and Skinker Boulevards, St. Louis 5, Mo.

THE COLLEGE OF LIBERAL ARTS—Thomas S. Hall, Ph.D., Dean
Courses in the humanities, the social studies, and the natural sciences, leading to a Bachelor of Arts degree; curricula for prospective teachers; preprofessional studies for students who plan to enter the professional schools of Business and Public Administration, Law, Medicine, Dentistry, Nursing, Social Work, the Graduate School of Arts and Sciences, the School of Botany, and advanced work at this and other universities and colleges.

THE SCHOOL OF ENGINEERING—Lawrence E. Stout, Ph.D., Ch.E., Dean
Four-year prescribed course of study leading to the degree of Bachelor of Science in each of the following branches: Architectural Engineering, Chemical Engineering, Civil Engineering, Electrical Engineering, Engineering Physics, Geological Engineering, Industrial Engineering, and Mechanical Engineering. Provision is also made for alumni to qualify for the professional degree of Engineer in each of these branches.

THE SCHOOL OF ARCHITECTURE—Kenneth E. Hudson, B.F.A., Dean
The option of two five-year programs leading to the degree of Bachelor of Architecture: 1. General Architecture; 2. Interior Option in Architecture. Graduate work leading to the degree of Master of Architecture.

THE SCHOOL OF BUSINESS AND PUBLIC ADMINISTRATION
Miller Upton, Ph.D., Dean
1. Two-year program, at the junior and senior level, leading to the degree of Bachelor of Science in the field of Business Administration, Public Administration, or Foreign Service. 2. Four-year program, open to freshmen, which leads to the degree of Bachelor of Science in Retailing. 3. Graduate work leading to the degrees of Master of Business Administration, Master of Public Administration, and Master of Science in Retailing.

THE GEORGE WARREN BROWN SCHOOL OF SOCIAL WORK
Benjamin E. Youngdahl, A.M., Dean
Two-year graduate professional curriculum leading to the degree of Master of Social Work; an additional professional two-year program leading to the degree of Doctor of Social Work; also a junior curriculum in the third and fourth undergraduate years, leading to the degree of Bachelor of Science in Social Work.

THE HENRY SHAW SCHOOL OF BOTANY
Henry N. Andrews, Jr., Ph.D., Dean
Affiliated with the Missouri Botanical Garden. Graduate work in Botany leading to the degrees of Master of Arts and Doctor of Philosophy, administered by the Graduate School of Arts and Sciences.

THE SCHOOL OF LAW—John Ritchie, B.S., LL.B., J.S.D., Dean
Three-year curriculum leading to the degree of Bachelor of Laws.

(Continued inside back cover)
THE CORPORATION OF WASHINGTON UNIVERSITY
(The Governing Board)

President
ETHAN ALLEN HITCHCOCK SHEPLEY

First Vice-President
DANIEL KAYSER CATLIN

Second Vice-President
JAMES WESLEY MCAFEE

Directors
WILLIAM MARKHAM AKIN
CHARLES WALTER BRYAN, JR.
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JAMES MARSH DOUGLAS
ADRIAN WOODS FraZIER
WILSON LINN HEMINGWAY
ROLAND MILTON HOERR
MEREDITH CABELL JONES

JOHN STARK LEHMANN
JAMES WESLEY MCAFEE
JOHN MERRILL OLIN
ALEXANDER WESSEL SHAPLEIGH
ETHAN ALLEN HITCHCOCK SHEPLEY
ERNEST WILLIAM STIX
HARRY BROOKINGS WALLACE
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Alumni Directors
CARL L. A. BECKERS
CLARENCE MARTIN BARKSDALE

AXEL NORMAN ARNESON
LEO MICHAEL SHANLEY

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Law

Medicine
Dentistry

Treasurer and Secretary of the Corporation
THOMAS EDWARD BLACKWELL

OFFICERS OF THE CENTRAL ADMINISTRATION

Arthur Holly Compton, Bridge Chancellor
Leslie James Buchan, Vice-Chancellor
Carl Tolman, Chairman, Faculties of Arts and Sciences
Thomas Edward Blackwell, Vice-Chancellor, Treasurer
Everett Harold Hopkins, Assistant to the Chancellor,
University Development

John Cleveland Talbot, Special Assistant to the Chancellor
Charles Belknap, Vice-Chancellor Emeritus
CALENDAR

1953-54
Registration for all new students, Wednesday, September 9, 1953.
Registration for all former students, Friday, September 11, 1953.
Academic year begins Monday, September 14, 1953; First Trimester ends Saturday, December 5, 1953.
Holiday, Thanksgiving Day, Thursday, November 26, 1953.
Registration for second half-year, Monday, February 1, 1954.
Final Examinations for first, second, and third classes begin Monday, June 7, 1954.
Commencement, Wednesday, June 9, 1954.

1954-55
Registration for all new students, Wednesday, September 8, 1954.
Registration for all former students, Friday, September 10, 1954.
First Trimester begins Monday, September 13, 1954; ends Saturday, December 4, 1954.
Commencement, Wednesday, June 8, 1955.
HEADS OF DEPARTMENTS

Arthur H. Compton..........................Bridge Chancellor of the University
Robert A. Moore..........................Dean of the School of Medicine and Edward Mallinckrodt Professor of Pathology
Carl F. Cori..............................Professor of Biological Chemistry
Lawrence T. Post..........................Professor of Clinical Ophthalmology
Alexis F. Hartmann.........................Professor of Pediatrics
Willard M. Allen..........................Professor of Obstetrics and Gynecology
Theodore E. Walsh..........................Professor of Otolaryngology
W. Barry Wood, Jr.........................Busch Professor of Medicine
Edwin F. Gildea.........................Wallace Renard Professor of Psychiatry
H. Lester White...........................Professor of Physiology
Oliver H. Lowry..........................Professor of Pharmacology
Robert E. Shank..........................Professor of Preventive Medicine
Hugh M. Wilson..........................Professor of Radiology
Edward W. Dempsey........................Professor of Anatomy
Arthur Kornberg..........................Professor of Microbiology
Carl A. Moyer..........................Bixby Professor of Surgery
Frank R. Bradley.........................Director of Barnes Hospital
Estelle Claiborne.........................Administrator of St. Louis Children’s Hospital

ADMINISTRATIVE OFFICERS OF THE SCHOOL OF MEDICINE

Robert Allan Moore..........................Dean
B.A., Ohio State University, 1921; M.S., 1927; M.D., 1928; Ph.D., Western Reserve University, 1930.

Samuel Bukantz................................Assistant Dean
B.S., New York University, 1930; M.D., 1934.

Robert Joy Glaser..........................Assistant Dean
S.B., Harvard University, 1940; M.D., 1943.

John Courtright Herweg........................Assistant Dean
B.S., Drury College, 1943; M.D., Washington University, 1945.

Charles Barber Mueller........................Assistant Dean
A.B., University of Illinois, 1938; M.D., Washington University, 1942.

William Bahlmann Parker........................Registrar
A.B., University of Missouri, 1921.
WASHINGTON UNIVERSITY SCHOOL OF MEDICINE

HISTORY OF THE MEDICAL CENTER

Washington University School of Medicine was formed in 1899 by the union of the St. Louis Medical College and the Missouri Medical College, both of which had operated successfully as separate institutions for nearly fifty years.

In 1910 new heads and staffs were appointed in all major departments in an extensive reorganization and development of the School, and in 1914 the Medical School moved to the present Kingshighway site. Robert A. Barnes Hospital, St. Louis Children’s Hospital, and the Medical School then comprised the Medical Center.

The St. Louis Maternity Hospital became affiliated with the group and constructed the present building in 1927. In 1945 the St. Louis Maternity Hospital became the property of the University. In 1931 the McMillan Eye, Ear, Nose and Throat Hospital, provided by the bequest of Mrs. Eliza McMillan, and the Oscar Johnson Institute, the gift of several donors, were erected by the University. The Edward Mallinckrodt Radiological Institute, the gift of Mr. Mallinckrodt and his son, was built in 1931 and has since provided X-ray services for the whole group. The Wohl Hospital, the gift of Mr. and Mrs. David P. Wohl, was built in 1952. The Renard Hospital, the gift of Mr. Wallace Renard and his children, was built in 1953. The Barnard Free Skin and Cancer Hospital was built in 1953.

The affiliation of the hospitals, the Washington University Clinics, and the institutes with the School of Medicine, and their location together make this group of institutions integral parts of the teaching program. Each hospital contains classrooms and laboratories used by students and staffs.

By the terms of the affiliations, the faculty of the School constitutes the professional staffs of these hospitals as well as of the University Clinics. The Clinics serve as outpatient departments of the hospitals.

The School is located at the eastern edge of Forest Park in St. Louis, and is served by three different bus and streetcar lines to various parts of the city. The campus of Washington University is at the opposite edge of the Park.
BULLETIN OF WASHINGTON UNIVERSITY

HOSPITAL AFFILIATIONS

Washington University School of Medicine is affiliated with the following institutions in St. Louis:

Barnes Hospital—425 beds, half of which are used for undergraduate teaching in medicine and surgery, with services also for gynecology; conducts a central diagnostic laboratory.

McMillan Hospital—for eye, ear, nose, and throat, operated as a division of Barnes Hospital, contains 150 beds for services of ophthalmology and otolaryngology, provides separate section for neuropsychiatric and special medical patients.

Oscar Johnson Institute—occupies five floors of the Oscar Johnson building, houses research and teaching laboratories for departments of ophthalmology, otolaryngology, medicine, and neuropsychiatry.

St. Louis Children's Hospital—200 beds, contains laboratories for the department of pediatrics.

St. Louis City Hospitals—used for both undergraduate and graduate teaching. The Medical School nominates the staffs for one division of City Hospital (1,037 beds), of the Malcolm Bliss Psychopathic Institute, and of the Homer G. Phillips Hospital (680 beds). The Isolation Hospital (now used for chronic diseases) and the City Sanitarium (for mental diseases) are used for study and teaching of these subjects.

St. Louis Maternity Hospital—quarters for 100 mothers and corresponding facilities for the new-born; 37 beds for gynecology; provides headquarters for laboratories for the department of obstetrics and gynecology.

Barnard Free Skin and Cancer Hospital—39 beds.

Renard Hospital—100 beds.

Wohl Hospital—65 beds.

Shriners' Hospital for Crippled Children—used for instruction, 100 beds.

Koch Hospital—used for instruction in tuberculosis.
ENTRANCE REQUIREMENTS

Entrance requirements to the School of Medicine are:

1. Character, attitude, and interest suitable to carrying out the duties of a physician.

2. Intellectual ability and achievement, indicated by satisfactory scholastic work prior to entering medical school.

3. Completion of at least three years of college courses in an approved college or university, with minimum subject requirements as follows:
   - English: 6 semester hours
   - Chemistry: 15 semester hours, including quantitative analysis and 4 hours of organic
   - Physics: 8 semester hours
   - Biology: 8 semester hours, at least 4 hours of which must be in zoology

4. Applicants are expected to have taken the Medical Aptitude Test of the Association of American Medical Colleges.

Applications should be filed by October 1 of the year preceding that in which admission is sought. Blanks will be furnished upon request, and instructions concerning fees and transcripts will be sent also.

ADMISSION TO ADVANCED STANDING

Applicants who have satisfactorily completed one or two years of study at another approved medical school may be accepted for admission to the second- or third-year class (when vacancies exist), provided:

1. That they comply with the requirements above stated for admission to the first-year class,

2. That courses equivalent in general content and duration to those in this School in the years for which credit is asked have been satisfactorily completed.

3. That at the discretion in the Committee on Admissions, examinations may be required in any subjects already covered.

An applicant for admission to the upper classes must have studied as a matriculated medical student in an acceptable medical school for a period at least equal to that already spent by the class to which admission is sought.
REQUIREMENTS FOR DEGREE

Candidates must be more than twenty-one years of age and of good moral character. They must have attended not less than four courses of instruction as matriculated medical students, the last of which has been in this School. They must have passed all required courses, or their equivalent, and have received satisfactory grades in the work of the entire four classes. They must have discharged all current indebtedness to the University.

At the end of the fourth academic term, students who have fulfilled these requirements will be recommended for the degree of Doctor of Medicine. Candidates must be present when the degrees are conferred. A graduation fee of $5.00 must be paid before Commencement.

STUDENT ADVISING PROGRAM

On the recommendation of a joint student-faculty committee and the approval of the Executive Faculty, a student advising program was instituted in the fall of 1952. In its first year, the program was limited to the senior class, but because of its success, it was soon extended to include both the junior and senior classes.

Students are assigned in groups of four to a faculty adviser, an association which is maintained throughout the ensuing two years. In addition to the pleasant social aspects of the relationship, the contact between student and adviser offers an opportunity for important discussions of many subjects of interest, including those dealing with the student's courses, postgraduate training, and his ultimate plans for practice, teaching, or research. During 1952-53, the following staff members served as advisers:

Dr. Willard Allen  Dr. S. C. Bukantz  Dr. Charles Eckert  Dr. Ben Eiseman  Dr. Edwin Gildea  Dr. Robert J. Glaser  Dr. Alfred Goldman  Dr. Sam Grant  Dr. Paul Hageman  Dr. Carl Lischer  Dr. O. H. Lowry  Dr. A. I. Mendeloff  Dr. C. V. Moore  Dr. R. A. Moore  Dr. Carl Moyer  Dr. C. Barber Mueller  Dr. Robert Paine  Dr. E. Rouse  Dr. Virgil Scott  Dr. Robert Shank  Dr. David Smith  Dr. Hugh Wilson  Dr. W. Barry Wood  Dr. Ralph Woolf
FEES AND EXPENSES

The University reserves the right to change the fees herein stated at any time without notice. Fees are payable in advance at the office of the Registrar of the School of Medicine. Checks should be made payable to Washington University. Students who do not register during the registration period are charged a late registration fee of $5.00.

Estimate of Expenses

This is an estimate of the average annual expenses of a student in the School of Medicine, excluding clothes, laundry, microscope, and incidentals. Amounts will vary considerably according to the individual.

<table>
<thead>
<tr>
<th>Item</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition and Student Health Fees</td>
<td>$804.00</td>
</tr>
<tr>
<td>Books and Instruments</td>
<td>$15.00 to 150.00</td>
</tr>
<tr>
<td>Room and Board ($20.00 to $25.00 a week)</td>
<td>720.00 to 900.00</td>
</tr>
</tbody>
</table>

$1539.00 to $1854.00

MICROSCOPIC AND DIAGNOSTIC INSTRUMENTS

Each freshman is required to possess a standard microscope equipped with a substage light. All students are required to provide themselves with stethoscopes, ophthalmoscopes, otoscopes, hemocytometers, percussion hammers, tape measures, flashlights, head mirrors, and skin pencils as they are needed.

Supplies and books may be purchased at the bookstore in the School of Medicine.
MEN'S DORMITORY

A dormitory housing about fifty students is in close proximity to the School of Medicine. Each occupant must furnish his own sheets, pillow cases, and blankets; otherwise the rooms are furnished.

Room rent is $75.00 per semester, payable in advance, at registration. Reservations are accepted only for the full academic year. Application for reservation should be made to the Registrar and must be accompanied by a reservation fee of $10.00. This fee will be returned should a room not be assigned. If a room is assigned, the fee will be held by the University as a bond against possible damage to room and furniture. Subject to such claim, it will be refunded at the end of the school year.

LIBRARY

The Library of the School of Medicine contains (April 1, 1953) 74,257 bound volumes and receives 833 medical periodicals, selected with reference to the needs of students and investigators.

The Library has acquired by gift and by purchase a number of private collections, among them the manuscripts, letters, and other valuable material of the pioneer American physiologist, William Beaumont.

Library hours are 8:30 a. m. to 10:00 p. m. on week days, and 8:30 a. m. to 5:00 p. m. on Saturdays.

VETERANS' ADMINISTRATION

The School of Medicine is approved by the Veterans' Administration for full training under Public Laws 346, 16, and 550.

CAFETERIA

A non-profit cafeteria in Barnes Hospital serving breakfast, lunch, and dinner is open to medical students.
GENERAL PLAN OF INSTRUCTION

The course in medicine covers a four-year period. The school year is 36 weeks in length and is divided into three trimesters of 12 weeks each. Classes are held 9-5 daily and 9-1 Saturdays.

In general, the curriculum during each year is as follows:

**First Year**
- morphology (gross anatomy and histology)
- biochemistry
- physiology
- medical psychology
- neurology (including neuroanatomy and neurophysiology)

**Second Year**
- pharmacology
- microbiology
- pathology
- methods of diagnosis
- introduction to surgery
- preventive medicine

**Third Year—Clerkships in:**
- medicine and neuropsychiatry
- surgery
- obstetrics-gynecology
- pediatrics

**Fourth Year—Clerkships in:**
- medicine (including neuropsychiatry and dermatology)
- surgery and surgery specialties
- obstetrics-gynecology
- pediatrics
- co-ordinated clerkship in outpatient department and preventive medicine

During the senior year, a six-week period is set aside for an elective of the student's choice.

Average undergraduate enrollment in the School of Medicine is 360. The freshman class has a limit of 86 students.
FELLOWSHIPS AND SCHOLARSHIPS

THE JACKSON JOHNSON FUND. Under the will of Jackson Johnson, the sum of $250,000 was given to the University, the income to be used "to aid worthy and desirable students in acquiring and completing their medical education." During recent years, the income from this fund has been devoted to Honor Scholarships named for the donor as well as to fellowships for needy students.

These Honor Scholarships are awarded on a regional basis with one or more scholarships being awarded annually to students from each of the following areas:

<table>
<thead>
<tr>
<th>Western</th>
<th>South Central</th>
<th>Northeastern</th>
</tr>
</thead>
<tbody>
<tr>
<td>California</td>
<td>Alabama</td>
<td>Indiana</td>
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<tr>
<td>Nevada</td>
<td>Arkansas</td>
<td>Michigan</td>
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<tr>
<td>Oregon</td>
<td>Kentucky</td>
<td>New Jersey</td>
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<tr>
<td>Washington</td>
<td>Louisiana</td>
<td>New York</td>
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<tr>
<td>Alaska</td>
<td>Mississippi</td>
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<td>Pacific Islands</td>
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<td>Tennessee</td>
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<td>Rocky Mountains</td>
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<td>Arizona</td>
<td>Canal Zone</td>
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<td>Colorado</td>
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<td>Montana</td>
<td>Delaware</td>
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<td>New Mexico</td>
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<td>Connecticut</td>
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<td>Utah</td>
<td>Georgia</td>
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<td>Wyoming</td>
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<td>Illinois</td>
<td>Virginia</td>
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<tr>
<td>Iowa</td>
<td>West Virginia</td>
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</tr>
<tr>
<td>Kansas</td>
<td>Washington, D. C.</td>
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<tr>
<td>Minnesota</td>
<td>Puerto Rico</td>
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<tr>
<td>Missouri</td>
<td>Virgin Islands</td>
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<td>Nebraska</td>
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<td>North Dakota</td>
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<tr>
<td>South Dakota</td>
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<tr>
<td>Wisconsin</td>
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The Jackson Johnson Regional Scholarships have been established to enable young men and women with superior qualifications and promise for a career in medicine to come to Washington University, without regard to their financial circumstances.
Eligibility. Jackson Johnson Regional Scholarships are open to those who plan to enter the freshman class at Washington University School of Medicine or to transfer from a two-year medical school to the third-year class at Washington University. The candidate must have resided for three years before application in one of the specified Regions, and have completed premedical work or the first two years of medicine in the same Region.

Stipend. Since the Jackson Johnson Regional Scholarships are regarded as prizes to be competed for by all students, whatever their financial need, the stipends will vary with the financial resources of the students. In those cases in which there is no financial need, a scholarship without stipend will be awarded. The maximum stipend will be $1,200 a year.

Selection. The awards will be made by the Committee on Admissions and Scholarships with the approval of the Chancellor on the basis of the academic record in college or medical school, the score in the medical aptitude and other tests, the recommendations of professors and others concerning ability, character, qualities of leadership, and general all-round development, and the extracurricular activities both in and outside of the School.

Renewals. Awards may be renewed with the same or different stipends for the succeeding years of the medical course, provided the achievements of the scholar justify the continuance of the award. The School may withdraw a Jackson Johnson Regional Scholarship if at any time the student's record or his actions in the School or outside prove him unworthy of it.

Application. All students accepted for admission are considered for the Jackson Johnson Regional Scholarships, making it unnecessary to file a special application.

JACKSON JOHNSON FELLOWSHIPS. In order to provide opportunities for able and promising young men and women, three Jackson Johnson Fellowships in the Preclinical Sciences will be offered annually.

Eligibility. All applicants must be graduates of a recognized school of medicine, and acceptable for admission to the Graduate School of Arts and Sciences of Washington University as candidates for a doctoral degree. Preference will be given to those who expect to pursue an academic career in one of the preclinical sciences.
Stipend. The stipend will vary with the needs and ability of the individual to a maximum of $2000 a year for the first year.

Renewal. Awards may be renewed with the same or different stipends for not to exceed, in all, three years, provided the achievements of the fellow justify continued study.

Application. All applications should be completed by March 1 for the period beginning the following July or September. Awards will be announced about April 1.

A Fellowship in Neurological Surgery with a stipend of $1,200 per year is awarded on recommendation of the Department of Surgery. Candidates must be graduates in medicine who will have completed an internship.

A Memorial Fellowship with a stipend of $500 may be awarded for one year to a graduate of the School, preferably a woman, for postgraduate study.

The George F. Gill Scholarship, instituted in memory of a former Clinical Professor of Pediatrics, entitles the holder to remission of the tuition fee to the amount of $100.

The Alumni Scholarship Award of $100 to be applied on the payment of the tuition fee is given for excellence in work during the preceding scholastic year on the recommendation of the Committee on Loans and Scholarships and the President of the Medical Alumni Association.

The Dr. John B. Shapleigh Scholarship. From a bequest of Dr. John B. Shapleigh, supplemented by contributions by Mrs. Shapleigh and Miss Margaret Shapleigh, a fund has been established, the income of which is used to pay the tuition of students in need of assistance.

The Eliza McMillan Student Aid Fund. The annual income from a bequest of Eliza McMillan provides a scholarship of about $200 for a deserving woman student in the School of Medicine.

The T. Griswold Comstock Scholarships. Through the bequest of Marilla E. Comstock, the annual income from $12,000 is used for two scholarships for students who otherwise would be unable to obtain a medical education and who desire and intend to follow the practice of medicine and surgery.
THE JOSEPH H. ROBLEE SCHOLARSHIPS. Provided through the gift of Mrs. Roblee, the income from the Joseph H. Roblee Scholarship Endowment Fund of $12,000 maintains two scholarships. They are awarded by the Chancellor to qualified, worthy, and deserving students in any division of the University.

THE ROBERT ALLEN ROBLEE SCHOLARSHIPS. Through the gift of Mrs. Joseph H. Roblee, the income from the Robert Allen Roblee Scholarship Endowment Fund of $15,000 provides one or more scholarships for qualified, worthy, and deserving students.

ANDREW RANKIN FLEMING AND SUSIE FLEMING FUND. Through the bequest of Susie Fleming, $150 from the income of this fund is available annually for scholarships for worthy and needy students in the School of Medicine.

THE ALINE RIXMAN LOAN FUND. Provided through the gift of William Rixman, the fund is used to alleviate unexpected financial emergencies that arise among medical students during the academic year. The fund is available to any student who, in the judgment of the Dean, gives promise of becoming a competent physician. It is expected that loans will be repaid within a reasonable time after the student has finished his training. The loans are granted by the Chancellor on the recommendation of the Dean.

THE W. MCKIM MARRIOTT SCHOLARSHIP AWARD, instituted in memory of Dr. W. McKim Marriott, Dean and Professor of Pediatrics, by Dr. C. V. Mosby for the C. V. Mosby Co., entitles the holder to an award of $500, which provides partial tuition for the recipient in the School of Medicine. The scholarship is awarded annually, preferably to a deserving young man who shows promise in the field of pediatrics. The award is made by the Chancellor on the recommendation of the Dean and the Professor of Pediatrics.

W. K. KELLOGG FOUNDATION SCHOLARSHIP AND LOAN FUND. A generous gift has been made to this and other universities by the W. K. Kellogg Foundation to provide financial assistance to well-qualified medical students in need of such aid. A limited number of scholarships and loans are available from this fund.

THE G. H. REINHARDT MEMORIAL SCHOLARSHIP FUND. Through the bequest of G. H. Reinhardt, an amount of not more than $400 each year is available to deserving students during their second year. No more than $100 shall be loaned to any one student. The loans are granted by the Chancellor on the recommendation of the Dean.
THE AUGUST F. HENKE FUND. Through the bequest of August F. Henke, $200 is available for aid to medical students. The scholarships or loans are granted by the Chancellor on the recommendation of the Dean.

JOSEPH H. SCHARF SCHOLARSHIP. Through the bequest of Dr. Joseph H. Scharf, the annual income from $2,418.72 is available for scholarships for worthy and needy students in the School of Medicine. The scholarships are awarded by the Chancellor on the recommendation of the Dean.

STUDENT ASSISTANTSHIPS are available in a number of departments in the School. Information concerning these may be obtained from the heads of the departments concerned.

Applications for all fellowships, scholarships, and assistantships may be made to the Dean. The awards are made by the Chancellor on the recommendation of the Dean.
DIVISION OF AUXILIARY MEDICAL SERVICES

Washington University School of Medicine and its affiliated hospitals offer courses in the following subjects:

- Hospital Administration
- Occupational Therapy
- Orthoptic Technology
- Physical Therapy
- Medical Technology
- Dietetics
- Anesthesiology
- X-ray Technology

The fees for certain courses in this division follow.

**Hospital Administration**

- Tuition (academic year) $525.00
- Tuition (clinical year) 200.00
- Student Health Fee (academic year) 40.00
- Graduation Fee 10.00
- Late Registration Fee 5.00

**Occupational Therapy**

*Candidates for B.S. degree*

- Tuition (two academic years) Per year 525.00
- Student Health Fee (two academic years) Per year 40.00
- Tuition (clinical year) Per year 100.00
- Late Registration Fee 5.00

*Advanced Standing Course*

- Tuition (academic year) 525.00
- Student Health Fee (academic year) 40.00
- Tuition (clinical year) 100.00
- Late Registration Fee 5.00

*Special Course*

- Tuition (one semester) 262.50
- Student Health Fee (one semester) 20.00
- Tuition (clinic training) Per month 10.00
- Late Registration Fee 5.00
Physical Therapy

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
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</thead>
<tbody>
<tr>
<td>Tuition (three semesters)</td>
<td>Per semester</td>
</tr>
<tr>
<td>Student Health Fee (three semesters)</td>
<td>Per semester</td>
</tr>
<tr>
<td>Tuition (clinical training, one semester)</td>
<td>Per semester</td>
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<tr>
<td>Late Registration Fee</td>
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</table>

X-ray Technology

<table>
<thead>
<tr>
<th>Service</th>
<th>Fee</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tuition (academic year)</td>
<td>Per year</td>
</tr>
<tr>
<td>Student Health Fee (academic year)</td>
<td>Per year</td>
</tr>
<tr>
<td>Late Registration Fee</td>
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</tbody>
</table>

Information concerning these courses may be obtained from the Registrar of the School of Medicine, 660 South Kingshighway, St. Louis 10, Missouri.

DIVISION OF POSTGRADUATE STUDIES

Washington University does not have a separate Graduate School of Medicine, but postgraduate educational programs are conducted by the School of Medicine, and graduate courses leading to a master's and a doctorate degree are offered by the Graduate School of Arts and Sciences. For further information, write the Assistant Dean, Division of Postgraduate Studies, Washington University School of Medicine, St. Louis 10, Missouri.
THE SCHOOL OF MEDICINE—Robert A. Moore, M.D., Ph.D., Dean  
(660 South Kingshighway, St. Louis 10, Mo.)  
Four-year curriculum leading to the degree of Doctor of Medicine; postgraduate courses. Through the Division of Auxiliary Medical Services, instruction leading to the degrees of Master of Hospital Administration, Bachelor of Science in Occupational Therapy, and Bachelor of Science in Physical Therapy; courses in Orthoptic Technology and X-Ray Technology leading to certificates; in cooperation with Barnes Hospital, courses for Laboratory Technicians, Medical Dietitians, and Nurse Anesthetists leading to certificates.

THE SCHOOL OF DENTISTRY—Otto W. Brandhorst, D.D.S., Dean  
(4559 Scott Avenue, St. Louis 10, Mo.)  
Four-year curriculum leading to the degree of Doctor of Dental Surgery, and courses for graduate students who may or may not be candidates for the degree of Master of Science in one of the dental specialties.

THE SCHOOL OF NURSING—Louise Knapp, R.N., B.S., A.M., Director  
(416 South Kingshighway, St. Louis 10, Mo.)  
Three-year program leading to the diploma of Graduate Nurse; five-year program leading to the degree of Bachelor of Science in Nursing, as well as to the diploma. Advanced programs for graduate nurses leading to the degrees of Bachelor of Science and Master of Science in Nursing.

THE SCHOOL OF FINE ARTS—Kenneth E. Hudson, B.F.A., Dean  
Specialized four-year programs leading to the Certificate of Attainment or the degree of Bachelor of Fine Arts, in Painting, Sculpture, Illustration, Advertising Design, Fashion Illustration, Dress Design, Design, and the Crafts.

UNIVERSITY COLLEGE—Willis H. Reals, Ph.D., Dean  
An adult education and evening division offering a wide range of classes for students who are unable to attend during the day, including courses which lead to the degrees of Bachelor of Science and Bachelor of Science in Education.

THE SUMMER SCHOOL—Stephen C. Gribble, Ph.D., Director  
Courses from almost every division of the University, under the regular teaching staff, as well as special classes given by instructors who are invited to the campus for this purpose.

THE GRADUATE SCHOOL OF ARTS AND SCIENCES  
Carl Tolman, Ph.D., Dean  
Work leading to the degrees of Master of Arts and Doctor of Philosophy in departments of the College of Liberal Arts, the School of Medicine, and, for the Ph.D. only, in the Schools of Engineering and Business and Public Administration; graduate professional degrees of Master of Arts in Education, Master of Science in Health and Physical Education, Master of Science in Counseling and Personnel, Master of Science in Speech and Hearing, and Doctor of Education.

THE SEVER INSTITUTE OF TECHNOLOGY  
Lawrence E. Stout, Ph.D., Ch.E., Director  
The graduate division of the School of Engineering, offering instruction leading to the degrees of Master of Science in Engineering and Doctor of Science in Engineering.