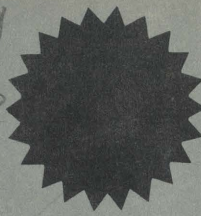


N.S. McDowell



**CALENDAR
1963-1964**

May 30, 1963

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Indiana University Bulletin

SCHOOL OF DENTISTRY

INDIANA UNIVERSITY BULLETIN

(OFFICIAL SERIES)

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Vol. LXI, No. 12 Bloomington, Indiana May 30, 1963

Calendars

Dental School

First Semester, 1963-64

September 9-11.....	Monday-Wednesday.....	Radiology Orientation for Juniors
September 12-13.....	Thursday-Friday.....	Radiology Orientation for Second Year Hygienists
September 12-13-16.....	Thursday, Friday, Monday	Freshman Orientation
September 13-16.....	Friday, Monday.....	Graduate Registration and Student Conferences
September 16.....	Monday.....	Registration (clinics open)
September 17.....	Tuesday.....	Classes begin
October 4-5.....	Friday-Saturday.....	Dental Alumni Days (classes will meet)
November 27.....	Wednesday 12 noon.....	Thanksgiving recess begins (clinics closed during recess)
December 2.....	Monday 8 a.m.....	Thanksgiving recess ends
December 20.....	Friday 5 p.m.....	Christmas recess begins (clinics closed during recess)
January 6.....	Monday 8 a.m.....	Christmas recess ends
January 20.....	Monday.....	Examinations begin
January 24.....	Friday.....	Semester ends

Second Semester, 1963-64

January 31.....	Friday.....	Graduate registration
February 3.....	Monday.....	Classes begin (undergraduate preregistration January 20-24)
March 24.....	Tuesday 5 p.m.....	Spring recess begins (clinics closed during recess)
March 30.....	Monday 8 a.m.....	Spring recess ends
May 25.....	Monday.....	Examinations begin
May 29.....	Friday.....	Second semester ends
June 8.....	Monday.....	Commencement

Bloomington Campus

First Semester

1962-63

1963-64

New student meeting—		
Junior Division.....	Sept. 10, M, 8 a.m.....	Sept. 9, M, 8 a.m.
New student meeting—		
transfer and graduate.....	Sept. 11, T, 8 a.m.....	Sept. 10, T, 8 a.m.
Counseling.....	Sept. 11-13, T-Th.....	Sept. 10-12, T-Th
Registration.....	Sept. 14, 15; F, S.....	Sept. 13, 14, F, S
Classes begin.....	Sept. 17, M, 7:30 a.m.....	Sept. 16, M, 7:30 a.m.
Mid-term reports due.....	Nov. 2, F, 5 p.m.....	Nov. 1, F, 5:20 p.m.
Thanksgiving recess begins.....	Nov. 21, W, 5:20 p.m.....	Nov. 27, W, 5:20 p.m.
Thanksgiving recess ends.....	Nov. 26, M, 7:30 a.m.....	Dec. 2, M, 7:30 a.m.
Christmas recess begins.....	Dec. 21, F, 5:20 p.m.....	Dec. 20, F, 5:20 p.m.
Christmas recess ends.....	Jan. 3, Th, 7:30 a.m.....	Jan. 6, M, 7:30 a.m.
Classes end.....	Jan. 11, F, 5:20 p.m.....	Jan. 16, Th, 5:20 p.m.
Examinations begin.....	Jan. 14, M, 7:30 a.m.....	Jan. 18, S, 7:30 a.m.
Examinations end.....	Jan. 21, M, 5:20 p.m.....	Jan. 25, S, 5:20 p.m.

Second Semester

1962-63

1963-64

New student meetings.....	Jan. 22, T.....	Jan. 28, T
Counseling.....	Jan. 23, 24; W, Th.....	Jan. 29, 30, W, Th
Registration.....	Jan. 23, 26; F, S.....	Jan. 31, Feb. 1, F, S
Classes begin.....	Jan. 28, M, 7:30 a.m.....	Feb. 3, M, 7:30 a.m.
Mid-term reports due.....	March 13, F, 5 p.m.....	Mar. 20, F, 5 p.m.
Spring recess begins.....	April 10, W, 5:20 p.m.....	Mar. 20, F, 5:20 p.m.
Spring recess ends.....	April 18, Th, 7:30 a.m.....	Mar. 30, M, 7:30 a.m.
Founders' Day*.....	May 1, W.....	May 6, W
Senior Class Day†.....	May 10, F.....	May 15, F
Classes end.....	May 17, F, 5:20 p.m.....	May 21, Th, 5:20 p.m.
Examinations begin.....	May 20, M, 7:30 a.m.....	May 23, S, 7:30 a.m.
Examinations end.....	May 27, M, 5:20 p.m.....	May 30, S, 5:20 p.m.
Memorial Day holiday.....	May 30, Th.....	May 30, S
Commencement.....	June 3, M, 10 a.m.....	June 8, M, 10 a.m.

* 9:30, 10:30, 11:30, and 12:30 classes do not meet.

† Seniors excused from classes beginning at 12:30 p.m.

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Officers, Faculty, and Staff, 1962-63

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- ELVIS J. STAHR, JR., B.C.L., LL.D., President of the University.
- HERMAN B. WELLS, A.M., LL.D., Chancellor of the University; President of the Indiana University Foundation.
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- JOSEPH AMOS FRANKLIN, B.S., Vice-President, and Treasurer.
- JOHN WILLIAM ASHTON, Ph.D., LL.D., Vice-President for Graduate Development, and Dean of the Graduate School.
- SAMUEL EDWARD BRADEN, Ph.D., Vice-President, and Dean for Undergraduate Development.
- CHARLES EDWIN HARRELL, LL.B., Registrar, and Director of the Office of Records and Admissions.
- MAYNARD KIPLINGER HINE, D.D.S., M.S., Dean of the School of Dentistry; Chairman of Graduate Dental Education.
- CHARLES LEROY HOWELL, D.D.S., M.P.H., Assistant Dean of the School of Dentistry.
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D.D.S., Northwestern University, 1934.
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A.B., DePauw University, 1947; M.S., Yale University, 1948; D.D.S., Indiana University, 1954; M.S.D., 1960.
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- WILLIAM HENRY RIFFLE, Instructor in Crown and Bridge and Partial Denture.
B.S. in Dent., Indiana University, 1952; D.D.S., 1955.
- JOHN R. RISCH, Instructor in Prosthetics.
D.D.S., Indiana University, 1951.
- JAMES RICHARD ROCHE, Instructor in Pedodontics.
D.D.S., Indiana University, 1947.
- CARL FREDERICK ROTHE, Assistant Professor of Physiology (School of Medicine).
B.Sc., Ohio State University, 1951; M.Sc., 1952; Ph.D., 1955.
- RUSSELL ANTHES SAGE, Associate Professor of Otorhinolaryngology, and Special Lecturer in Dentistry (School of Medicine).
B.S., Indiana University, 1926; M.D., 1928.
- GLEN OSCAR SAGRAVES, Director of Clinics, and Assistant Professor of Oral Diagnosis.
B.S., Indiana State College, 1950; D.D.S., Indiana University, 1958.
- HARVEY SARNER, Lecturer in Jurisprudence.
B.S., University of Minnesota, 1958; LL.B., 1959.
- MARVIN GEORGE SCHMIDT, Instructor in Operative Dentistry.
B.S., Purdue University, 1956; D.D.S., Indiana University, 1960.
- RICHARD JOHN SCHNELL, Instructor in Dental Materials.
A.B., Washington University, 1941; D.D.S., St. Louis University, 1946; M.S., Indiana University, 1958.
- WILLIAM F. SCHULTZ, Intern in Oral Surgery.
A.B., Indiana University, 1959; D.D.S., 1962.
- JORDAN LEE SCULL, Instructor in Crown and Bridge and Partial Denture.
B.S. in Dent., Indiana University, 1952; D.D.S., 1955.
- EWALD ERDMAN SELKURT, Chairman, and Professor of Physiology (School of Medicine).
A.B., University of Wisconsin, 1937; A.M., 1939; Ph.D., 1941.
- WILLIAM GENE SHAFER, Chairman, and Professor of Oral Pathology.
B.S., University of Toledo, 1947; D.D.S., Ohio State University, 1947; M.S., University of Rochester, 1949.
- ROBERT HOWARD SHELLHAMER, Associate Professor of Anatomy (School of Medicine).
A.B., Temple University, 1947; A.M., Ohio State University, 1948; Ph.D., 1952.
- EDWARD WHITE SHRIGLEY, Chairman, and Professor of Microbiology (School of Medicine).
B.S., Iowa State College of Agriculture and Mechanic Arts, 1932; M.S., 1933; A.M., Harvard University, 1934; Ph.D., University of Wisconsin, 1937; M.D., 1941.
- JAMES AARON SHUPE, Intern in Pedodontics.
D.D.S., Indiana University, 1962.
- GEORGE WILLIAM SIMPSON, Instructor in Prosthetics.
A.B., Indiana University, 1942; D.D.S., 1944.

- REUBEN ALBERT SOLOMON, Clinical Professor of Medicine (School of Medicine).
B.S., Indiana University, 1915; M.D., 1917.
- LEWIS BENSON SPEAR, Teaching Associate.
B.S., Butler University, 1953; D.D.S., Indiana University, 1960.
- ROBERT H. SPEDDING, Teaching Associate in Pedodontics.
A.B., Indiana University, 1953; D.D.S., 1960.
- WILLARD CONKLING STAMPER, Assistant Professor of Oral Diagnosis.
D.D.S., Indiana University, 1937.
- SAMUEL MILES STANDISH, Chairman, Division of Clinical Oral Pathology, and Associate Professor of Oral Pathology.
D.D.S., Indiana University, 1945; M.S., 1956.
- PAUL EDWARD STARKEY, Chairman of the Division of Clinical Pedodontics, and Associate Professor of Pedodontics.
D.D.S., Indiana University, 1943.
- VERGIL KENNETH STOELTING, Chairman, and Professor of Anesthesiology (School of Medicine).
B.S., Indiana University, 1936; M.D., 1936.
- MORRIS MEYER STONER, Clinical Professor of Orthodontics.
D.D.S., Indiana University, 1942; M.S., 1947.
- WILLIAM ALLEN SUMMERS, Associate Professor of Microbiology (School of Medicine).
A.B., University of Illinois, 1935; M.S., 1936; Ph.D., Tulane University of Louisiana, 1940.
- MARJORIE LOUISE SWARTZ, Assistant Professor of Dental Materials.
B.S., Butler University, 1946; M.S., Indiana University, 1959.
- HENRY MAURICE SWENSON, Chairman, Division of Clinical Periodontics, and Associate Professor of Periodontics.
B.S., University of Illinois, 1941; D.D.S., 1942.
- ROBERT EUGENE TARPLEE, Assistant Professor of Oral Diagnosis.
D.D.S., Indiana University, 1952; M.S.D., 1960.
- VAROUJAN TCHALIAN, Instructor in Prosthetic Dentistry.
B.S., Armenian College of Beirut, 1945; D.D.S., École de Chirurgie Dentaire et de Stomatologie de Paris (France), 1955.
- RICHARD V. THOMPSON, Instructor in Operative Dentistry.
D.D.S., Indiana University, 1961.
- JACKSON DEAN TODD, Consultant in Oral Surgery.
A.B., Indiana University, 1951; D.D.S., 1955.
- SVERKER TORESKOG, Graduate Assistant in Crown and Bridge and Partial Denture.
D.D.S., Royal School of Dentistry (Sweden), 1960.
- CARLA JEAN TOTTEN, Instructor in Dental Hygiene.
Certificate in Dental Hygiene, Indiana University, 1955; R.D.H., 1955.
- LEWIS JAMES URSCHER, Consultant in Oral Surgery.
B.S., Indiana University, 1955; D.D.S., 1958.
- GRANT VAN HUYSEN, Chairman, and Professor of Oral Anatomy.
D.D.S., University of Pennsylvania, 1925.
- JEANE THAYER WALDO, Clinical Professor of Oral Surgery.
B.S., Franklin College of Indiana, 1922; D.D.S., Indiana University, 1925; B.S., 1932; M.D., 1934.

ROBERT CLARENCE WALLS, Instructor in Crown and Bridge and Partial Denture.

D.D.S., Indiana University, 1959.

RICHARD CURTIS WEBSTER, Associate Professor of Anatomy (School of Medicine).

A.B., University of Louisville, 1938; M.S., 1940; Ph.D., University of Kansas, 1949.

JOE GORDON WHITE, Assistant Professor of Prosthetic Dentistry.

D.D.S., Indiana University, 1946.

ROBERT J. WITHAM, Graduate Assistant in Operative Dentistry.

D.D.S., Indiana University, 1962.

OFFICIAL ASSISTANTS

LYNN BINKLEY, Chief Accountant.

(Mrs.) CLEONA HARVEY, Administrative Assistant, and Recorder.

PAUL D. JACKSON, B.S.C.E., Superintendent of Buildings and Grounds.

GERTRUDE KATZENBERGER, Office Manager, and Cashier, Main Clinic.

JAMES ROBERT NEEL, B.S., Purchasing Agent.

RICHARD CLIFTON SCOTT, Division of Dental Art.

ROBERT MARTIN TIRMENSTEIN, B.S. in Bus., Personnel Director.

MARC G. WAGGENER, Editor, News Bureau.

(Mrs.) MABEL WALKER, Dental Librarian.

FACULTY COMMITTEES

ADMINISTRATION—Dean Hine (Chairman), Drs. Andrew, Bailey, Beamer, Beck, Bowman, Boyd, Burstone, Miss Fisk, Drs. Gilmore, Healey, Howell, Johnston, McDonald, Mitchell, Muhler, Professor Phillips, Drs. Ping, Segraves, Selkurt Shafer, Shrigley, Swenson, Van Huysen, Mrs. Harvey, Mrs. Chilton (Secretary).

ADMISSIONS—Dean Hine (Chairman), Drs. Bailey, Boyd, McDonald, Professor Phillips, Mrs. Harvey (Secretary).

ADVISORY—Dr. Howell (Chairman), Drs. Boyd, Johnston, McDonald, Professor Phillips, Mrs. Harvey (Secretary).

APTITUDE TESTING—Dr. McDonald (Chairman), Drs. Cunningham, Hohlt, Howell, Misselhorn, Schnell, Starkey.

COOPERATION WITH ALUMNI—Dr. Healey (Chairman), Drs. Gilmore, Gregory, Hohlt, Howell, Muhler, Professor Phillips (Editor, *Bulletin*).

CURRICULUM—Drs. Bailey, Healey, Hine, Howell, Johnston, McDonald (Chairman), Muhler, Shafer, Swenson.

EXHIBITS—Dr. Howell (Chairman), Drs. Boyd, McDonald, Mitchell, Professor Phillips, Drs. Van Huysen, White, Mr. Scott.

GRADUATE INSTRUCTION—Dean Hine (Chairman), Dr. Muhler (Secretary), Drs. Baldwin, Bixler, Burstone, Gilmore, Hansen, Healey, Howell, Johnston, McDonald, Mitchell, Professor Phillips, Drs. Shafer, Van Huysen.

INSTRUMENTS—Dr. Segraves (Chairman), Drs. Bailey, Boyd, Healey, Johnston.

LIBRARY—Dean Hine, Dr. Van Huysen (Chairman), Drs. Dykema, McDonald, Mitchell, Shafer, Mrs. Walker (Librarian).

LOANS—Professor Phillips (Chairman), Drs. Hohlt, Mitchell, Hine ex officio.

POSTGRADUATE INSTRUCTION—Professor Phillips (Chairman), Dr. Howell (Secretary), Drs. Cunningham, Gilmore, Johnston, Ping, Starkey.

PROMOTIONS—Includes all instructors of each class. Freshman Class, Dr. Boyd; Sophomore Class, Dr. Derry; Junior Class, Dr. McDonald; Senior Class, Dr. Sagraves.

REFRESHER COURSES AND SYMPOSIA—Dr. Johnston (Chairman), Drs. Bailey, Bogan, Gregory, Howell, McDonald, Mitchell, Mrs. Chilton (Secretary).

RESEARCH—Professor Phillips (Chairman), Drs. Hine, Mitchell, Muhler, Shafer.

STUDENT AFFAIRS—Dr. Gilmore (Chairman), Dr. Howell (Co-chairman), Drs. Boyd, Healey, Hohlt, Mitchell, Miss Fisk.

THERAPEUTICS—Drs. Gilmore, Healey, Mitchell, Ping (Chairman), Starkey, Swenson.

General Information

Indiana University. By every measure of strength among modern universities, Indiana University ranks near the top. It is old enough (founded in 1820) to have great stability and great traditions. It is large enough (tenth in the nation) to offer a breadth of instruction seldom equaled. Yet, through a carefully organized system of counseling, it gives personal and individual attention to each student.

The Indiana faculty, including scholars of national and international reputation, offers instruction and training in research in hundreds of subjects. The University libraries, which include some of the nation's most important collections in a number of fields, contain more than 4,000,000 pieces.

On all its campuses, Indiana University has sought to preserve the informality and friendliness of a small school. As the result, no student becomes "lost" in the transition from high school to university. This has been accomplished through the successful faculty-student counseling program of the Junior Division (the "academic home" of all freshmen) and the individualized programs in all the dormitories.

More than twenty different offices at Indiana University provide services designed to give each student individual attention. These include aid in acquiring correct study and reading habits, health care, planning for special courses of study, part-time employment, student loans and scholarships, aid in finding accommodations, and job placement service on graduation.

Since Indiana University is composed of several different schools or divisions, students receive a wide variety of opportunities for study and training. These areas cover the fields of the allied health sciences; arts and sciences; business; dentistry; education; health, physical education, and recreation; law; library science; medicine; music; nursing; optometry; and social service.

The College of Arts and Sciences has one of the largest enrollments and faculties of any college in Indiana. The School of Business, by national ranking, is a leader in a wide variety of business training courses. The School of Music is outstanding among such schools at state universities. A large percentage of the administrators and teachers in the state's public school system has been trained in the School of Education. The School of Health, Physical Education, and Recreation offers many new courses in the expanding field of health and recreation. Through the facilities of the Medical Center at Indianapolis, the School of Medicine (fourth in enrollment), the School of Dentistry, and the School of Nursing offer exceptional opportunities for training. The School of Law, both at Bloomington and at Indianapolis, is recognized as outstanding. The Division of Allied Health Sciences offers several programs leading to degrees in the various fields associated with medicine and dentistry. The Division of Optometry and the Division of Library Science offer the only accredited programs in Indiana leading to degrees in the fields of optometry and library science.

The Graduate School at Indiana attracts scholars from hundreds of other institutions, both in the United States and abroad. Specialized study is available on the highest academic levels and in all major fields of study.

Though Bloomington is a small city, Indiana University is able to provide cultural advantages seldom duplicated in metropolitan areas. These include outstanding symphony orchestras, world-famous musicians and lecturers, Broadway dramatic and musical productions, ballet, etc. Many students enjoy participating in the activities of the more than forty musical units on the campus, including the philharmonic orchestra, band, chorus, and many other smaller ensembles. Others become interested in the programs of the campus publications such as the daily newspaper, or in the self-government groups, religious organizations, and the many hobby clubs.

Within easy driving distance from the Bloomington Campus are immense state forest preserves and three state parks, which are available for recreational purposes. The campus itself is famous for its natural beauty, as is the southern Indiana area in which the University is located. Extensive space on the campus is provided for outdoor and indoor sports and games.

Housing for students has been a major undertaking of the University. Dormitories, with accommodations available at a wide range of prices, are provided for more than half of the students enrolled. The buildings are modern and include facilities which offer opportunities for comfort beyond the average "room and board."

Indiana University is constituted by law as the head of the state's public school system. It is supported by the people of Indiana, who have always been alert to the finest in educational opportunities. The University has not been content to rest on past attainments. Perhaps that is one reason why it is one of the fastest growing universities among the thirty largest and best American institutions.

School of Dentistry. Indiana University School of Dentistry is a professional school for men and women, offering a four-year curriculum leading to the degree Doctor of Dental Surgery. It is located at 1121 West Michigan Street, Indianapolis, Indiana, and is an integral part of Indiana University's Medical Center. The School of Dentistry is a member of the American Association of Dental Schools and is fully accredited by the Council on Dental Education of the American Dental Association.

Requests for information on dental education should be directed to the Indiana University School of Dentistry, 1121 West Michigan Street, Indianapolis, Indiana, 46202. Information may be obtained at the main office of the School of Dentistry at any time between 9 a.m. and 5 p.m., Monday through Friday.

The curriculum for the School of Dentistry is presented on the Medical Center Campus in Indianapolis. Students will gain their educational experiences, not only in the Dental School Building, but also in the Medical Science Building and in the hospitals on the Medical Center Campus.

Opportunities in Dentistry. Study of modern social trends in the United States indicates that there will be an increased demand for dental service in the next generation. Young men and women who are ready to choose a vocation now should be advised to consider a career in dentistry, since dentistry has much to offer the individual who elects to study and practice it. The dentist has the satisfaction of knowing his services contribute to the health, comfort, and appearance of his patients, for dentistry has proved itself as an important health service. It is true that dentists do not generally become wealthy, but they are reasonably assured of an adequate, dependable income, and a respected place in community life. Usually the dental practitioner may regulate his working hours, and in many ways he enjoys a greater independence than persons in most vocations.

The general practitioner of dentistry is trained to care for a variety of oral diseases, and he finds that each patient presents a different problem in diagnosis and treatment. Most dentists engage in general practice, but there are several recognized specialties in the field of dentistry. For example, the orthodontist is trained to prevent and correct malpositions of teeth, the periodontist to care for diseases of the soft tissues of the mouth, the pedodontist to care for the dental problems of children, the exodontist to extract teeth, the oral surgeon to care for the more complex surgical procedures required in the oral cavity, the endodontist to treat infected root canals of teeth, the prosthodontist to restore lost teeth, and the restorative dentist to replace parts of teeth lost by decay. In addition to these specialties, there is a need for dentists in public health, in the Dental Corps of the U.S. Army, Navy, and Air Force, in the Veterans Administration, in research, and in teaching.

To those young men and women who are interested in scientific courses, those who have an interest in developing exacting technical skills, and those who sincerely desire to serve in one of the health professions, dentistry has much to offer.

History and Description. Dental education in Indiana began when the Indiana Dental College was organized in 1879 by a group of members of the Indiana State Dental Association in accordance with an agreement with the Indiana General Assembly of that year, which had passed the first law covering the practice of dentistry in Indiana. The Indiana Dental College was the ninth dental school to be organized in America and it has successfully offered a program in dental education since that time. Graduates are to be found practicing in almost all civilized countries and in every state in the United States.

On June 1, 1925, by act of the Indiana legislature, the College was purchased by the state and became Indiana University School of Dentistry. In 1934, the present well-equipped Dental School Building was erected. In 1940 the freshman year was moved to Bloomington where it remained until 1958 when it was transferred back to the Medical Center Campus in Indianapolis. In the academic year 1961-62 the School of Dentistry had a total registration of approximately 492 students.

The Indiana University Medical Center consists of the School of Medicine, the School of Dentistry, the School of Nursing, the Robert W. Long Hospital, the James Whitcomb Riley Hospital for Children (including the Kiwanis Wing), the Rotary Building, the Clinical Building, the William H. Coleman Hospital for Women, the Union Building, and the new Medical Science Building. Located adjacent to the Medical Center are Marion County General Hospital, Veterans Hospital, and the LaRue D. Carter Memorial Hospital. Such a situation is ideal for the study of dentistry. Students in the School of Dentistry are admitted to all of the University hospitals for training and observation in hospital procedure.

Clinics. The facilities for clinical material at the School of Dentistry are excellent. Patients are drawn from a population, including nearby towns connected with Indianapolis, of about 750,000 people.

The variety of cases that present themselves is almost unlimited. Every student in the School has abundant opportunities offered to perfect his technique in placing gold, amalgam, resinous, and silicate cement fillings, porcelain and gold inlays, crown and bridge work, partial and full dentures, root canal treatment and filling, radiographic technique, and to study the various pathological conditions that present themselves during the conduct of a dental practice. The dental clinics are open five days a week and are constantly under the supervision of competent instructors.

Hospital patients are available for study in the Long Hospital and the Riley Hospital for Children to allow the student to study hospital procedures and care of patients in the various departments of the hospitals.

The Library of the School of Dentistry. The library, located in the west wing on the first floor of the School of Dentistry Building, contains almost 60,000 items, of which about 20,000 are texts and volumes of periodicals embracing all the fields of dentistry and the essential fields in the allied sciences, including medicine. The library currently receives 486 periodicals covering these subjects. Numerous gifts of books and periodicals are received from graduates and friends of the School. Many of the periodicals help to complete volumes for binding. The library is gradually accumulating a collection of rare dental books, using as a nucleus the small collection owned by the School since the deanship of the first dean, Dr. Phineas G. C. Hunt. Memberships are maintained in the American Library Association, the Indiana Library Association, the Medical Library Association, and the Special Libraries Association.

The library is open from 8 a.m. to 8 p.m., Monday and Wednesday, and from 8 a.m. to 5 p.m., Tuesday, Thursday, and Friday. The staff, which consists of two professional librarians (one part time), and three full-time assistants, functions under the direction of the University Library on the Bloomington Campus and a committee composed of the Dean and five additional members of the faculty of the School of Dentistry. Dental students also have access to the excellent medical library in the Medical Science Building.

Predental Students on the Bloomington Campus. For the convenience of these students the dental school Recorder (Mrs. Cleona Harvey) visits the Bloomington Campus periodically, usually on the first Thursday in each month. Predental students interested in discussing their academic programs should watch the information column or notices in the *Indiana Daily Student* for specific dates, or should go to Room 104 of Kirkwood Hall or call 337-1821 to arrange a specific appointment. An appointment may also be arranged with Dr. Maynard K. Hine, Dean of the School of Dentistry, or Dr. Joseph C. Muhler, Secretary of the Dental Graduate School, since both visit the campus almost weekly.

Living Expenses at Bloomington. Room and meals in the Halls of Residence, Bloomington Campus vary from \$317.50 to \$450 a semester. Rates for married students vary from \$50 a month for a trailer to \$114.50 a month for a two-bedroom furnished apartment, according to type. Cooperative housing is available to women at \$70 a semester, for a room only. Rooms in private residences may be obtained at an average price a semester of \$117 double to \$135 single. Meals are available at nearby restaurants or at the Indiana Memorial Union.

Living Expenses at Indianapolis and Living Facilities on the Medical Center Campus. Students will find living expenses fairly reasonable in Indianapolis but it is well to keep in mind that costs are greater than in smaller communities.

In the Union Building the University provides 20 one-bedroom furnished apartments for students, residents, and interns who are married and for single and married staff persons. Bachelor quarters for residents and interns and double room facilities for single staff persons and graduate students are also provided in the Union Building. The Single Student Dormitory, which is adjacent to and connects directly with the Union, furnishes housing for 245 male and female students. Winona Village, a temporary housing project, offers facilities for 71 single men and 42 unfurnished two-bedroom apartments for married couples with children. The Warthin Apartment building also provides 105 accommodations for married students, residents, and interns in efficiency and one-bedroom units both furnished and unfurnished.

Information about rooms and apartments in private homes for single men and women and housing for married couples throughout the city is available in the Medical Center Housing Office (located in the Warthin Apartment building) where off-campus rental information file is maintained. Payment for room in University facilities for single persons is made by the month or by the semester depending upon the particular building to which an individual is assigned. Rates for all single and married accommodations on campus are subject to change by action of the Board of Trustees.

The average gross amount of money spent by dental students is largely regulated by the spending habits of the individual. A considerable percentage of students earn their board and lodging outside

of school hours. This is desirable only when absolutely necessary, as the school work should be the first and greatest interest in the life of the student.

The University cooperates with several banks which have established finance plans for students. These plans generally provide that the bank will advance the major portion of a student's expenses each year, with repayment being made to the bank in equal monthly installments over a more extended period. More complete information may be obtained by contacting the Chief Accountant on the Medical Center campus.

Fees. Predental: All predental students registered in the Junior Division or in the College of Arts and Sciences, if they are legal residents of the state of Indiana, are charged a basic fee of \$10 a credit hour. Predental students who are not legal residents of the state of Indiana and who are registered in the above schools are charged a basic fee of \$23.50 a credit hour. The average amount of work carried by predental students is fifteen credit hours a semester.

Dental: Since July 15, 1962, all applicants to Indiana University have been required to pay an application processing fee of \$10. This fee is paid only once, is not refundable, and is not applied to other fees. Students applying for admission to the dental school who have never attended Indiana University as a regularly admitted student (on the Bloomington Campus or at one of the regional campuses) will be required to pay this fee. A money order or check should be sent in a special envelope provided for this purpose. Students who have registered with Indiana University since July 15, 1962, will have paid this fee and will not be required to pay it again.

Basic fees for resident students in the School of Dentistry are \$250 a semester. All students who are not legal residents of the state of Indiana will be charged a basic fee of \$500 a semester.

An advance payment of \$25 on fees is required after a student has been accepted. This advance payment is not returnable. The fee for a D.D.S. degree, payable thirty days prior to graduation, is \$5. If a duplicate diploma is issued, a fee of \$5 will be charged.

Students should come prepared to pay fees, since students should not be admitted to class until fees are paid. In case a student is compelled to postpone his work or withdraw, the fees will be returnable in full if such action is taken within seven days after registration.

See page 61 regarding fees and expenses for dental hygienists.

Fees are subject to change by action of the Board of Trustees.

Refunds: A student who withdraws may, within five days after withdrawal, upon presenting the proper withdrawal notice at the Cashier's Office, procure the following refund:

Withdrawal during first or second semester: 100 per cent refund if withdrawal occurs during first week of school; 75 per cent during second week; 50 per cent during third week; 25 per cent during fourth week and no refund thereafter.

Withdrawal during summer session: 100 per cent refund if withdrawal occurs during first week of school; 50 per cent during second week and no refund thereafter.

Breakage, etc.: Breakage, damage, and loss of school property must be paid for by the student or students at fault. In case they are not known, it will be charged against the entire class or student body. The School will not be responsible for the loss of any personal property belonging to any student, whether by theft, fire, or unknown cause; however, each student is provided with a steel locker.

General Expenses. Books for the four years will cost approximately as follows: freshman year, \$175; sophomore year, \$90; junior year, \$90; senior year, \$25.

Instruments required for the education of a dental student are quite costly, but many of them can be used after graduation if the student exercises care. The approximate cost of the instruments is as follows: freshman year, \$300; sophomore year, \$650; junior year, \$250; senior year, \$20. The instruments are purchased from the School of Dentistry.

Health Service. The Indiana University Medical Center provides a student health service for students of the Schools of Medicine and Dentistry, the course for laboratory technicians, the Normal College of the American Gymnastic Union, and the Division of Social Service. The service is designed to promote the general health of students by offering complete clinical and laboratory examinations, dispensary or infirmary care for minor illnesses, and limited hospital care for major illnesses or surgical procedures. The cost is included in the regular fee.

Honor Fraternity. The national dental honorary fraternity, Omicron Kappa Upsilon, is represented by the component chapter of Theta Theta with Professor Ralph W. Phillips, President, Dr. Joseph C. Muhler, President-Elect, Dr. Charles L. Howell, Vice-President, and Dr. Richard W. Norman, Secretary-Treasurer. Membership in this fraternity is voted annually by the faculty members to 12 per cent of the graduating class, and the key, which is symbolic of the fraternity, is awarded to each newly-elected member. This election is based upon the merit of the individual student, and all nominations are made from those who rank in the upper one-third of the class.

Fraternities. Four national Greek letter dental fraternities for undergraduates have chapters in the School. They are: Alpha Omega, Delta Sigma Delta, Psi Omega, and Xi Psi Phi. Some of these fraternities maintain their own fraternity houses, which offer room and board to their members. They are under the general control of an interfraternity council.

Student American Dental Association. Under the auspices of the American Dental Association and the faculty, a chapter of student members of the American Dental Association has been organized; the S.A.D.A. is a fully recognized association to which all students in the School of Dentistry are eligible. In their meetings, this chapter considers problems incident to their coming graduate experiences based on the principles established for the guidance and government of the American Dental Association. All members of this group

automatically become members of the American Dental Association upon graduation from this institution. Drs. Charles Howell and H. William Gilmore are student advisers.

Alumni Association. Through the formation of the Indiana University School of Dentistry Alumni Association many privileges have been offered to Indiana University graduates practicing in the state. Each alumnus of the School of Dentistry automatically becomes a member of this Association. In 1962-63, Dr. Robert Peden was President and Dr. Malcolm Boone was Secretary-Treasurer.

Alumni Bulletin. The School of Dentistry has a semiannual publication called the *Alumni Bulletin*. The purpose of the *Bulletin* is to keep the alumni informed regarding the activities and progress of the School. The members of the Alumni Association receive the *Bulletin* without cost. Professor Ralph W. Phillips is the editor.

Student Loans. The School maintains a loan fund for students who would otherwise be unable to continue their dental education. The fund is available to students in the sophomore, junior, and senior years.

Lectures and Clinics. Members of the faculty are available for lectures and clinics before district and local dental societies and study clubs throughout the state.

Chaplain. The Medical Center Chaplain's Office is located in one of the cottages opposite the Dental School Building. Personal appointments may be scheduled at any time. The Resident Chaplain is Protestant; a Chaplain is available for students of each faith.

Requirements for Admission, Promotion, and Graduation

Application for Admission. It is desirable that candidates for the School of Dentistry make application before the beginning of the last semester of the academic year preceding that in which they wish to enter. It is not necessary for the applicant to complete the academic requirements before making application, although all requirements must be completed before final acceptance can be given.

Application blanks may be obtained from the Office of the School of Dentistry, 1121 West Michigan Street, Indianapolis, Indiana, 46202. Application blanks must be completely filled in and accompanied by an official transcript from *each college* attended. An aptitude test is required and a personal interview with the Committee on Admissions may be requested. Details concerning the aptitude test may be obtained from the Office of the Dean, or by writing to the American Dental Association, 222 East Superior Street, Chicago, Illinois. It should be emphasized that it is the responsibility of the student to take the aptitude test in ample time to allow the Committee on Admissions to include it in his record.

Requirements for Admission. All entrance credentials must be approved by the Committee on Admissions of the School of Dentistry. Applicants must present: (1) high school credentials which will satisfy requirements for admission to the Junior Division of Indiana University. Although no specific high school courses are required, except those in the usual college entrance courses, it is recommended that the prospective dental student elect economics, psychology, shop work (one unit), history, civics, or English in completing his college entrance requirements. (2) credentials of credit for at least sixty semester hours or at least ninety quarter hours of approved predental collegiate work. The college course must include at least two semesters of credit in English (minimum six hours), two semesters of biology or zoology, two semesters of general physics, two semesters of general chemistry, and a semester's credit in organic chemistry. All science courses must include both class and laboratory instruction. (3) credit points to equal at least twice the number of hours of credit (a C average). Other factors being equal, preferential consideration will be given to applicants who are residents of Indiana.

Suggested Predental Course. The predental collegiate training may be taken at any accredited college or university. Details of courses offered in the various accredited colleges may vary, so the college courses should be carefully considered when a program is planned, particularly in the field of science. All required science courses, for example, must always include lecture and laboratory, but might give hours of credit different from those indicated in the course as outlined by Indiana University and printed below. *Students should submit their proposed program to the Recorder of the School of Dentistry and have it approved early in their predental course to be certain*

that their program is adequate. A minimum of sixty hours of academic work is required for admission to the School of Dentistry. At Indiana University, and at many other universities, two hours of physical education and four hours of military training are required. Since these courses are not dental school requirements, however, they cannot be counted in the sixty hours of academic work required. Following is an outline of a program for pre dental courses:

FIRST YEAR

Hours	Hours
English Composition 2	English Composition 2
Zoology (Animal Biology) 5	Zoology (Animal Biology) 5
Inorganic Chemistry 5	Inorganic Chemistry 5
*Electives 5-6	*Electives 5-6
<hr/> 17-18	<hr/> 17-18

SECOND YEAR

Speech 2	Physics 5
Organic Chemistry 5	†Electives 11
Physics 5	<hr/> 16
†Electives 4	
<hr/> 16	

Students who have taken their pre dental work in other schools and desire to enter Indiana University School of Dentistry will be required to have their work evaluated to determine whether or not it has met the standards of admission. Following is the outline of the currently recommended program for pre dental students who are enrolled at Indiana University on the Bloomington Campus:

FIRST YEAR

Hours	Hours
English W131 2	English W132 2
Zoology Z103 5	Zoology Z215 5
Chemistry C105 5	§Mathematics M113 2
†§Mathematics M107 3	Chemistry C106 5
Military Training 1	Elective 2
Physical Education 1	Military Training 1
<hr/> 17	Physical Education 1
	<hr/> 18

SECOND YEAR

Speech S121 2	Physics P202 5
Chemistry C341 5	Electives 10
§Physics P201 5	Military Training 1
Electives 3	<hr/> 16
Military Training 1	
<hr/> 16	

* These electives must include prerequisites which may be required by the liberal arts college for organic chemistry and physics.

† This should include military training or physical education if required by the liberal arts college.

‡ In some instances mathematics M107 is prerequisite to Chemistry C105. The courses may be taken concurrently. Students who have had one year of high school algebra take M105; those with one and a half years of high school algebra take M107; those with two years of high school algebra should not take algebra in college.

§ Mathematics M107 (algebra) and M113 (trigonometry) or their high school equivalent are prerequisite to Physics P201.

The following courses are recommended as desirable electives for students attending Indiana University in Bloomington:

1. To take during first two years: Introductory Psychology I (Psychology P101), Introductory Laboratory Psychology I-II (Psychology P111-P112); Greek and Latin Elements in Medical Terminology (Classics C209); courses from Groups IV A and IV B listed under combined degrees (below); Public Speaking I-II (Speech S121-S122); General and Individual Hygiene (Anatomy and Physiology P304).

2. To take after completion of two years: foreign language, two semesters; General and Human Heredity (Zoology Z364); American Literature I-II-III (English L353-L354-L355).

Dental Course. Students register each September for the dental course which consists of eight separate semesters of sixteen weeks each. Details of the dental course are given in another section of this *Bulletin*. The degree conferred is Doctor of Dental Surgery.

Combined Academic and Dental Degrees. The faculties of the College of Arts and Sciences and of the School of Dentistry have approved a seven-year course in arts and dentistry leading to the degrees Bachelor of Science and Doctor of Dental Surgery. The following curriculum has been approved for those students who wish to obtain the B.S. degree and who will enter the School of Dentistry after six semesters (ninety-two semester hours) in the College of Arts and Sciences.

COMBINED DEGREE PROGRAM LEADING TO DEGREE B.S. IN DENTISTRY

FIRST YEAR (Predental)

	Hours		Hours
*Mathematics M107	3	†Mathematics M113	2
‡English W131	2	‡English W132	2
Zoology Z103	5	Zoology Z215	5
Chemistry C105	5	Chemistry C106	5
Military Training	1	Military Training	1
Physical Education	1	Physical Education	1
	<hr/> 17		<hr/> 16

SECOND YEAR (Predental)

Chemistry C341	5	Physics P202	5
*†Physics P201	5	‡Group IV A	3
‡Group IV A	3	‡Psychology P101	3
Military Training	1	Classics C209	2
Elective	2	Electives	2
	<hr/> 16	Military Training	1
			<hr/> 16

THIRD YEAR (Predental)

†Foreign Language	5	†Foreign Language	5
‡Group IV B	3	‡Group IV B	3
Electives	7	Electives	7
	<hr/> 15		<hr/> 15

* See footnotes for Mathematics M107 on preceding page.

† See footnotes for Mathematics M113 on preceding page.

‡ These courses are specifically required for the degree B.S. in Dentistry.

FOURTH YEAR (Dental)

Subjects included in Group IV A and IV B electives are listed below. Choice of electives taken should be approved by the Recorder of the School of Dentistry or the Dean of the College of Arts and Sciences.

The faculty of the College of Arts and Sciences has also approved a curriculum which shall include the foreign language and Group IV requirements leading to the A.B. degree, for students entering the School of Dentistry. This will ordinarily require that the student start his foreign language studies in the first semester of his sophomore year, postponing his Group IV A and IV B requirements until his junior year.

The courses of Group IV A are the following:

Anthropology: A103-A104, A303-A304
 Economics: E201-E202, E300
 Geography: G210 and G313
 Government: G101-G102, G103-G104
 History: H103-H104, H105-H106, H305-H306-H307, H308-H309
 Sociology: S161, and S162 or S163

The courses of Group IV B are the following:

The Arts: Comparative Literature C225, Fine Arts H100, Music M174, and Speech S240 (Any three)
 Classics: C250 and C260
 Comparative Literature: Third- or fourth-year courses
 English: L101 and L102
 Fine Arts: Courses in history of art
 French: Third- or fourth-year courses of a literary character
 German: Third- or fourth-year courses of a literary character
 Greek: Second-, third-, or fourth-year courses of a literary character
 Italian: Third- or fourth-year courses of a literary character
 Latin: Second-, third-, or fourth-year courses of a literary character
 Music: M101 and M102
 Philosophy: Six hours from the total departmental offering, but must include P100, P240, or P250
 Russian: R305-R306, or R363, R364
 Spanish: Third- or fourth-year courses of a literary character
 Speech and Theatre: S247-S248

Admission to Advanced Standing. The student who desires admission to advanced standing in the School of Dentistry must present credentials showing that he has satisfactorily completed some courses in a school which has at least comparable preliminary requirements and maintains a similar curriculum. Examinations in all subjects may be required of applicants for advanced standing. Occasionally, graduates of foreign dental school who desire a degree from Indiana University may be admitted. These students are given a special course of study which requires a minimum of two years, and includes completion of all the routine senior requirements. Further information may be obtained from the Dean, School of Dentistry, 1121 West Michigan Street, Indianapolis, Indiana, 46202.

Rules for Attendance and Promotion. 1. In any course, the minimum attendance for which credit will be given, or which will admit a student to final examination, is 85 per cent of the time scheduled for instruction in that course. The margin of 15 per cent

absence is provided to accommodate only unavoidable absence due to illness, death of relatives, delayed registration, or other causes, and it is not contemplated that this concession shall apply other than to exceptional cases.

2. In case of serious personal illness, properly attested, whereby a student's attendance falls to not below 75 per cent during the school year, the student may be permitted to make up 10 per cent of the required 85 per cent minimum by systematic work during vacation under competent instruction at his own expense. Such work must be done at the School of Dentistry and must have the sanction of the Dean and the instructor in charge of the course.

3. Instruction in all courses will begin as scheduled. No student who has not completed his registration within one day after the last stated day for registration may obtain credit for the year's work.

4. A student's grade of scholarship in each of his courses is determined by the combined results of examinations and classroom work. The quality of a student's work will be indicated by the following grades: A, B, C, D, S (satisfactory), and F (failure). The term Incomplete will be limited to satisfactory work which is not complete. This term will not be used to signify work of inferior quality.

5. A failure (F) requires repetition of the course or additional work approved by the Dean.

6. Any student who fails to report for examination or who fails to perform any part of the required work in any course will receive an Incomplete.

7. Failure to remove an Incomplete grade within six months (except in clinical courses), to the entire satisfaction of the instructor in charge and of the Dean, will constitute a failure. (See general rules below.)

8. A student who has Incompletes or failures, or both, in courses amounting to more than 30 per cent of the scheduled hours for the semester may be dropped from his class.

9. No student will be promoted in good standing unless he has to his credit at least an equal number of hours and credit points.

10. The dental faculty reserves the right to terminate the connection of any student with the School at any time for improper conduct, gross immorality, or lack of sufficient progress in the work, and under such circumstances no fees will be returned.

Incomplete Grades.* The grade of Incomplete may be given only where the completed portion of a student's work in the course is of passing quality. A student must remove an Incomplete within two semesters, or one summer session and one semester, of subsequent residence in the University. If a student fails to remove the Incomplete grade during the time allowed, the Incomplete will be changed to F by the dean of the school in which he is currently registered. Both the student and the instructor in whose course

** None of these regulations apply to those courses in which completion of the work of the course is not usually required at the end of the semester. Once a student has graduated, nothing in these regulations shall prohibit the Incomplete from remaining on the record.*

the student received the Incomplete will be notified of this change in grade.

A student may not register in a course in which he has a grade of Incomplete.

The student may be denied the right to make up an Incomplete if it seems to the dean and the instructor that it is impractical for the student to complete the course. In this event, the student should be given the opportunity to withdraw from the course and receive a grade of W on University records.

When the grade of Incomplete is given because the student missed the final examination, he shall be allowed to remove the Incomplete by taking the examination only if he has followed the regular procedure to have his absence excused and the Committee on Absence has notified the instructor that the student may be permitted to take the examination. If the Committee on Absence, under the Dean of Students, determines that the reason for the student's absence is not satisfactory, they should inform the instructor that the grade of Incomplete should be changed to a grade of F.

A grade of Incomplete may be removed in one of the following ways: (1) The student may complete the course within the time limit and the instructor will then send the appropriate "Removal of Incomplete" card to the Office of Records and Admissions. (2) The dean of the student's school may authorize change of the Incomplete to W. **NOTE:** When the Incomplete was received because of absence from the final examination, students may prefer to receive a grade of W instead of taking the examination. In such cases, the dean will not approve the grade of W unless the Committee on Absence has approved the reason for absence.

Withdrawals. Withdrawals, approved by the dean of the student's school, during the first four weeks of a full-length semester and during the first two weeks of a summer session, are arbitrarily marked W. After this time, such withdrawals are marked W or WF according to whether the student is passing or failing in the work of the course at the time of withdrawal, and the student will be required to show adequate reasons for withdrawal to the dean of his school. In those cases where students discontinue attendance without officially withdrawing, the instructor shall report the grade of WF. Where nonattendance occurs late in the semester, however, a grade of Incomplete may be used if the instructor has reason to believe the cause of absence was beyond the control of the student.

Summer Sessions. The dental clinics are open during most of the summer months, but no formal classes are held in the dental school. Except for students on probation, attendance is not required, but junior and senior students are encouraged to attend to obtain additional clinical instruction and experience.

Graduation. Candidates for the degree Doctor of Dental Surgery must possess good moral character, must have been students of good deportment while in school, and must have completed all of the required work of the curriculum to the satisfaction of the faculty.

Undergraduate Courses, 1963-64

* In the following course statements the letter before course number indicates field of study or category; the first digit of the course number indicates the year in which the course is offered, as follows: 5, freshman; 6, sophomore; 7, junior; 8, senior. The figures given in parentheses with "cr." indicate credit hours. These courses are subject to change without notice.

Anatomy

D501-D502. Anatomy, Oral: Freshman I-II. (2-3 cr.)

Dr. MISSELHORN and Staff.

Morphological study of the teeth: their arrangement and occlusion.

Anatomy D511-D512. Human Anatomy: Freshman I-II. (5-5 cr.)

Dr. ANDREW and Staff.

A lecture and laboratory course dealing with gross anatomical features of the human body, with special emphasis on the head and neck.

Anatomy D513. Histology: Freshman. (4 cr.)

Dr. ANDREW and Staff.

Study of the histogenesis and minute structure of human tissues and organs, and the morphologic evidence of their function.

D514. Histology and Embryology, Oral: Freshman. (2 cr.)

Dr. VAN HUYSEN and Staff.

Microscopical study of oral tissues and their development, including lecture and laboratory work. Slides, radiographs, and fresh tissues from the dental clinic will be used to correlate structure and function.

D807. Anatomy, Applied: Senior. (1 cr.)

Dr. VAN HUYSEN.

A comprehensive review of the head and neck, with a liberal use of prepared specimens and other aids. Lectures stress the relationship of anatomical structures to clinical procedure.

Basic Technics

D521-D522. Basic Technics: Freshman I-II. (4-4 cr.)

Drs. AMOS, BOYD, FISHER, M. HEALEY, KING.

This course is designed to acquaint the student with materials and techniques used in subsequent courses of study, and to serve as an introduction to the fundamental principles of clinical dentistry.

Biochemistry

B505. Biochemistry for Dental Students: Freshman. (5 cr.)

Drs. BOWMAN, GIFFORD, MUHLER, and Staff.

Lectures, recitations, and laboratory. Chemical nature of major tissue constituents, intermediary metabolism, and the chemical regulation of body functions. Principles of nutrition, and emphasis on the biochemistry of the teeth. The laboratory work demonstrates metabolic patterns and chemical methods of examining biological materials.

*Crown and Bridge and Partial Denture
(Fixed and Removable Prosthodontics)*

D604. Crown and Bridge: Sophomore. (4 cr.)

Drs. DYKEMA, JOHNSTON, MAESAKA, and Staff.

Lecture and laboratory course covering the fundamentals, indications, contraindications, and construction of the full veneer and partial veneer crowns, the inlay as a retainer, the use of the pinledge, the soldered joint and subocclusal rest, the indications and contraindications for fixed bridges.

D651-D652. Partial Denture Section I-II. (4-2 cr.)

Drs. BOGAN, JOHNSTON, and Staff.

This course considers the basic principles of diagnosis, surveying, mouth preparation, clasp design, saddle outline, types of bars and their rigidity, selection of teeth, assembly, processing, and insertion and care of partial dentures.

D701-D702. Crown and Bridge: Junior I-II. (6-1 cr.)

Drs. DYKEMA, JOHNSTON, KLEIN, MAESAKA, and Staff.

This course includes lectures, laboratory studies, and clinical practice on diagnosis, pontic design and construction; indications and construction of porcelain and acrylic veneers, the changes in vertical dimensions, and the anterior-MacBoyle retainer; a consideration of use of elastic impression technique, and the construction of bridges and partial veneer crowns.

D791-D792. Partial Denture: Junior I-II. (1-2 cr.)

Drs. BERGER, BOGAN, BORKOWSKI, JOHNSTON.

This course consists of plans for mouth preparation and designs for removable partial dentures, a survey of clinical models, splinting, equilibration through grinding and restorative procedure.

D801-D802. Crown and Bridge: Senior I-II. (4-4 cr.)

Drs. DYKEMA, JOHNSTON, and Staff.

The lectures are on precision attachments, oral rehabilitation, and increased vertical dimension, and include seminar discussions of clinical cases. The clinical requirement is the construction of upper and lower anterior and posterior bridges, and individual crowns of gold, gold and porcelain, gold and plastic, and plastic and porcelain.

D871-D872. Partial Denture: Senior I-II. (1-1 cr.)

Drs. BOGAN, BORKOWSKI, JOHNSTON.

Students are taught mouth preparation for and construction of clinical partial dentures.

Dental Materials

D611-D612. Dental Materials: Sophomore I-II. (2-1 cr.)

Mr. PHILLIPS, Miss SWARTZ.

Discussion and demonstration of the physical and chemical properties of materials used in dentistry, and the effect of manipulation upon these properties. Clinical applications are stressed.

Endodontics

D606. Endodontics: Sophomore. (2 cr.) Drs. HEALEY, PATTERSON.

A correlation of the basic endodontic clinical procedures and the related biologic principles is comprehensively presented in this course.

D816. Endodontics: Senior. (½ cr.)

Drs. HEALEY, PATTERSON, and Staff.

Clinical applications are made in this course of the principles of endodontics as taught in the preclinic years. Emphasis is placed on correct selection of cases, effective treatment procedures, and the restoration of the pulpless tooth following endodontic treatment.

Microbiology

Microbiology J650. Microbiology for Dental Students. (90 hrs.)
(4 cr.) Staff.

Microbiology as it applies to problems of the oral cavity is emphasized. The importance of microbiology to the practicing dentist is considered, as well as methods and procedures of sterilization and asepsis.

Nutrition and Public Health

D707. Civil Defense—Emergency Medical Care: Junior. (1 cr.)
Dr. HOWELL and Guest Lecturers.

This course presents an introduction to radiation physics, bomb types, radiation detectors, radioisotopes, decontamination, and conduct during possible attack. Chemical and biological warfare are considered, and casualty care is emphasized in relation to shock, burns, soft tissue trauma, and fractures. To be offered every other year.

D710. Nutrition: Junior. (2 cr.) Drs. HENNON, MUHLER.

The fundamentals of nutrition and metabolism, as well as biological analysis for normal metabolic constituents are discussed. The importance of an adequate protein, fat, vitamin, mineral, and endocrine level in the organism is discussed in relation to a normal function of the body as a whole, and the teeth and supporting structures in particular.

D806. Public Health: Senior. (1 cr.) Drs. HOWELL, GISH.

Lectures and discussion of problems relating to public health as applied to dentistry; how health problems are integrated with local communities; state and national programs.

D817. Civil Defense—Emergency Medical Care: Senior. (1 cr.)
Dr. HOWELL and Guest Lecturers.

This course presents an introduction to radiation physics, bomb types, radiation detectors, radioisotopes, decontamination, and conduct during possible attack. Chemical and biological warfare are considered, and casualty care is emphasized in relation to shock, burns, soft tissue trauma, and fractures. To be offered every other year.

Operative Dentistry

D621-D622. Operative Dentistry: Sophomore I-II. (4-3 cr.)
Drs. BOYD, GILMORE, HOHLT.

Fundamental principles and technical procedures of operative dentistry, including classification and selection of instruments, cavity preparations, physical properties, and manipulation of filling materials are presented in this course, which prepares the student for clinical practice in the junior year.

D721-D722. Operative Dentistry: Junior I-II. (3-4 cr.)
Drs. BOYD, GILMORE, HOHLT, and Staff.

Clinical applications of operative procedures taught in the sophomore year are made in this course, supplemented by discussions and demonstrations of operating positions at the dental chair, use of separating devices, and control of pain. All clinical procedures are carried out by students under direct supervision.

D810. Advanced Operative Technique: Senior. ($\frac{1}{2}$ cr.)
Dr. GILMORE.

Special instruction will be given in this course on gold foil restorations, autosealins, the indirect inlay techniques, and the airbrasive technique.

D821-D822. Operative Dentistry: Senior I-II. (4-3 cr.)
Drs. BOYD, GILMORE, HOHLT, and Staff.

Seminars and lectures are continued through the first semester, with clinical practice through the entire year. Oral examination, diagnosis, treatment planning, and studies of erosion, hypoplasia, and dental anomalies receive special attention. The practice of root canal therapy, covering all phases of pulpal involvements, is stressed.

*Oral Diagnosis***D711-D712. Oral Diagnosis: Junior I-II. (1½-1½ cr.)**

Drs. MISSELHORN, MITCHELL, and Staff.

Students are given lectures and clinical practice in oral examination, history taking, and coordination of symptomatology. Emphasis is placed upon interpreting radiographs and detecting etiologic factors, both systemic and local, of oral disorders. Clinical teaching is supplemented by already prepared case histories with color photographs.

D811-D812. Oral Diagnosis: Senior I-II. (½-½ cr.)

Drs. MISSELHORN, MITCHELL, and Staff.

A continuation of the diagnosis course given in the junior year (D711-D712). The senior student is scheduled for clinical practice only and thereby has an opportunity to see and study at first hand the various kinds of oral diseases present in the many patients who appear for treatment.

*Oral Surgery***D706. Principles of Surgery: Junior. (1 cr.)**

Dr. BERMAN.

This course is designed to inculcate in the student an appreciation of the fundamental principles of surgery as applied to the mouth. Emphasis is placed upon surgical pathology and surgical physiology rather than technique.

D731-D732. Oral Surgery: Junior I-II. (1½-1½ cr.)

Drs. GREGORY, MORRIS, PING, and Staff.

Lecture course covering local anesthesiology, surgical anatomy, basic principles of diagnosis, routine and surgical removal of teeth, infections of the face, neck, and mouth, and diseases of the oral cavity and adjacent tissues. Includes clinical demonstrations and supervision of operations of routine and minor oral surgery cases.

D818. Anesthesiology: Senior. (1 cr.)

Dr. STOELTING and Staff.

Indications, contraindications, techniques for use, and the principles of various general anesthetic agents will be discussed in this course.

D831-D832. Oral Surgery: Senior I-II. (1½-1½ cr.)

Drs. GREGORY, HUTTON, PING, REDISH, and Staff, and Guest Lecturers.

The course includes lectures, seminars, clinical practice, and demonstrations of diagnosis, treatment planning, and surgical treatment of oral disorders, including tumors, impacted teeth, alveolar abscesses, deformities, harelip and cleft palate, and fractures of the jaws.

*Orthodontics***D601-D602. Fundamentals of Occlusion: Sophomore I-II. (1-1 cr.)**

Drs. BURSTONE, CALLIS, GARNER, and Staff.

Lectures and demonstrations one hour each week introduce the student to problems associated with diagnosis of dental and facial anomalies. The normal pattern of the face and the fundamental principles of normal occlusion are emphasized; special attention is given to the growth and development of the face and dental mechanism.

D771-D772. Orthodontics: Junior. (1-½ cr.)

Drs. BURSTONE, CALLIS, GARNER, and Staff.

The lecture each week is devoted to the analysis of dental and facial anomalies and the study of diagnostic methods and classifications. In the lecture and laboratory period of the second semester, the student performs technical exercises used in the prevention and correction of malocclusions.

D803. Orthodontics: Senior. (1 cr.)

Dr. BURSTONE and Staff.

The senior course in orthodontics introduces the student to methods of case analysis and treatment procedures which are executed by the orthodontic specialist. Particular emphasis is placed on the role of the general practitioner in the detection and interception of malocclusions, and the treatment of minor orthodontic problems.

Pathology

General Pathology C607. General Pathology: Sophomore. (4 cr.)

Drs. BEAMER, SHAFER, SMITH.

In the study of the principles of disease production in the human body, gross specimens and histologic analyses are used as the means of teaching the common ways in which the living tissues and organs of the body respond to various injurious agents.

D608. Pathology, Oral: Sophomore. (3 cr.)

Drs. SHAFER, STANDISH.

Detailed studies of developmental abnormalities and acquired disorders of the teeth and surrounding structures are made in this course. Illustrated lectures and a laboratory course are designed to teach the student the microscopic and clinical picture of oral lesions. Close association is maintained between this and the clinical dental departments.

D815. Senior Pathology Conference: Senior. (1 cr.)

Dr. SHAFER.

A conference in which interesting clinical cases are studied grossly, radiographically, and histologically. Through informal discussion, a diagnosis is established and the proper method of treatment outlined.

Pedodontics

D708. Pedodontics: Junior. (1 cr.) Drs. McDONALD, STARKEY.

In this lecture course, the general subjects discussed are those of child management; growth, development, and morphology of the deciduous dentition; restorative and preventive procedure for children.

D709. Advanced Pedodontic Technique: Junior. ($\frac{1}{2}$ cr.)

Drs. McDONALD, STARKEY.

A laboratory course designed to acquaint the student with current advanced technical procedures in the field of pedodontics.

D841-D842. Pedodontics: Senior I-II. (2-1 cr.)

Drs. McDONALD, STARKEY, and Staff.

Restorative and preventive procedures for children are performed in the clinic and correlated with the material presented in the lecture course. Clinical assignments are designed to acquaint the student with a variety of problems in the practice of dentistry for children.

Periodontics

D607. Periodontics: Sophomore. (1 cr.) Dr. SWENSON.

Introduction to diagnosis, treatment and prevention of periodontal disease, and the maintenance of oral health.

D751-D752. Periodontics: Junior I-II. ($1\frac{1}{2}$ - $1\frac{1}{2}$ cr.)

Drs. HANSEN, SWENSON, and Staff.

This course includes a study of the periodontal diseases confronting the general practitioner: their etiology, symptomatology, and accepted methods of treatments.

D851-D852. Periodontics: Senior I-II. ($\frac{1}{2}$ - $\frac{1}{2}$ cr.)

Drs. HANSEN, SWENSON, and Staff.

A review of principles taught in preceding years, with emphasis upon instrumentation and clinical procedures. Most subject material is provided by clinical cases.

Pharmacology and Therapeutics

D705. Dental Therapeutics: Junior. (1-½ cr.) Dr. PING.

A lecture and quiz course designed to produce competency in prescription writing, use of drugs in a rational therapeutic manner and supported by pharmacotherapeutics, toxicology, posology, materia dentica, and demonstrations.

D781-D782. Internal Medicine: Junior I-II. (1-1 cr.) Dr. SOLOMON.

A discussion of the more important systemic diseases and of the drugs used in their treatment.

D793. Pharmacology: Juniors. (1 cr.) Drs. ASHMORE, PING, and Staff.

Lectures and quizzes. The site and mechanism of typical drugs are discussed. Emphasis is placed on the drugs used most frequently in dentistry.

Physiology

Physiology F509. Human Physiology: Freshman. (6 cr.) Dr. SELKURT and Staff.

The course includes a study of muscle, nervous systems, body fluids, circulation, respiration, digestion, metabolism, excretion, endocrines, sense organs, and body systems.

Practice Administration

D504. History of Dentistry: Freshman. (1 cr.) Dr. HOWELL.

Lectures include consideration of dentistry in prehistoric, ancient, medieval, and modern periods with discussions of the development of modern phases of practice. Development of dental education is traced, and the dental code of ethics explained.

D804. Jurisprudence: Senior. (1 cr.) Mr. SARNER.

Lectures and study of cases on elementary law, with special reference to contracts and torts as applied to dental practice, and on the professional relation, its duties and liabilities, malpractice, and statutes governing dental practice.

D805. Practice Administration: Senior. (1 cr.) Dr. L. W. BERGER and Guest Lecturers.

Discussions are presented of office administration, patient relations, professional cooperation, collections, insurance, investments, and taxes.

Preventive Dentistry

D503. Dental Seminar: Freshman. (1 cr.) Dr. MUHLER and Staff.

A series of lectures and discussions on various aspects of dentistry will be presented. This series is designed to aid in the orientation of freshman dental students.

D714. Preventive Dentistry Clinic: Junior. (½ cr.) Drs. BIXLER, MERCER, MUHLER, and Staff.

A special clinic course designed to teach the student how to use standard laboratory diagnostic procedures in the planning of an effective preventive program for the dental patient. Emphasis is placed upon correlating diagnosis with treatment plan.

D813. Preventive Dentistry: Senior. (1 cr.)

Drs. MERCER, MUHLER, and Staff.

A series of lectures is presented wherein the chemical composition of the teeth is discussed and the known preventive measures evaluated. Methods of diagnosis, classification of caries activity status, reasons for natural immunity, the effects of carbohydrates, and the dynamics of the teeth are discussed.

*Prosthetic Dentistry***D631-D632. Prosthetic Dentistry: Sophomore I-II. (3-2 cr.)**

Dr. DERRY and Staff.

Lectures and laboratory exercises in the basic techniques relative to prosthetic dentistry. Assignments are designed to utilize the student's time to the greatest advantage in preparing him to solve the clinical problems which he will encounter in his junior and senior years.

D761-D762. Prosthetic Dentistry: Junior I-II. (2-1 cr.)

Drs. BAILEY, DERRY, WHITE, and Staff.

Lectures, seminars, reading assignments, and clinical practice in the various problems encountered in prosthetic procedures. Special consideration is given to diagnosis and treatment planning and their influence on prosthetic procedures. Students are first given comparatively simple clinic assignments proceeding with the more difficult problems as they gain experience.

D808. Rehabilitation: Senior. (1 cr.)

Drs. CUNNINGHAM, DAVIS, TCHALIAN, and Guest Lecturers.

This course consists of a series of lectures given by representatives of several medical and dental specialties illustrating the prosthetic management of patients with maxillofacial defects. The "team approach" to the rehabilitation of patients with both congenital and acquired maxillofacial defects is emphasized.

D861-D862. Prosthetic Dentistry: Senior I-II. (3-3 cr.)

Drs. BAILEY, DERRY, WHITE, and Staff.

Demonstrations, lectures, seminars, and clinical practice covering all phases of complete denture prosthetics. Special consideration is given to diagnosis and treatment planning, with clinical assignments in the treatment of cleft palate and other abnormalities.

*Radiology***D703. Radiology: Junior. (2½ cr.)**

Drs. BECK, CARR, MATLOCK, and MITCHELL.

This course includes a consideration of the principles associated with the many facets of dental radiography: X-ray production, characteristics of ionizing radiation, manipulation of the X-ray machines, preparation of radiographs and their interpretation and radiological health hygiene. (Lecture and clinic.)

D814. Radiology: Senior. (½ cr.)

Drs. BECK, CARR, MATLOCK, and MITCHELL.

Senior students are assigned to the Radiology Clinic to improve their skills in radiographic technique and interpretation.

Special Clinics

Junior and senior students are scheduled for numerous special clinics in the Marion County General Hospital, and in the Riley and Long Hospitals, as well as in the School of Dentistry.

*Summer Session***Clinical Dental Procedures. (6 cr.)****Clinical Staff.**

Students will be permitted to perform dental treatments in the School of Dentistry clinics. The course is offered to advanced students on a full- or half-time basis. Students electing to spend full time will be given six hours of elective credit.

Undergraduate Curriculum in Dentistry

FRESHMAN YEAR

Courses	First Semester		Second Semester		Total Credit Hours	Total Clock Hours
	Lecture	Laboratory or Clinic	Lecture	Laboratory or Clinic		
Histology	2	2	0	0	4	90
Oral Anatomy	1	1	1	2	5	142½
Physiology	0	0	3	3	6	135
Human Anatomy	2	3	2	3	10	240
Biochemistry	3	2	0	0	5	105
Dental Seminar	0	0	1	0	1	15
History of Dentistry	1	0	0	0	1	15
Basic Technics	2	2	2	2	8	210
Oral Histology and Embryology	0	0	1	1	2	45
Total					42	997½

SOPHOMORE YEAR

Prosthetic Dentistry	1	2	1	1	5	120
Operative Dentistry	1	3	1	2	7	180
Crown and Bridge	0	0	2	2	4	90
Microbiology	0	0	2	2	4	90
General Pathology	2	2	0	0	4	90
Dental Materials	2	0	1	0	3	45
Fundamentals of Occlusion	1	0	1	0	2	30
Oral Pathology	0	0	2	1	3	60
Partial Denture	2	2	1	1	6	135
Endodontics	0	0	1	1	2	45
Periodontics	0	0	1	0	1	15
Total					41	900

JUNIOR YEAR

Operative Dentistry	1	2	1	3	7	255
Prosthetic Dentistry	1	1	0	1	3	105
Crown and Bridge	2	4	0	1	7	195
Pharmacology and Dental Therapeutics	1	0	1	½	2½	45
Radiology	2	0	0	½	2½	52½
Orthodontics	1	0	1	½	2½	52½
Oral Diagnosis	1	½	1	½	3	75
Periodontics	1	½	1	½	3	75
Oral Surgery	1	½	1	½	3	75
Principles of Surgery	0	0	1	0	1	15
Internal Medicine	1	0	1	0	2	30
Pedodontics	0	0	1	0	1	15
Advanced Pedodontic Technique	0	0	0	½	½	15
Nutrition	0	0	2	0	2	30
Partial Denture	1	0	1	1	3	75
*Civil Defense	0	0	1	0	1	15
Preventive Dentistry	0	0	0	½	½	22½
Total					44½	1,147½

SENIOR YEAR

Applied Anatomy	1	0	0	0	1	15
Operative Dentistry	1	3	0	3	7	285
Advanced Operative Technique	0	½	0	0	½	15
Pedodontics	1	1	0	1	3	105
Crown and Bridge	1	3	1	3	8	300
Oral Surgery	1	½	1	½	3	75
Oral Diagnosis	0	½	0	½	1	45
Periodontics	0	½	0	½	1	45
Prosthetic Dentistry	1	2	1	2	6	210
Practice Management	0	0	1	0	1	15
Jurisprudence	0	0	1	0	1	15
Public Health	1	0	0	0	1	15
Preventive Dentistry	0	0	1	0	1	15
Radiology	0	0	0	½	½	22½
Senior Pathology Conference	0	0	1	0	1	15
Endodontics	0	0	0	½	½	22½
Partial Denture	0	1	0	1	2	90
Anesthesiology	0	0	1	0	1	15
Orthodontics	1	0	0	0	1	15
*Civil Defense	0	0	1	0	1	15
Rehabilitation	1	0	0	0	1	15
Total					42½	1,365

This schedule is subject to change.

* Offered every other year.

The Graduate Program in Dentistry

Dental Graduate Faculty: Dean and Professor HINE (Chairman); Assistant Dean and Professor HOWELL; Research Professor MUHLER (Secretary); Professors HEALEY, HOPPER, JOHNSTON, McDONALD, MITCHELL, PHILLIPS, SHAFER; Associate Professors BURSTONE, DYKEMA; Assistant Professors BALDWIN, BECK, BIXLER, CALLIS, GARNER, GIFFORD, GILMORE, MUMFORD, STANDISH, SWARTZ; Instructors GISH, HERMAN.

Advisory Faculty: Professors BAILEY, BOYD, GREGORY, VAN HUYSEN; Associate Professor SWENSON.

The School of Dentistry offers, in addition to work for the D.D.S. degree, a program leading to the degree Master of Science in Dentistry (M.S.D.). The purposes of the graduate dental program are to continue the advancement of knowledge by offering opportunities for further study and research to persons interested in dental problems and to educate dentists in methods of research in preparation for teaching and dental education.

This program is intended primarily for students who have received their doctorate in dentistry and who are desirous of obtaining an adequate background in one of the various specialized fields of dentistry or of the allied basic sciences, in order to broaden their dental background for private practice and, perhaps, to complete the academic requirements for their specialty boards. The M.S.D. degree is granted upon completion of a minimum of thirty hours of course work, of which at least eighteen hours must be devoted to didactic work. Of this total of eighteen hours, no more than six may be in an advanced clinical practice investigation. A total of six hours must be in research.

It is possible, also, for a student to register in the Graduate School of Indiana University and work toward the M.S. or Ph.D. degree. Emphasis in the M.S. program is placed on nonclinical subjects. The M.S. and Ph.D. degrees are available in the fields of anatomy, physiology, microbiology, pharmacology, and biochemistry on the Medical Center campus. Those students who wish to work toward the M.S. degree must complete essentially the same requirements as outlined for the M.S.D., but, in addition, must possess a bachelor's degree and must satisfactorily complete the foreign language requirements as outlined by the Graduate School. More emphasis, too, is placed upon theory courses in the M.S. program than for those students interested in the M.S.D. In general, students who wish to practice or teach a clinical subject are encouraged to work toward the M.S.D., while those more interested in the basic science courses would be advised to complete the requirements for the M.S. Under special circumstances, the M.S.D. degree may be conferred upon outstanding individuals not holding the D.D.S. or equivalent degree who have demonstrated their ability in dental research and education and who give good evidence of continuing in these fields. The M.S.D. degree may be granted in

the following major areas of concentration: oral pathology, dental materials, pedodontics, crown and bridge prosthesis, denture prosthesis, radiology, operative dentistry, endodontics, orthodontics, oral medicine-oral diagnosis, periodontics, biochemistry, preventive dentistry, and public health. The M.S. degree may be granted in Anatomy, Biochemistry, Dental Materials, Oral Pathology, Orthodontics, and Preventive Dentistry.

Admission. Prospective graduate students should request an application blank from Dr. Joseph C. Muhler, Secretary, Graduate Dental Program, Indiana University School of Dentistry, 1121 West Michigan Street, Indianapolis, Indiana, 46202. Transcripts of undergraduate and professional work will be required, together with such additional material as may serve to determine eligibility and ability to conduct satisfactorily an advanced course of study. *Only students who have an accumulative grade average of B will be considered for admission, unless under exceptional circumstances the prospective student can provide evidence that he is capable of successfully completing the graduate dental program.*

Requirements. Each student must take, in proper sequence, the required courses which comprise his major concentration and he must also select additional hours for a minor subject. The nature of the minor subject selected is dependent upon the ultimate goal of the student as well as his academic background. Generally speaking, the selection is an individual matter with a variety of subjects available. The final credit requirement is determined by each student's graduate committee and is usually dependent upon his academic background. The student must provide good evidence of his ability to do original work and to express clearly his thoughts and research accomplishments by satisfactorily completing an original research problem. Each student must complete at least six credit hours of research. *No additional credit will be given, however, if more than this number of hours is taken.*

For graduate degrees in dentistry there is a time or residence requirement of two semesters as well as a credit requirement. This residence requirement may vary according to the department involved and the progress of the student. The term "residence" is defined as follows: A student acquires a semester (one half of an academic year) of residence by devoting all his time to his studies for that period. Students carrying less than a normal load of 14 to 16 hours will receive residence credit in proportion to the number of hours carried, at the rate of six weeks of residence credit for each five semester hours completed. No reduction in the time requirement will be made for work carried in excess of a normal load.

Candidates for degrees are assigned to a graduate faculty committee. This committee is composed of the chairman of the candidate's major subject who serves as the chairman of his committee, and two additional graduate faculty members. It is the purpose of this committee to advise the student concerning his academic problems. The members of the student's committee will conduct preliminary oral examinations covering essentially the candidate's fields of

study. The student must be prepared at the time of his final examination not only to defend his thesis but also to give good evidence that he can clearly organize his thoughts and is capable of continuing the problem he began in the graduate dental program. No student will be admitted to candidacy for the M.S.D. degree who fails to maintain a B average in his graduate studies.

It is important for the student to understand that he must complete his final oral and written examinations six months prior to his date of graduation. He is eligible to take these examinations upon the completion of one half of his didactic course requirements. He must also deliver to the secretary of the graduate dental program four unbound copies of his thesis at least one month prior to the time of his "defense of thesis" examination, which in all instances must be at least forty-five days prior to graduation. The thesis must be prepared in a form acceptable to the graduate committee. An acceptance sheet signed by his committee, a 500-word abstract, and a vita must accompany his unbound thesis. For the M.S.D., the student is required to submit to the secretary of the graduate dental program one unbound original copy of his thesis, and a carbon copy, bound in black with gold lettering, for the successful completion of his final examination. Those students receiving the M.S. must submit an original and a carbon copy, bound in black with gold lettering, and, in addition, an unbound carbon copy.

*Some
new for
1 year*

Fees. Fees for resident students in the graduate dental program are \$10 a credit hour, and for nonresidents \$23.50 a credit hour. An advanced payment of \$50 on fees is required after a student has been accepted. This fee is not returnable except in instances where students are called to active military duty. The fee for an M.S.D. degree in the School of Dentistry is \$5, and is payable thirty days prior to graduation. The degree fee for an M.S. or Ph.D. degree conferred by the Graduate School is \$5.

Graduate Courses, 1963-64

C605. General Pathology. (1-5 cr.)

Fall quarter, lectures and demonstrations for orientation in the broad fields of disease. Winter quarter, general pathology with emphasis on inflammation and infection, supplemented by study of material in the classroom and at autopsy. Spring quarter, disease related to anatomic systems is correlated with clinical subjects.

G900. Statistics. (2 cr.)

An introduction into the problems of experimental design, including statistical methods for handling measures of central tendency, variation, reliability, and significance. Special emphasis will be placed on the determination of significance.

G901. Advanced Oral Histology and Embryology. (2 cr.)

This course deals with the normal structures of the oral cavity, including their growth and development, with particular emphasis on the microscopic study of the tissues.

G902. Advanced Oral Pathology. (1-6 cr.)

This course is designed to acquaint the student with all phases of disease of the oral cavity and adjacent structures. Oral manifestations of systemic disease are stressed, as well as disturbances of growth and development, infections, and neoplasms. Microscopic study of tissue sections forms an important part of this course.

G903. Histologic Technique. (1 cr.)

Since the preparation of tissue for microscopic study and the application of special techniques in both routine laboratory procedures and research form an important part of the pathologist's experience, this course is designed to demonstrate the theoretical and practical basis for the preparation of tissue.

G904. Special Pathology of Neoplasms. (3 cr.)

Since neoplastic disease forms an important part of oral pathology, considerable time is devoted to the discussion and study of this subject. Microscopic diagnosis makes up a considerable portion of this course as well as discussion of the clinical features and treatment of tumors.

G905. Special Pathology of Bone. (1-3 cr.)

This course deals with the histology, physiology, and pathology of bone with particular reference to the maxilla and mandible. It includes development, growth, maintenance, and functional adaptation of bone and a study of bone in pathologic states such as developmental disturbances, inflammatory disturbances, disturbances of metabolism, and tumors.

G906. Tumor Clinic. (½ cr.; 1 cr. maximum.)

In this clinic the student is able to observe the clinical manifestation of neoplastic diseases, follow the patients through the various types of therapy, and see the patients at various postoperative intervals. Special emphasis is placed on tumors of the head and neck.

G907. Oral Surgery Pathology Conference. (½ cr.; 1 cr. maximum.)

This conference consists of the presentation of interesting cases, many of which are diagnostic problems. The student is expected to prepare several cases for presentation.

G908. Advanced Radiographic Interpretation. (2 cr.)

Intensive study is made of the theory and practice of radiographic interpretation. Through lectures and laboratories, correlation is made between gross anatomy, histology, pathology, and the radiogram for maximum efficiency in radiographic interpretation.

G909. Recent Advances in Dentistry. (1 cr.) *Dr McDonald*

The purpose of this course is to acquaint the graduate dental student with the present-day problem of the recent development in the various dental fields. A brief introduction to statistics and how research problems should be designed is presented.

G910. Seminar. (1 cr.) *Graduate Faculty***G911. Theory of Dental Metallurgy. (1-5 cr.)** *Dr Phillips*

A discussion of composition, chemical reactions, physical properties, and the clinical significance of metals, resins, and other materials used in dentistry. It includes certain phases of metallography, physical chemistry, and physics pertinent to this field.

G912. Specifications and Test Methods in Dental Materials. (1-5 cr.) *Dr Phillips*

A seminar course, supplemented by lectures and laboratory demonstrations, to acquaint the student with the highly specialized test methods employed in this field for evaluation of all materials with particular attention being given to the A.D.A. specifications.

G913. Clinical Application of Dental Materials. (1-4 cr.) *Dr Phillips*

A series of lectures and seminar periods designed to teach the student the practical application of basic knowledge. The unique problems associated with the field of dental materials and avenues for future research are also discussed.

G914. Advanced Prosthetic Theory. (1-3 cr.) *Dr Hine*

This course embraces conference sessions, seminars, and lectures covering advanced theories of prosthetic denture service. Studies include discussions on the hinge axis, involved articulators, and comparative values of the various types of denture materials and prosthetic teeth.

G915. Advanced Prosthetic Clinic. (1-6 cr.) *Dr Hine*

Work in this area involves clinical practice in the treatment of patients, following the most advanced theories and practices suggested in G914.

G916. Special Problems in Prosthetic Design. (1-4 cr.) *Dr Hine*

This course embraces conference sessions, lectures, reading assignments, and clinical practice in the treatment of patients with difficult and unusual prosthetic denture problems.

G917. Maxillofacial Prosthesis. (1 cr.) *Dr Hine*

This course includes lectures, conference sessions, demonstrations, and clinical practice in the rehabilitation of patients with such abnormalities as cleft palate and loss of tissue from tumors, accidents, war injuries, and congenital diseases.

G918. Research: Oral Diagnosis-Oral Medicine. (Cr. arr.) *Dr Mitchell***G919. Research: Prosthetics. (Cr. arr.)** *Dr Hine***G920. Research: Oral Pathology. (Cr. arr.)****G921. Research: Dental Materials. (Cr. arr.)****G922. Research: Pedodontics. (Cr. arr.)****G923. Research: Crown and Bridge Prosthetics. (Cr. arr.)****G924. Research: Radiology. (Cr. arr.)****G925. Research: Operative Dentistry. (Cr. arr.)**

G926. Research: Endodontics. (Cr. arr.)

G927. Research: Orthodontics. (Cr. arr.)

G928. Research: Periodontics. (Cr. arr.)

G929. Research: Biochemistry. (Cr. arr.)

G930. Research: Preventive Dentistry. (Cr. arr.)

G931. Advanced Pedodontics. (1-3 cr.)

This lecture-seminar course is designed for the dentist who intends to practice pedodontics as a specialty. During a two semester course, material will be presented related to study of diagnostic, restorative, and preventive phases of pedodontics. Special emphasis will be given to the evaluation of the literature and the application of new knowledge introduced in pedodontics.

G932. Research: Anatomy. (Cr. arr.)

G933. Research: Public Health. (Cr. arr.)

G934. Advanced Clinical Pedodontics. (1-6 cr.)

The course is designed to acquaint the graduate student with principles of advanced restorative and preventive procedures in pedodontics. There is instruction and clinical experience in the areas of restorative dentistry, dental caries control, hereditary and congenital dental anomalies, oral habits, and interceptive orthodontic procedures.

G935. Dental Pediatrics. (2 cr.)

A course designed to acquaint the graduate student with the dental problems of the chronically ill and handicapped child. Lectures, discussions, and ward rounds are included in order to cover the normal and abnormal physical and emotional growth of the child.

G936. Principles of Pedodontic Restorative Procedures. (1-3 cr.)

This is a course designed to familiarize the graduate student with the principles involved in restorative and interceptive orthodontic procedures.

G937. Advanced Clinical Instruction in Removable Partial Denture Prosthodontics. (2-6 cr.)

Clinical construction of clasp-retained removable partial dentures, involving both normal mouths and those mutilated by accidents or extensive surgery.

G938. Advanced Removable Partial Denture Technique. (2-6 cr.)

Includes precision attachments. Surveying of models and designing of appliances; planning over-all treatment for partially edentulous mouths.

G939. Porcelain Jacket Crown Technique. (2 cr.)

Construction of porcelain jacket crowns to dimension and form. Rebuilding nonvital or mutilated teeth to prepared form. Multiple construction in one arch and in opposing arches.

G940. Advanced Clinical Instruction in Crown and Bridge Prosthodontics. (1-6 cr.)

Clinical construction of porcelain jacket crowns, acrylic bridges, stabilizing splints, occlusal reconstruction, increasing vertical dimension, full mouth reconstruction, splinting of abutment teeth, and reconstruction of crown form of abutment teeth in preparation of mouths for removable bridges and partial dentures; construction of cases mounted with special consideration for the hinge axis.

G941. Advanced Crown and Bridge Technique. (1-4 cr.)

Laboratory construction of porcelain jacket crowns to dimension; reproduction of anatomic variation and color distribution; construction of plastic veneers and masking materials over gold to meet the requirements of the Hunter Color and Color Difference Meter; precision attachment technique.

G942. Gnathology Seminar. (1-3 cr.)

An exposition of the Stuart concept of gnathology, occlusion, the relationship of the mandible to the maxilla in rest position and in function, location of the hinge axis, a discussion of instruments to which this relationship can be transferred, using this relationship for construction, seating, and postseating examination and care of such prostheses.

G943. Tooth Form and the Modifications Required in the Construction of Retainers and Pontics. (1-2 cr.)

A critical review of principles of topographical anatomy and contours in restorations of gold, porcelain, and resin; discussion of methods of modifying or altering function for stimulation or protection of alveolar process and periodontal membrane in the construction of partial prostheses and single unit restorations.

G944. The Principles of Gnathology. (1-3 cr.)

The application of gnathology to oral rehabilitation, and the techniques advocated by Drs. Stuart, de'Amico, DePietro, and Granger will be studied. The theory of clutch and cheek bite transfers will be studied and demonstrated in their application to complete and partially edentulous arches.

G945. Pedodontic Seminar. (1 cr.)

A seminar-discussion course for second-year graduate students and residents. The purpose of the course is to acquaint the student with current literature, research design and advanced case analysis and diagnosis. Prerequisites are courses: G934 (Advanced Clinical Pedodontics), G931 (Advanced Pedodontics), and G935 (Dental Pediatrics).

G946. Advanced Clinical Radiography. (1-4 cr.)

Through working with the undergraduate dental student in the Radiology Clinic, opportunity is offered for a thorough clinical study of intra-oral and extra-oral radiographic technics, various errors associated with oral radiographic technics, and the problems and mechanisms associated with the operation of a teaching-service clinic in oral radiography. (G948 prerequisite or taken concurrently).

G947. Cephalometrics. (1-4 cr.)

Prerequisite, G991. This course deals with the technique of procuring films of the living individual, the tracing of important facial landmarks and planes, the taking of significant angular and linear readings, and transposing same to a graph from which important conclusions may be drawn. The use of cephalometry as an aid in other phases of dentistry besides orthodontics is taught.

G948. General Radiography. (2 cr.)

This course is designed for those who have the usual background in oral radiography and offers a comprehensive general approach to the theory and principles behind modern oral radiography and their applications in X-ray production, intra-oral and extra-oral technics, film processing, radiographic interpretation, and radiation hygiene.

G949 (J949). Microbial Physiology. (3 cr.)

This course will cover the chemical and physical nature of bacteria, their metabolic and physical properties, and the nature of their response and adaptation to their environment.

G950. Advanced Operative Dentistry. (1-6 cr.)

The student will gain an understanding of both basic and new concepts in operative procedure. Clinical assignments, under supervision of the advanced operative staff, will emphasize complete patient treatment with emphasis on meticulous and exacting technical procedures in the treatment of oral conditions.

G951. Analysis of Operative Technique. (2 cr.)

This course will cover the theory of operative technique.

G952. Study of Indirect and Plastic Restorations. (2 cr.)

This rapidly developing field of operative dentistry affords the graduate student an opportunity to develop new methods of handling various procedures, as well as mastering the chemical and physical knowledge necessary to manipulate many of the new dental materials.

G953. Recent Advances in Operative Dentistry. (2 cr.)

The theory and basic information associated with recent developments in operative dentistry is presented by lectures, seminars, and demonstrations.

G954. Principles of Crystal Growth. (2 cr.)

Theories of crystal growth, types of crystallization, and the effects of impurities are considered. Emphasis is placed on the physical and chemical properties of crystalline solids in light of their atomic structure and with respect to their environment. Applications to medical and dental growths are discussed.

G955. Endocrinology. (1-3 cr.)

The course consists of one-half hour lectures and assigned student readings. Approximately two thirds of the course is devoted to general endocrinology and basic endocrine mechanisms. Emphasis is placed upon adrenal, pancreatic, thyroid, and parathyroid functions. The remainder of the course deals with oral and dental problems specifically associated with endocrine malfunction.

G956. Advanced Endodontics. (1-6 cr.)

Clinical study of special endodontic problems involving advanced cases. Correlation of treatment, history, and prognosis are stressed.

G957. Analysis of Endodontic Theory. (1-4 cr.)

Lecture course in which medication, application, and recent techniques are studied. Relationship to other branches of dentistry is shown.

G958. Bio-Mechanics. (1-4 cr.)

Consideration is given to principles of force application used in altering dento-facial relationship. Special attention is given to appliance, design, fabrication, and activation. Specific treatment procedures are discussed in seminar and applied on the typodont in the laboratory.

G959. Oral Microbiology. (1-3 cr.)

Special problems relating to the oral bacteria flora are presented with emphasis placed on their relationship to the various branches of dentistry.

G960. Advanced Orthodontic Clinic. (1-6 cr.)

Students learn to execute the details of the treatment plan, based on careful analysis. Special attention is devoted to timing phenomena. Re-analysis is employed to check progress of treatment by very exacting means. Students assist in management of special cases of cleft palate, surgical correction, and temporomandibular syndrome.

G961. Advanced Radiographic Concepts. (1 cr.)

Through lectures, laboratories, and clinics, special consideration is given to the principles of radiography employed in temporomandibular joint studies, sialography, panoramic radiography, laminography, cineradiography, and cephalometry. The various technics for intra-oral radiography will also be analyzed.

G962. Fundamentals of Occlusion. (2-4 cr.)

Lectures and seminar. Emphasizes basic normal and abnormal processes which influence occlusion of humans as compared to that of the herbivore, carnivore, and rodent, to better illustrate the principles of occlusion. Study of the effects of unsatisfactory occlusion bring out the need for an understanding of facial form and function.

G963. Advanced Orthodontic Techniques. (2 cr.)

This course deals with the details of wrought and cast appliances used in the treatment of malocclusions. The exercises are planned to develop an attitude of perfectionism and maximum self-discipline.

G964. Dento-Facial Analysis. (2 cr.)

Prerequisite, G947. Methods of determining and evaluating deviation from normal dental, skeletal, muscular, and integumental patterns are considered. Emphasis is placed on treatment objectives with respect to stability, esthetics, and function.

G965. Histophysiology and Pathology of the Periodontium. (2 cr.)

Gross clinical observations are correlated with microscopic findings of the normal periodontium and the periodontium under stress of orthodontic care, periodontal disease, periapical pathosis, systemic diseases and other abnormal conditions. Emphasis is placed on the physiological role of tissues at the cellular level.

G966. Advanced Clinical Periodontics. (1-4 cr.)

Clinical problems relating to advanced cases of special interest involving diseases of the soft tissue and bony support are treated and evaluated.

G967. Advanced Periodontics. (4 cr.)

A study of periodontal diseases as to etiology, symptomatology, treatment, and differential diagnosis.

G968. Advanced Clinical Oral Diagnosis-Oral Medicine. (1-4 cr.)

The usual and the unusual oral pathologic problems of patients are studied.

G969. Advanced Didactic Oral Diagnosis-Oral Medicine. (2 cr.)

Discussion and demonstration of the many oral diagnostic techniques that are available are correlated with the clinical signs and symptoms of diseases involving the teeth, pulp, periodontium, and contiguous tissues and anatomical areas.

G970. Advanced Biochemistry Laboratory. (1-3 cr.)

Special problems of interest in intermediary metabolism are stressed. Cellular respiration and experiments relating to inorganic metabolism are performed. Experimental hormonal problems are carried out by each student.

G971. Intermediary Metabolism. (3 cr.)

Lecture course designed to acquaint the student with the metabolic pathways of fats, carbohydrates, and proteins. Special emphasis is placed upon cellular respiration and its effect on the oral tissues.

G972. Proteins and Nucleic Acids. (2 cr.)

The essential facts regarding the composition of proteins and protein-like substances are discussed. The structure, method of analysis, and relation of protein to other biological factors are presented.

G973. Vitamins, Mineral Metabolism, and Hormones. (2 cr.)

The structure and the relation to disease and metabolism of these substances are presented in relation to normal and abnormal dental diseases.

G974. Advanced Nutrition. (2 cr.)

Special nutritional problems relating to calcification and soft tissue health are presented. Emphasis is placed on the relation of fats, carbohydrates, proteins, vitamins, minerals, and drugs on the dental structures.

G975. Basic Radiological Physics. (2 cr.)

Basic properties of various types of ionizing radiation, their interaction with matter, fundamentals of radiation detection and measurement, and basic instrument design are presented.

G976. Advanced Preventive Dentistry. (2 cr.)

The theory by which soft tissue diseases and dental caries may be prevented are discussed. The importance of chemicals, drugs, and cosmetic agents in decreasing the initiation of dental disease is stressed.

G977. Preventive Dentistry Laboratory. (1-3 cr.)

Study of the technique of caries-susceptibility tests which may be helpful to reduce oral diseases. The relationship of nutritional survey data to oral health is also evaluated.

G978. Fundamentals of Radiation Biology. (2 cr.)

A study is made of the effects of ionizing radiation on biological systems. Concepts of the mechanisms of action and effects at the molecular, cellular, organ, and total body levels are considered. Prerequisite: G975 (Basic Radiological Physics).

G979. Radiology Literature Evaluation. (1 cr.)

Evaluation of scientific literature in general, with emphasis on the radiology literature, is made in some detail. Principles of research and scientific writing are emphasized.

G980. Advanced Surgical Endodontics. (2-4 cr.)

This course includes lectures, seminars, and clinical assignments designed to provide the student with a thorough knowledge of the principles of advanced surgical endodontics. Prerequisites: G956 and G957.

G982. Clinical Field Studies. (1-3 cr.)

Study is made of preliminary preparations for a clinical field study including delineation purpose, review of history, methods, personnel needed, equipment, sample size, data to be collected, study sites, etc. A review of projects is also made with the opportunity to prepare a field study outline.

G983. Dental Problems of Special Population Groups. (1-3 cr.)

Recent emphasis has been placed on health problems of special population groups such as the chronically ill, the aged, the handicapped, and the institutional patient. Dental problems of these special groups with emphasis on methods of care are stressed in this course.

G985. Fluoride Metabolism. (2 cr.)

This course consists of lectures and special assignments on the history, clinical studies, pharmacology, toxicology, and biochemistry of fluoride compounds. Particular emphasis is given to current evaluations of newer methods of using fluoride compounds.

G990. Advanced Anatomy. (1-3 cr.)

This is an advanced lecture and laboratory course dealing with the gross anatomical features of the human body.

G991. Advanced Anatomy of Head and Neck. (1-3 cr.)

Advanced dissection of the various structures of the head and neck, with special emphasis on various age specimens. Dental abnormalities are stressed.

G992. Biology of the Tooth and Periodontium. (1-4 cr.)

This course consists of a microscopical study of the tooth and periodontium. It will consider the response of these tissues to pathology, instrumentation, and filling materials used in operative, endodontic, and crown and bridge procedure. Animals will be used to illustrate the response of the tooth tissues to these procedures.

G993. Animal Experimental Procedures. (1-3 cr.)

This course is offered to familiarize the student with the handling of animals and the observation of results. The course consists of eight exercises and frequent conferences on the manipulation of animal tissues. Each student will develop an outline of exercises best suited for his particular interests.

G994. Applications of Genetic Principles to Problems in Dentistry. (2 cr.)

A brief review of the general principles of human genetics is presented to emphasize the importance of genetics to problems encountered in dentistry such as dental malformation, cranio-facial growth and development, and diseases of the periodontium.

G995. Biostatistics as Applied to Public Health Problems. (1-4 cr.)

Lectures and laboratory exercises on the collection, tabulation, and elementary analyses of data, including vital statistics, the treatment of rates, distribution of variates and sampling variation. Data from clinical and laboratory studies previously conducted by university researchers will be available and actual proposed studies will be used in experimental design exercises.

G996. Epidemiology. (1-3 cr.)

An introduction to the principles of epidemiology, the distribution and dynamics of disease in human populations, factors influencing their occurrence, investigation of disease by clinical epidemiology, including basic biological and statistical evidence, all with special reference to dental caries, periodontal disease, malocclusion, and dental health problems of special population groups.

Summated Health
G997. Man and His Environment. (2 cr.)

Selected field trips to water and sewage treatment plants, dairies and food processing plants including vending machine facilities. This course includes, in addition to basic environmental health and sanitary science, special reference to fluoridation and radiation hygiene.

G998. Community Health Services. (1-4 cr.)

Lectures and seminars including: (1) Public Health Administration; (2) Health and Human Behavior with society as the background; (3) Health Education in Public Health reflecting the educational process in public health and of health education activities; (4) Group Purchase Plans including pre and post payment, open and closed panels, indemnity and co-insurance schemes, and dental service corporations.

G999. Public Health Practice. (1-6 cr.)

Functions, scope, and historical background of public health; organization of official and voluntary public health agencies. Designed primarily to teach: (1) the purposes and objectives of public health; (2) principles of administration that underlie these organizational efforts. Includes programs in maternal and child health, mental health, public health, nursing, hospital services, and dental health.

984

Major Fields of Graduate Study

ANATOMY

It is the purpose of this course to provide the basic information for the teaching of anatomy to dental students. This subject should be particularly inviting to those dentists interested in either oral surgery or orthodontics. A maximum of 15 hours in the major subject is required, and, in addition, 6 to 8 hours in a minor. A research project and a thesis are also required. A M.S. degree is offered.

REQUIRED COURSES

Major: Anatomy		Hours
G901	Advanced Oral Histology and Embryology	2
G903	Histologic Technique	1
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G932	Research: Anatomy	Arr.
G990	Advanced Anatomy	1-3
G991	Advanced Anatomy of Head and Neck	1-3
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

C605	General Pathology	1-4
G902	Advanced Oral Pathology	1-6
G904	Special Pathology of Neoplasms	3
G907	Oral Surgery Pathology Conference (2 semesters, ½ hour each)	1
G908	Advanced Radiographic Interpretation	2
G948	General Radiography	2
G971	Intermediary Metabolism	3
G974	Advanced Nutrition	2

In addition to those outlined above, additional courses are available in the Graduate Program in Anatomy in the School of Medicine from which the student may choose.

BIOCHEMISTRY

Perhaps no single course except biochemistry could be rightly referred to as the father of preventive dentistry. A good understanding of biochemistry is necessary for the satisfactory understanding of almost every dental subject regardless of whether it is a basic science or a clinical subject. An intimate relationship must exist between the health of the oral hard and soft tissues and their nutrition and metabolism. The M.S.D. degree in biochemistry is closely correlated with the program in preventive dentistry as well as in many of the other related fields. A total of 13 hours in the major concentration is required in addition to at least 10 hours from the selected elective courses. An original piece of research and a thesis are also required.

REQUIRED COURSES

Major: Biochemistry		Hours
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G929	Research: Biochemistry	Arr.
G970	Advanced Biochemistry Laboratory	1-3

G971	Intermediary Metabolism	3
G972	Proteins and Nucleic Acids	2
G973	Vitamins, Mineral Metabolism, and Hormones	2
G974	Advanced Nutrition	2
	Minor: 6 to 8 hours, credit arranged	
G985	Fluoride Metabolism	2

ELECTIVE COURSES

F812	Methods in Toxicology	Arr.
F816	Clinical Toxicology	3-5
F842	Tumor Metabolism and Chemotherapy	3
G959	Oral Microbiology	1-3
G976	Advanced Preventive Dentistry	2
G977	Preventive Dentistry Laboratory	1-3
G982	Clinical Field Studies	1-3

The Graduate Program in Biochemistry of the School of Medicine offers the Ph.D. degree. Students with a special interest in biochemistry may select from a wide variety of courses additional subjects which may be of particular interest to the student.

CROWN AND BRIDGE PROSTHETICS

The M.S.D. is conferred upon dentists who complete a prescribed program of study emphasizing subjects valuable to one interested in crown and bridge prosthesis; it consists of a minimum of 10 to 12 hours in the major field, 6 to 8 hours in a selected minor, 6 hours from the electives, and a research problem and a thesis. The correlation between dental metallurgy and prosthetics is stressed, and the student is provided with sufficient didactic and clinical instruction to provide him with the fundamentals of modern crown and bridge prosthodontics.

REQUIRED COURSES

Major: Crown and Bridge Prosthetics		Hours
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G911	Theory of Dental Metallurgy	1-5
G923	Research: Crown and Bridge Prosthetics	Arr.
G937	Advanced Clinical Instruction in Removable Partial Denture Prosthodontics	2-6
G938	Advanced Removable Partial Denture Technique	2-6
G939	Porcelain Jacket Crown Technique	2
G940	Advanced Clinical Instruction in Crown and Bridge Prosthodontics	1-6
G941	Advanced Crown and Bridge Technique	1-4
G942	Gnathology Seminar	1-3
G943	Tooth Form and the Modifications required in the Construction of Retainers and Pontics	1-2
G944	The Principles of Gnathology	1-3
G962	Fundamentals of Occlusion	2-4
G976	Advanced Preventive Dentistry	2
	Minor: 6 to 8 hours, credit arranged	

ELECTIVE COURSES

G901	Advanced Oral Histology and Embryology	2
G912	Specifications and Test Methods in Dental Materials	1-5
G913	Clinical Application of Dental Materials	1-4
G948	General Radiography	2
G956	Advanced Endodontics	1-6
G967	Advanced Periodontics	4
G974	Advanced Nutrition	2

DENTAL MATERIALS

A thorough knowledge of dental materials is essential for a dentist practicing in any clinical field. A high percentage of the failures seen daily in the dental office can be attributed to the improper use of dental products. The study of both theory and practice relating to the subject of dental materials is a science in itself; this study is especially pertinent in the present era of dentistry where the picture is changing so rapidly. In the undergraduate curriculum, it is possible to provide only a survey of the field. The purpose of this graduate course is to acquaint the graduate dentist with the theory, philosophy, and use of dental materials in order that he may more intelligently face the daily problems contingent on this area. In order to qualify for the M.S.D. in dental materials, the student must complete a minimum of 13 hours in his major, 6 to 8 hours in a minor subject, and 7 hours of selected elective courses. Original research and a satisfactory thesis are also required.

REQUIRED COURSES

Major: Dental Materials		Hours
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G911	Theory of Dental Metallurgy	1-5
G912	Specifications and Test Methods in Dental Materials	1-5
G913	Clinical Application of Dental Materials	1-4
G921	Research: Dental Materials	Arr.
G976	Advanced Preventive Dentistry	2
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G936	Principles of Pedodontic Restorative Procedures	1-3
G941	Advanced Crown and Bridge Technique	1-4
G951	Analysis of Operative Technique	2

ENDODONTICS

Recently, increased emphasis has been placed on the art and science of endodontics because of improvements in its effectiveness. This is due to a better understanding and application of the biologic sciences and the use of present-day therapeutic procedures.

The Graduate Program leading to the degree Master of Science in Dentistry provides the opportunity for supplemental or continuing education in endodontics on an advanced level for those persons who are desirous of concentrating in this area of dental practice or who plan to engage in teaching or research in endodontics.

A minimum of 14 hours of credit is required in the major field and 6-8 hours in an elective minor subject. In addition, an approved research project and a satisfactory thesis are required.

REQUIRED COURSES

Major: Endodontics		Hours
C605	General Pathology	1-4
G902	Advanced Oral Pathology	1-6
G905	Special Pathology of Bone	1-3
G907	Oral Surgery Pathology Conference (2 semesters, ½ hour each)	1

G908	Advanced Radiographic Interpretation	1-2
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G926	Research: Endodontics	Arr.
G946	Advanced Clinical Radiography	1-4
G948	General Radiography	1-2
G956	Advanced Endodontics	1-6
G957	Analysis of Endontic Theory	1-4
G959	Oral Microbiology	1-3
G965	Histophysiology and Pathology of the Periodontium	2
G976	Advanced Preventive Dentistry	2
G980	Advanced Surgical Endodontics	2-4
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G901	Advanced Oral Histology and Embryology	2
G904	Special Pathology of Neoplasms	3
G905	Special Pathology of Bone	1-3
G906	Tumor Clinic (2 semesters, ½ hour each)	1
G953	Recent Advances in Operative Dentistry	2
G969	Advanced Didactic Oral Diagnosis—Oral Medicine	2
G974	Advanced Nutrition	2
G994	Applications of Genetic Principles to Problems in Dentistry	2

OPERATIVE DENTISTRY

With the advent of the newer restorative materials and the new operative techniques, the principles governing operative dentistry for the adult are becoming increasingly more complex. It is the purpose of the M.S.D. program in restorative dentistry to correlate these principles with clinical applications that may be experienced in general practice. The program is designed to give sufficient experience in related fields; thus, it provides the dental graduate with an adequate background to become a dental instructor in either adult restorative dentistry or endodontics. A minimum of 15 hours is required in the major concentration and 6 hours from the selected electives, in addition to a research project and a thesis.

REQUIRED COURSES

Major: Operative Dentistry		Hours
G901	Advanced Oral Histology and Embryology	2
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G911	Theory of Dental Metallurgy	1-5
G925	Research: Operative Dentistry	Arr.
G950	Advanced Operative Dentistry	1-6
G951	Analysis of Operative Technique	2
G952	Study of Indirect and Plastic Restorations	2
G953	Recent Advances in Operative Dentistry	2
G976	Advanced Preventive Dentistry	2
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G902	Advanced Oral Pathology	1-6
G948	General Radiography	2
G956	Advanced Endodontics	1-6
G967	Advanced Periodontics	2
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2

ORAL DIAGNOSIS-ORAL MEDICINE

A program of advanced study is available to the dentist who wishes to prepare himself for teaching and/or research, with a major interest in oral diagnosis. Both the M.S. and the M.S.D. degrees are

offered. In this program, emphasis will be placed on didactic course work concerned with oral pathology and oral medicine, and on the application of this knowledge in the oral diagnosis clinic. The histopathology laboratory also will be utilized. The program for each individual will be planned according to his interests and objectives. The thesis requirement may be met through the performance of either clinical or laboratory research. The following courses are suggested in order to meet the 14-hour minimal requirement in the major field, 6 to 8 hours in the minor, 6 hours in research, and the hours of electives.*

REQUIRED COURSES

Major: Oral Diagnosis-Oral Medicine		Hours
G605	General Pathology	1-4
G901	Advanced Oral Histology and Embryology	2
G902	Advanced Oral Pathology	3-6
G906	Tumor Clinic (2 semesters, 1/2 hour each)	1
G907	Oral Surgery Pathology Conference (2 semesters, 1/2 hour each)	1
G908	Advanced Radiographic Interpretation	2
G909	Recent Advances in Dentistry	1
G918	Research: Oral Diagnosis-Oral Medicine	Arr.
G965	Histophysiology and Pathology of the Periodontium	2
G968	Advanced Clinical Oral Diagnosis-Oral Medicine	1-4
G969	Advanced Didactic Oral Diagnosis-Oral Medicine	2
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G904	Special Pathology of Neoplasms	3
G905	Special Pathology of Bone	1
G959	Oral Microbiology	2-3
G973	Vitamins, Mineral Metabolism, and Hormones	2
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2
G977	Preventive Dentistry Laboratory	1-3

In addition to the above, any course listed in the *Bulletin of the Graduate School* may be selected as an elective.

In essence, it is proposed to train such persons, to a reasonable extent, as bench pathologists, but with considerable emphasis on the application of this knowledge at the chairside in a teaching capacity. There is no clear-cut definition of "oral medicine" at this institution, but the course has been so designed that it would be acceptable to the (unrecognized) American Board of Oral Medicine, should the applicant wish to pursue qualifications in this field. If the applicant should wish to seek certification by the American Board of Oral Pathology, he could be guided toward this end through the cooperation of the Department of Oral Pathology. In any case, emphasis will be placed on clinical oral diagnosis and research in this field.

ORAL PATHOLOGY

The purpose of this graduate program in oral pathology is to train persons who desire to prepare themselves for a career in teaching and research. The training of individuals who wish to enter general practice in dentistry is not encouraged under this particular program, since courses in other departments where more clinical experience is

* Any graduate course listed on pages 40-47 may be elective.

available would be more beneficial to them. The principal objectives of this specific program are: to prepare dentists for research and the teaching profession; to build a firm foundation of knowledge in the basic fields kindred to oral pathology; to correlate oral clinical pathology with oral histopathology; and, finally, to develop an attitude and appreciation for the methods and principles of research in a basic science. Both the M.S. and M.S.D. degrees are offered.

A stereotyped program cannot be provided for each student; the programs of no two students will be identical. Rather, it is believed that a well-defined program can be outlined for each student to meet his personal interests and fulfill his objectives. The following program is suggested as meeting the minimum didactic requirements, although it is advisable also for the student to take courses in other subjects to broaden his understanding of the field of oral pathology.

REQUIRED COURSES

Major: Oral Pathology		Hours
G605	General Pathology	1-4
G901	Advanced Oral Histology and Embryology	2
G902	Advanced Oral Pathology	1-6
G903	Histologic Technique	1
G904	Special Pathology of Neoplasms	3
G905	Special Pathology of Bone	1-3
G906	Tumor Clinic (2 semesters, ½ hour each)	1
G907	Oral Surgery Pathology Conference (2 semesters, ½ hour each)	1
G908	Advanced Radiographic Interpretation	2
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G920	Research: Oral Pathology	Arr.
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G948	General Radiography	2
G959	Oral Microbiology	1-3
G967	Advanced Periodontics	4
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2
G996	Epidemiology	1-3

ORTHODONTICS

This program of graduate instruction is offered for the dentist desiring to specialize in the field of orthodontics. The primary objectives of the course are:

1. The development of an appreciation of optimal occlusion in the broadest sense with special consideration to function, stability, and esthetics.

2. The gaining of a thorough knowledge of the dentofacial complex with reference to anatomical structure, variation, and growth and development, and their demonstration by analytic methods.

3. The development of an awareness of soft and hard tissue changes during growth and repair, and response to these tissues to local and systemic influences including mechanical therapy.

4. The acquiring of an understanding of the principles and materials involved in the bio-mechanics of treatment and proficiency in the techniques involved.

A total of 30 semester hours is required, 14 hours in the major field and a minimum of 6 hours in an elective minor. An original research project and a thesis are also required. An M.S. or M.S.D. is conferred upon the satisfactory completion of the requirements and a minimum residence of 21 months.

REQUIRED COURSES

Major: Orthodontics		
G900	Statistics	2
G902	Advanced Oral Pathology	3
G905	Special Pathology of Bone	2
G909	Recent Advances in Dentistry	1
G912	Specifications and Test Methods in Dental Materials	2
G927	Research: Orthodontics	6
G947	Cephalometrics	4
G958	Biomechanics	2
G960	Advanced Orthodontic Clinic	6
G963	Advanced Orthodontic Techniques	2
G964	Dento-Facial Analysis	2
G991	Advanced Anatomy of the Head and Neck	2
G994	Applications of Genetic Principles to Problems in Dentistry	2
* Fundamentals of Occlusion		
* Record Procurement		
* Speech Physiology and Pathology		
* Caries Prevention		
* Theoretical Mechanics		
* Orthodontic Appliances		
* Speech and Myofunctional Therapy		
* Mixed Dentition Treatment		
* Staff Clinical Seminars		
* Histopathology of the Periodontal Membrane		
* Cleft Lip and Palate Rehabilitation		
* Occlusal Equilibration		
* Orthodontics and Allied Specialities		

ELECTIVES†

G901	Advanced Oral Histology and Embryology	2
G911	Theory of Dental Metallurgy	1-5
G917	Maxillofacial Prosthesis	1
G948	General Radiography	2
G955	Endocrinology	1-3
G974	Advanced Nutrition	2

PEDODONTICS

The program of graduate instruction is designed to prepare a graduate dentist to practice pedodontics as a specialty. It is, likewise, the intention to provide an educational background for those who plan to enter the field of pedodontic teaching or research.

The objectives of the course are as follows:

1. Develop in the student the ability to manage or direct the child patient's behavior in a dental chair and the child-parent relationship during the appointment.
2. Develop mastery of the scientific, operative, and prosthodontic procedures required during the periods of the deciduous, mixed, and immature permanent dentition.

* Denotes noncredit courses.

† Other elective courses may be considered on approval of the Orthodontic Department and the Graduate Committee.

3. Obtain a thorough knowledge of the physical and chemical properties of the materials employed in the practice of pedodontics and outstanding skill in the manipulation of these materials.

4. Develop skill in the removal of teeth for the age group being treated and the management of the minor oral surgery problems that arise in a pedodontic practice.

5. Become familiar with the practice of scientific root surgery and pulp therapy for young teeth and the skillful management of traumatized teeth.

6. Acquire ability to diagnose and treat any growth development and health problem of childhood which is within the province of the pedodontist.

7. Acquire ample knowledge with which to direct the child and parent in an adequate dental health program and to institute all recognized preventive measures.

8. Provide experience with the scientific method and the critical appraisal of information in the literature.

The Master of the Science in Dentistry with a major in Pedodontics will require a minimum of 30 semester hours of credit. A total of 10-12 hours is required in the major; 6-8 hours in a selected minor; and in addition, 6 hours in an elective field of study and the satisfactory completion of an original research problem.

RECOMMENDED COURSES

Major: Pedodontics		Hours
G902	Advanced Oral Pathology	1-6
G909	Recent Advances in Dentistry	1
G922	Research: Pedodontics	1-6
G931	Advanced Pedodontics	2
G934	Advanced Clinical Pedodontics	1-3
G935	Dental Pediatrics	2
G936	Principles of Pedodontic Restorative Procedures	2
G945	Pedodontic Seminar	1
G947	Cephalometrics	2-4
G962	Fundamentals of Occlusion	2-4
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G900	<i>Dentistics</i>	2
G901	Advanced Oral Histology and Embryology	2
G907	Oral Surgery Pathology Conference	1/2
G912	Specifications and Test Methods in Dental Materials	1-3
G917	Maxillofacial Prosthesis	1
G946	Advanced Clinical Radiography	1
G965	Histophysiology and Pathology of the Periodontium	2
G968	Advanced Clinical Oral Diagnosis-Oral Medicine	2
G976	Advanced Preventive Dentistry	2
G977	Preventive Dentistry Laboratory	1
G993	Animal Experimental Procedure	2
G994	Applications of Genetic Principles to Problems in Dentistry	2
G999	Public Health Practice	1-3

G987 *Clinical Field Studies - Foundations of Teaching* - 1-3

G984 *Seminars in Psychosocial Foundations of Teaching* - 1

G983 *Dental Problems of Special Population Groups* - 1-3

PERIODONTICS
The relationships between problems of occlusion, nutrition, biochemistry, bacteriology, and pathology are all stressed for the student interested in improving his knowledge and skill in the treatment of diseases of the oral soft tissue. The M.S.D. degree may be obtained

G974 *Advanced Nutrition* - 2

after satisfactorily completing at least 15 hours of work in the major fields, 6 to 8 hours in an approved minor subject and 6 hours from the selected elective courses. An original research problem and a thesis are also required.

REQUIRED COURSES

Major: Periodontics		
G901	Advanced Histology and Embryology	2
G902	Advanced Oral Pathology	3
G905	Special Pathology of Bone	2
G907	Oral Surgery Pathology Conference (2 semesters, ½ credit each)	1
G909	Recent Advances in Dentistry	1
G910	Seminar	1
G928	Research: Periodontics	Arr.
G965	Histophysiology and Pathology of the Periodontium	2
G966	Advanced Clinical Periodontics	1-4
G967	Advanced Periodontics (2 semesters, 2 hours each)	4
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

G948	General Radiography	2
G955	Endocrinology	2
G959	Oral Microbiology	2
G968	Advanced Clinical Oral Diagnosis-Oral Medicine	2
G976	Advanced Preventive Dentistry	2
G991	Advanced Anatomy of Head and Neck	2-3

In addition to the above, any course listed in the *Bulletin of the Graduate School* may be taken as an elective.

PREVENTIVE DENTISTRY

It would not be difficult to justify the existence of a major study program in preventive dentistry, for probably upon no other subject does the autonomous future of dentistry depend. The M.S.D. study program in preventive dentistry is based upon a thorough correlation between public health, periodontics, and dental caries, and is clearly dependent upon the course in radiology. The application of biochemistry principles, the understanding of caries diagnostic tests, and the relationship of nutrition to dentistry are all stressed in this program. A minimum of 18 hours in the major field is required, in addition to 6 hours from the selected elective courses, besides a thesis and a research problem.

REQUIRED COURSES

Major: Preventive Dentistry		Hours
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G930	Research: Preventive Dentistry	Arr.
G967	Advanced Periodontics (2 semesters, 2 hours each)	4
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2
G977	Preventive Dentistry Laboratory	1-3
G982	Clinical Field Studies	1-3
G983	Dental Problems of Special Population Groups	1-3
G985	Fluoride Metabolism	2
G995	Biostatistics	3
G996	Epidemiology	2
Minor: 6 to 8 hours, credit arranged		

18 hrs
only
including
research

ELECTIVE COURSES

G902	Advanced Oral Pathology	1-6
G934	Advanced Clinical Pedodontics	1-6
G948	General Radiography	2
G971	Intermediary Metabolism	3
G973	Vitamins, Mineral Metabolism, and Hormones	2

PROSTHETIC DENTISTRY

Due to the complex problems involved and the difficulties encountered in general practice in the field of prosthetic dentistry, an increasing need has arisen for additional training and guidance at the graduate level. The advanced course in prosthetics leading to the M.S.D. degree is intended to provide a wide variety of clinical experience, with the more difficult prosthetic cases coupled with a sufficient number of theory courses to broaden the interested practitioner in this field. A minimum of 12 hours in the major field is required. In addition, 8 hours in a minor subject, 6 to 8 hours in elective courses, and a satisfactory thesis are required.

REQUIRED COURSES

Major: Prosthetic Dentistry		Hours
G902	Advanced Oral Pathology	1-6
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G914	Advanced Prosthetic Theory	1-3
G915	Advanced Prosthetic Clinic	1-6
G916	Special Problems in Prosthetic Design	1-4
G917	Maxillofacial Prosthesis	1
G919	Research: Prosthetics	Arr.
G940	Advanced Clinical Instruction in Crown and Bridge Prosthodontics	1-6
G962	Fundamentals of Occlusion	2-4
G991	Advanced Anatomy of Head and Neck	1-3
Minor: 6 to 8 hours, credit arranged		

ELECTIVE COURSES

Surgical consideration in prosthodontia:		
G901	Advanced Oral Histology and Embryology	2
G911	Theory of Dental Metallurgy	1-5
G913	Clinical Application of Dental Materials	1-4
G947	Cephalometrics	4
G948	General Radiography	2
G967	Advanced Periodontics	4
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2

PUBLIC HEALTH

With the current interest in communal fluoridation, child health school programs, and public health in general, there is a constant need for dentists specially skilled in public health methods. This course is correlated with preventive dentistry and is designed for those interested in preventive measures. It consists of a maximum of 16 hours in the major field, 7 to 9 hours in an elective minor, and a satisfactory thesis.

REQUIRED COURSES

Major: Public Health		Hours
G909	Recent Advances in Dentistry	1
G910	Seminar (2 semesters, 1 hour each)	2
G933	Research: Public Health	Arr.
G982	Clinical Field Studies	1-3
G983	Dental Problems of Special Population Groups	1-3
G985	Fluoride Metabolism	2
G995	Biostatistics	4
G996	Epidemiology	3
G997	Man and His Environment	2
G998	Community Health Service	4
G999	Public Health Practice	1-6
Minor: 7 to 9 hours, credit arranged.		

ELECTIVE COURSES

G908	Advanced Radiographic Interpretation	2
G971	Intermediary Metabolism	3
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2
G977	Preventive Dentistry Laboratory	1-3

RADIOLOGY

The graduate program in radiology is offered primarily to those who wish to prepare themselves for a career in teaching and research. The program is designed to encourage the acquisition of a comprehensive understanding of those fundamental concepts of physics, mathematics, chemistry, and biology which form the basis for: (1) practical clinical oral radiography; and (2) a critical appreciation of contemporary research utilizing ionizing radiation. The general program presents a threefold approach to the subject: (1) intra-oral and extra-oral radiographic technics; (2) radiographic interpretation; and (3) radiation biology. The individual's program will be planned according to his interests and objectives and will consist of lectures, laboratories, clinics, seminars, and a research project leading to a written thesis. To obtain the M.S.D. degree in radiology, the following minimum requirements must be fulfilled: (1) a total of 30 hours, (2) 14 hours in the major, (3) 6 hours in a minor, (4) a research problem, and (5) a written thesis. The following program outline is suggested as meeting the minimum didactic requirements.

REQUIRED COURSES

Major: Radiology		Hours
G908	Advanced Radiographic Interpretation	2
G910	Seminar	1
G924	Research: Radiology	6
G946	Advanced Clinical Radiography	2
G948	General Radiography	2
G961	Advanced Radiographic Concepts	1
G975	Basic Radiological Physics	2
G978	Fundamentals of Radiation Biology	2
G979	Radiology Literature Evaluation	1
Minor: 6 hours		

ELECTIVE COURSES

G904	Special Pathology of Neoplasms	3
G974	Advanced Nutrition	2
G976	Advanced Preventive Dentistry	2
G977	Preventive Dentistry Laboratory	1-3

Postgraduate Study in Dentistry

Students who wish to take graduate courses in dentistry, but do not wish to study for an advanced degree or who are not eligible to enter the Graduate Dental Program, may take some of the courses as postgraduate students. Students taking postgraduate courses will receive academic credit by paying the regular fees for such courses and are given a certificate of attendance upon the completion of the courses taken. The grades earned will be recorded in the Office of Records and Admissions and will also appear on official University transcripts.

The Curriculum for Dental Hygienists

Dean and Professor HINE; Professors PHILLIPS, SHAFER, VAN HUYSEN; Assistant Professors FISK (Director), BECK, GIFFORD, MATLOCK, STANDISH, STARKEY; Instructors ACKERMAN, HERMAN, HODGES, NORMAN, TOTTEN. In addition, staff includes faculty members from the School of Medicine, the Indiana University Center at Indianapolis, and the Indiana State Board of Health.

Because of the rapidly increasing need for dental hygienists, the Indiana University School of Dentistry offers a two-year curriculum leading to a Certificate in Dental Hygiene. A four-year program leading to a Bachelor of Science degree in Public Health Dental Hygiene is also available through the Division of Allied Health Sciences.

The dental hygienist is proving to be a valuable aid to the dentist, since she can make an important contribution to the dental health of patients. The dental hygienist studies a professional program which entitles her, upon graduation and successful passage of a state board examination, to perform a specific service in the mouths of children and adults, to take and develop X rays, and to assume other responsibilities in the dental office, or to participate as a health worker in a city, state, or county health program. Dental hygienists should not be confused with dental assistants, since the training of a dental assistant is primarily vocational education, or on-the-job training, as she does not work directly on patients and is not licensed by the state. Most dentists who employ a dental hygienist also employ one or more dental assistants.

The history of the profession of dental hygiene is within the life span of many of its members. The profession emerged in the second decade of this century because some progressive members of the dental profession were convinced that dentistry should not be practiced solely for the *relief* of pain, but also for the *prevention* of such discomfort. A few dentists became interested in developing preventive methods and required their patients to return to the office at regular intervals for a dental prophylaxis (cleaning of teeth) and to exercise daily home care of the mouth as instructed. The results of this type of practice were very gratifying, but so time-consuming that most dentists did not have sufficient time for the necessary amount of restorative work which was still necessary, and which was their chief source of income.

Dr. Alfred C. Fones, of Bridgeport, Connecticut, solved the problem by training his dental assistant as a hygienist, so that she could perform a dental prophylaxis. Today courses for dental hygienists are offered by many of the leading colleges and universities of the country, and hygienists are licensed by law to practice in the District of Columbia, and in all the states of the United States, including Hawaii and Alaska.

Since each year more qualified applicants apply than can be accepted, only those who show an aptitude for and interest in a professional career and the ability to pursue academic work of college level are admitted. Applicants must be between eighteen and thirty years of age and graduates from an accredited high school. Their high school records must be of college preparatory quality and must include courses in biology and chemistry. Applicants are encouraged to attend a liberal arts college for a year before they register in the Dental Hygiene Curriculum. Only a few are ever admitted directly from high school.

Dental hygiene students whose homes are not within commuting distance of the Medical Center can live on the campus. The rent is \$40 a month.* Meals can be obtained in the Student Union at a cost of approximately \$2 a day.

*Dental hygiene students who are legal residents of the state of Indiana are charged a basic fee of \$10 a credit hour; for nonresidents, the basic fee is \$23.50 a credit hour. Books, instruments, and uniforms cost approximately \$250 for the first year and \$100 for the second year.

For further information, write to the Director, Curriculum for Dental Hygienists, Indiana University School of Dentistry, 1121 West Michigan Street, Indianapolis, Indiana, 46202.

COURSES FOR TWO-YEAR CURRICULUM FOR DENTAL HYGIENISTS LEADING TO A CERTIFICATE

H100-H101. Human Biology I-II: First Year. (4-4 cr.)

DRS. VAN HUYSEN, STANDISH.

A combined course including anatomy, physiology, and pathology, which assures better integration and more realistic approach. Designed to give the fundamentals of gross and microscopic anatomy and physiology; functions of the systems of the human body and principles of disease production. Special emphasis is placed on the head and neck.

H102. Dental Prophylaxis Technic: First Year. (3 cr.)

MISS ACKERMAN, MISS FISK, MRS. TOTTEN.

In this course the student is instructed, on manikin heads, to develop operative technic in removing stains and deposits from the surfaces of teeth.

H103. Clinical Practice: First Year. (4 cr.) Miss Fisk and Staff.

In this course the student begins treatments of children and adult patients, and receives instruction in mouth examination and treatment planning in the Department of Oral Diagnosis. A series of lectures will be given to acquaint the student with various phases of dentistry.

H104. Dental Anatomy: First Year. (3 cr.)

DR. HODGES, MISS ACKERMAN, MRS. TOTTEN.

This course includes the gross study of the morphology of teeth, their arrangement, and occlusions. Reproductions are made of various types of human teeth.

H105. Chemistry and Nutrition: First Year. (3 cr.) Dr. NORMAN.

This course is intended to give the student a sufficient knowledge of chemistry to prepare her to be a dental hygienist. Specific ideas in chemistry are correlated with working principles in dentistry. A previous knowledge of chemistry is assumed.

* Rates and fees are subject to change by action of the Board of Trustees.

H106. Preventive Dentistry. (1 cr.) Dr. HERMAN.

This is a series of lectures which are designed to acquaint the dental hygiene student with various aspects of the detection and the prevention of dental disease.

H108. Pharmacology and Therapeutics: First Year. (1 cr.) Mr. GIFFORD.

In this course, the student learns something about the actions and uses of drugs and the theory of anesthetics, with emphasis placed on those used in dentistry.

H201-H202. Clinical Practice I-II: Second Year. (5-5 cr.) Miss FISK and Staff.

Continuous experience on patients is received in the School of Dentistry and in the Riley Hospital. To integrate procedures taught in didactic courses with practice, students are assigned to the Departments of Oral Surgery and Radiology. Lectures on the various phases of dentistry are continued.

H203. Radiology: Second Year. (2-1 cr.) Dr. BECK.

This course includes a thorough consideration of the principles associated with the production of Xrays, manipulation of the X-ray machine, intra-oral film placement, film processing, and radiographic interpretation of normal anatomical structures seen on intra-oral radiographs. Students are assigned to the Radiology Clinic throughout the year to develop their skill in radiography.

H204. Oral Pathology: Second Year. (2 cr.) Dr. SHAFER.

This course is designed to acquaint the student with developmental abnormalities and acquired disorders of the teeth and surrounding structures. Illustrated lectures and clinical observations are used to develop the student's concept of deviations from normal.

Allied Health E443. Public Health Education Methods. (3 cr.)
(2 hours, lecture; 1 hour, laboratory) Dr. COLASUONNO.

Consideration of the more usual techniques of group work; investigations of social and psychological factors which determine the effectiveness of group work in promoting public health activities; study of necessary tools and procedures. Laboratory provides opportunity for gaining competence in group work and in the design, construction, and use of materials.

H208. Dental Materials: Second Year. (2 cr.) Mr. PHILLIPS.

This course introduces the student to materials used in restorative dentistry, prosthetic dentistry, and orthodontics, to a study of their manipulation, and, to a limited extent, to their actual application in dentistry.

H209. Practice of Community Dental Hygiene: Second Year.
(2 cr.) Dr. GISH and Staff.

This course affords the student supervised field experience in a school health program through the cooperation of the State Board of Health.

H210. Technical Writing: Second Year. (2 cr.) Staff.

Required course for dental hygienists. This is an integrated course combining the evaluation and reporting of research in dentistry.

Education P100. Introduction to Educational Psychology. (First
year.) (3 cr.) Staff.*

An introduction to general psychology, designed to give the student an understanding of himself and other people through the study of sensation, emotion, intelligence, personality, motivation, learning, thinking, and the nervous system. Lectures and class discussion will be supplemented by group and individual experiments and demonstrations.

* From the Indianapolis Downtown Campus.

Education P200. Child Development. (Second year.) (3 cr.)
Staff.*

Prerequisite, P100 or equivalent. This course considers children's mental, physical, emotional, and social development in relation to their adjustment to school, with emphasis on the kinds of attitudes, knowledge, and habits that are characteristic of teachers who understand children.

English W131-W132. Elementary Composition I-II. (First year.)
(2-2 cr.) Staff.

No prerequisite. A course in written English beginning with the acquisition of skills in simple description, narration, and exposition and progressing to the practice of persuasion and documentation in support of a thesis.

HPER H160. First Aid (Red Cross). (Second year.) (1 cr.)
Staff.

A lecture and demonstration course on first-aid measures for wounds, hemorrhage, burns, exposure, sprains, dislocations, fractures, unconscious conditions, suffocation, drowning, and poisons with skill training in all procedures.

Microbiology J107. Microbiology for Dental Hygiene Students.
(First year.) (3 cr.) Mr. RAIDT.

Required course for dental hygienists. Basic problems of dental microbiology are considered in lectures and laboratory. Emphasis is placed on host-parasite relationships as particularly related to bacterial, fungal, and viral infections. Methods of sterilization and aseptic techniques are likewise emphasized.

Allied Health H301. Public Health Organization and Administration.
(3 cr.) Dr. COLASUONNO.

An introductory course to acquaint the student with the historical background, early development, and objectives of public health; its structure at federal, state, and local levels. Legal and financial aspects, organization, administration, and program content. The function of each professional category of personnel, with emphasis upon community understanding and cooperation.

Sociology S161. Principles of Sociology. (First year.) (3 cr.)
Staff.*

This course describes and interprets the nature of interpersonal relationships, societies, groups, and communities, and such institutional areas as the family, industry, and religion; the social process operating within these areas; their significance for problems of personality, human nature, social disorganization, and social change.

†Speech S121. Public Speaking I. (Second year.) (2 cr.) Staff.

This is a basic course in the theory and practice of public speaking, giving training in thought processes necessary to organized speech content, personality, components of effective delivery, and use of voice, body, and language.

Allied Health S321. Environmental Sanitation. (3 cr.) Mr. ADAMS.

A survey course. Considers broad objectives of environmental sanitation through application of sanitary procedures on a community-wide basis. Control of water supplies, sewage systems, solid waste handling, air hygiene, food and milk sanitation, housing, radiological health, insect and rodent control are discussed in the light of their influence on man's health.

* From the Indianapolis Downtown Campus.

† Required for graduation, but not offered by the School of Dentistry.

DENTAL HYGIENE CURRICULUM

FIRST YEAR

Courses	First Semester Laboratory or Clinic		Second Semester Laboratory or Clinic		Total Credit Hours	Total Clock Hours
	Lecture	Clinic	Lecture	Clinic		
Human Biology	3	1	3	1	8	160
*English Composition	2	0	2	0	4	64
Principles of Sociology			3	0	3	48
Dental Anatomy	1	2			3	80
General Chemistry and Nutrition	3	0			3	48
Dental Prophylaxis Technique	1	2			3	80
Microbiology			1	2	3	80
Introduction to Educational Psychology			3	0	3	48
Pharmacology and Therapeutics			1	0	1	22
Clinical Practice			1	3	4	160
Preventive Dentistry			1	0	1	16
Total					36	806

SECOND YEAR

*Public Speaking	2	0			2	32
Oral Pathology	2	0			2	32
Clinical Practice	1	4	1	4	10	416
Dental Materials	1	1			2	48
Radiology	2			1	3	80
Public Health Education Methods			3	0	3	48
Public Health Organization and Administration			3	0	3	48
Child Development			3	0	3	48
First Aid			1	0	1	22
Community Practice of Dental Hygiene			0	†2	2	105
Technical Writing			2	0	2	32
Environmental Sanitation			3	0	3	48
Total					36	959
Grand Total						1,765

DEGREE PROGRAM

A program leading to a Bachelor of Science in Public Health Dental Hygiene is offered by the Division of Allied Health Sciences of the School of Medicine. This program prepares the student for administrative positions in departments of public health and in schools for dental hygienists. Credit received in the Dental Hygiene Curriculum may also be applied on degrees in other areas.

For further information relative to the degree program, write to the Director, Public Health Dental Hygiene, Indiana University Medical Center, 1300 West Michigan Street, Indianapolis, Indiana, 46207.

TRANSFER STUDENTS

Transfer students from other colleges and universities may register for either the certificate or the degree program. All applications will be reviewed by the Committee on Admissions for dental hygiene students. Although credit will be granted for comparable liberal arts courses, the student will be required to take all of the required professional courses.

* Required for graduation, but not offered by the School of Dentistry.

† 105 hours of field work.

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