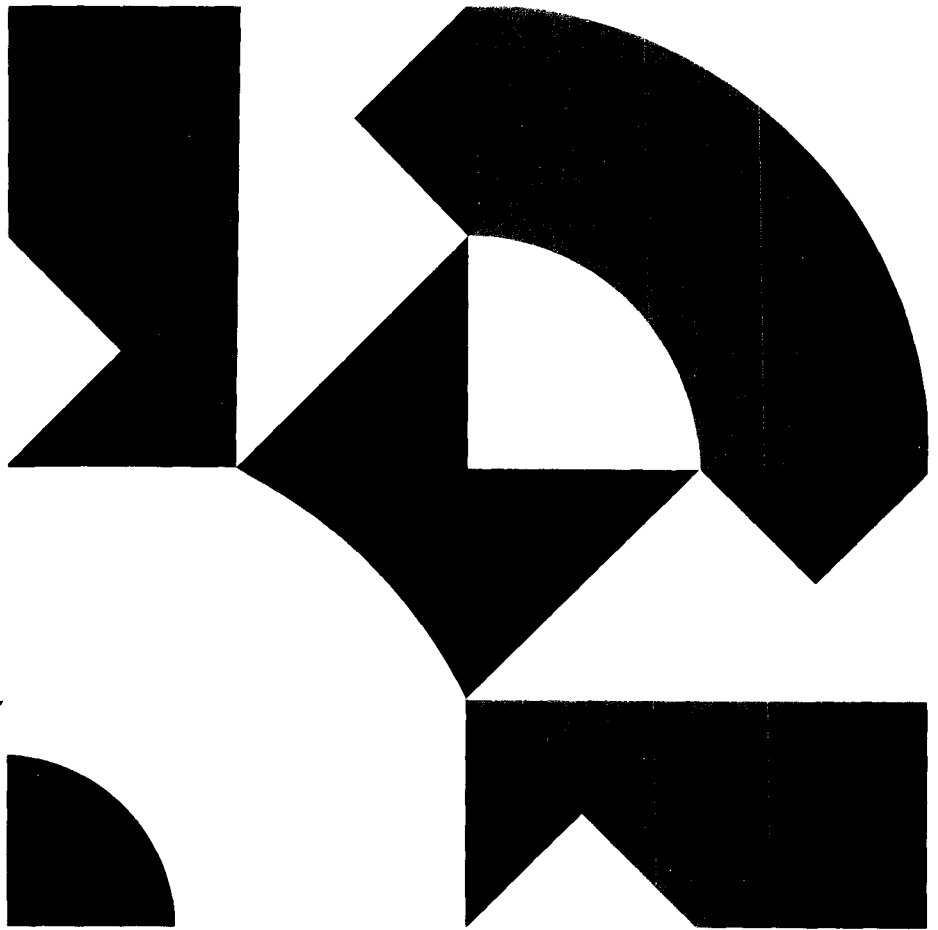


UNIVERSITY
OF MINNESOTA
BULLETIN

1978-1980

Volume 11, Number 1

SCHOOL OF DENTISTRY





UNIVERSITY OF MINNESOTA

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School of Dentistry

U N I V E R S I T Y O F M I N N E S O T A

FOUNDED IN THE FAITH THAT MEN ARE ENNOBLED BY UNDERSTANDING,
DEDICATED TO THE ADVANCEMENT OF LEARNING AND THE SEARCH FOR TRUTH,
DEVOTED TO THE INSTRUCTION OF YOUTH AND THE WELFARE OF THE STATE



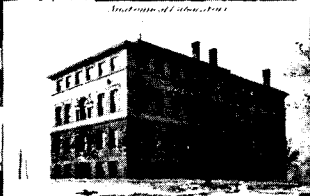
Anatomy class



Anatomy of laboratory



Operator technique



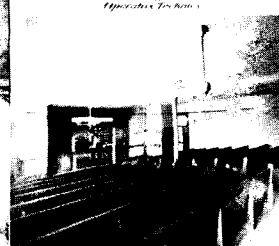
Medical Building



Dental clinic

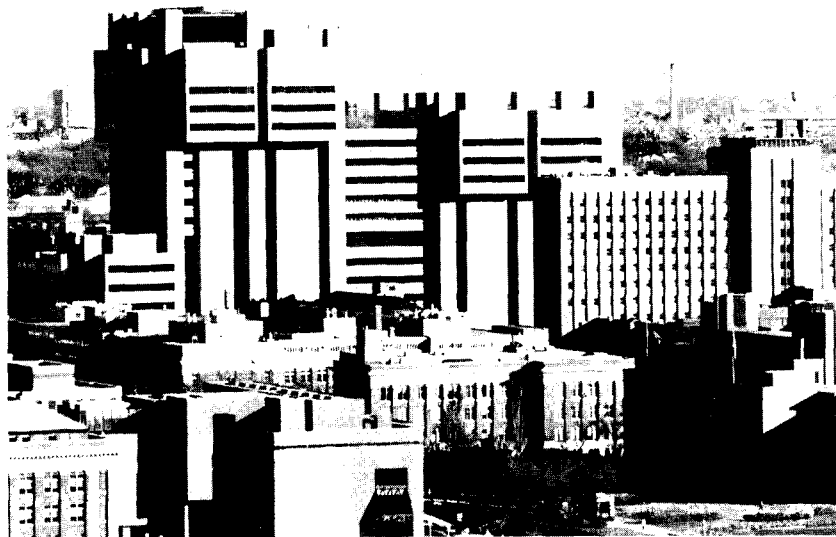


Dental school building



Dentures of class

Dental education circa 1894



University of Minnesota Health Sciences Center today

School of Dentistry

I. GENERAL INFORMATION

History and Governance

The University of Minnesota was chartered in 1851, 7 years before the Territory of Minnesota became a state. In 1888, the University took over the Minnesota College Hospital, a private school of medicine that since 1883 had been offering courses of instruction in dentistry and medicine. The College of Dentistry was one of three colleges included in the Department of Medicine established by the University in 1888. The College of Dentistry, organized as a separate college in 1892, changed its name to the School of Dentistry in 1932.

Minnesota's Board of Regents in 1968 changed the title of the University's Medical Center to the University of Minnesota Health Sciences Center. In 1970 the Health Sciences were reorganized with the appointment of a vice president who reports to the University president and has the ultimate administrative responsibility for the academic and service units in the Health Sciences. The deans of the health science schools and the director of University Hospitals constitute the Council of Deans and Directors, which serves as the primary advisory body to the vice president for the health sciences. The council's members represent the College of Pharmacy, College of Veterinary Medicine, Medical School, School of Dentistry, School of Nursing, School of Public Health, and University Hospitals. The Office of Vice President for the Health Sciences and the Council of Deans and Directors are responsible for planning and determining basic policy for the Health Sciences.

The dean is the chief administrator of the School of Dentistry. An Executive Committee, composed of divisional chairpersons and other full-time faculty members, is the legislative body of the school and advisory body to the dean.

Equal Opportunity Statement

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Section 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, 330 Independence Avenue S.W., Washington, D.C. 20201.

Programs

The School of Dentistry conducts an extensive selection of education, research, and service programs. It offers a program in dentistry leading to the doctor of dental surgery degree, graduate activity at the M.S. and Ph.D. levels, and programs for auxiliary personnel in dental hygiene and dental assisting. The School of Dentistry is a full member of the American Association of Dental Schools.

General Information

DENTISTRY, DENTAL HYGIENE, AND DENTAL ASSISTING PROGRAMS

The undergraduate programs in dentistry, dental hygiene, and dental assisting are approved by the Council on Dental Education of the American Dental Association. These programs are described in later sections of this bulletin.

BACHELOR OF SCIENCE DEGREE

The bachelor of science degree will be granted to all students in the School of Dentistry who have satisfactorily completed the specified course requirements for the 3 years of pre-dental liberal arts study and 2 years of dental study. The degree is optional on the part of the student. Application for the bachelor of science degree should be made before the student completes the D.D.S. degree.

Students who qualify may earn the B.S. degree with distinction or with high distinction.

Students must satisfy the requirements of the All-University Council on Liberal Education to be eligible for the B.S. degree. These requirements are designed to help all students acquire a broad and better understanding of self, nature, and society.

During the 3 or more years of liberal arts study, students must satisfy the following distribution requirements to be eligible for the B.S. degree.

1. 9 credits in English composition, with waiver accepted if advanced English course carries less than 9 credits for composition or student is exempted from English.
2. 48 credits distributed among the four categories of knowledge listed below, with a minimum of 9 credits in each.
 - A. *Communication, Language, Symbolic Systems*
Linguistics, logic, rhetoric, philosophical analysis, mathematics, and English and foreign language communication skills.
 - B. *The Physical and Biological Sciences*
The physical universe: chemistry, physics, geology, natural science, astronomy, and geography. The biological universe: biology, zoology, genetics, anthropology, entomology, botany, and natural science.
 - C. *Man and Society*
The analysis of human behavior and institutions: social science, anthropology, economics, geography, political science, psychology, sociology, and speech. The development of civilization: historical and philosophical studies in humanities, classics, history, and philosophy.
 - D. *Artistic Expression*
Art, music, architecture, speech and theatre arts, foreign or American literature, and languages.

GRADUATE PROGRAMS

Graduate education in dentistry is offered at the master of science level through the Graduate School. A doctor of philosophy degree in oral biology is also offered through the Graduate School. The programs are designed to meet the needs of members of the dental profession in education, research, and specialty practice.

Advanced specialty training programs in dentistry are offered in endodontics, oral biology, oral pathology, oral radiology, oral surgery, orthodontics, pediatric dentistry, periodontics, and prosthodontics. These specialty programs are approved

by the Council on Dental Education of the American Dental Association.

For descriptions of graduate programs and courses in dentistry, see the *Graduate Programs in the Health Sciences Bulletin*.

CONTINUING EDUCATION PROGRAM

The Department of Continuing Dental Education regularly offers a series of short courses in dentistry, dental hygiene, and dental assisting. These courses are intended to meet the needs of members of the profession for studies of material not normally covered in the undergraduate curriculum as well as new developments in research and clinical procedures and concepts. Sessions usually are 3 days to 1 week in duration. In some courses clinical practice is included. Special brochures listing courses, dates offered, and costs are available to those requesting that their names be placed on the department's mailing list. Inquiries about course offerings should be mailed to: Director, Department of Continuing Dental Education, 6-406 Health Sciences Unit A, 515 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Objectives

The School of Dentistry is devoted to the advancement of the dental profession through teaching, research, and service. Its objectives are:

Teaching

1. To prepare undergraduates for high quality professional practice through the acquisition of skills, knowledge, and attitudes essential to the practice of dentistry.
2. To conduct educational programs based on a strong foundation of scientific and biological principles that gives students an understanding of the patient's total health and teaches them to plan, execute, and direct oral health treatment and preventive measures as part of general health care.
3. To inculcate in students a community-conscious attitude, an understanding of the sociological and psychological aspects of health and disease, and an appreciation for the obligations of a professional person in general and a member of a health profession in particular.
4. To provide students with experience in working with auxiliary personnel and practicing team dentistry.
5. To prepare dental auxiliary personnel to assist the practicing dentist and to perform clinical duties consistent with their skills and training.
6. To provide graduate-level training for the preparation of individuals interested in careers in research, academic dentistry, and specialty practice.
7. To teach undergraduate and graduate students the essentials of practicing dentistry in hospitals and community health centers.
8. To stimulate students to conduct research, to think critically, and to understand public health needs and preventive dentistry.
9. To utilize the most advanced teaching methods in a curriculum subject to constant review.
10. To promote needed programs of continuing education for dental practitioners and related health professionals.

General Information

11. To integrate the teaching programs of the school with those of the other health sciences and the community.
12. To provide other health science workers and the University community with insight into the importance of oral health.
13. To inform and influence the community and society about the benefits of good oral health.

Research

1. To advance the knowledge of oral health with an active, expanding fundamental and applied research program.
2. To investigate various educational methods and to develop new techniques and measurements for evaluating educational programs to determine the need for change and improvement.
3. To investigate community oral health problems, causes of oral disease, and methods of preventive care.
4. To develop an environment conducive to full and open inquiry into all facets of health, disease, and education applicable to the role of dentistry in total health care.

Service

1. To provide exemplary care for patients treated in the clinics.
2. To provide prompt and efficient consultative services to dental practitioners, medical practitioners, and other health science professionals.
3. To promote and cooperate with communities on oral health service projects consistent with the mission of the dental school.
4. To demonstrate an attitude of social responsibility and sensitivity while undertaking and carrying out the school's service programs.
5. To share and disseminate oral health knowledge with dental practitioners, other health science workers, and the public.

Facilities

The School of Dentistry, which has been housed in six different buildings since its founding, is now located in the Health Sciences Unit A building south of Washington Avenue, between Union Street and Harvard Street, on the Minneapolis campus. The address is 515 Delaware Street S.E., Minneapolis, Minnesota 55455. The school's facilities, constructed with state and federal funds, provide an excellent environment for the teaching and practice of dentistry and permit greater flexibility and innovation in curriculum design for undergraduate and graduate instruction. New research facilities allow opportunity for expanded research activities to complement the educational programs. All the basic science teaching laboratories are located in the Health Sciences Unit A building except the anatomy laboratories, which are located in an adjacent building.

The dental school is part of a great university health center. The school is adjacent to the University of Minnesota Hospitals and the Biomedical Library. The center and associated teaching hospitals provide students with excellent facilities for the study of dentistry and allied dental fields.

The highly specialized teaching staff includes instructors from the dental school, the University and other teaching hospitals, the basic medical science departments,

and departments of other academic disciplines. Instruction is offered through lectures, laboratory courses, seminars, closed-circuit television, demonstrations, and clinical practice in the dental clinics and hospitals.

Students in dentistry enjoy all the advantages that come from participation in the activities of a university composed of academic, scientific, and professional colleges. The dental school is located on the Minneapolis campus of the University, and a variety of cultural and recreational opportunities are also available to students.

Libraries

The University Libraries system ranks as one of the 10 largest college library systems in the United States. The system houses over 4 million volumes and many periodicals and pamphlets covering every subject in the University curriculum. The O. Meredith Wilson Library, located on the West Bank of the Minneapolis campus, serves as the headquarters of the library system. Its large, airy reading rooms provide an excellent place to study.

The Biomedical Library in Diehl Hall is located 1 block south of the Health Sciences Unit A building housing the School of Dentistry. It includes an extensive selection of reference materials in the fundamental and clinical health sciences. Reference books, texts, and treatises are kept on open shelves in this library. This section of the library includes all available literature on dentistry in book and periodical form; new volumes are purchased for the dental collection as soon as they have been recommended by the Library Committee of the faculty in dentistry. This library, with over 250,000 volumes and over 3,500 current periodical subscriptions, offers students excellent resource materials for the study of the science and practice of dentistry and provides a quiet, conveniently located place to study.

Reference books and periodicals for the use of dental students are located in the Reading Room on the ninth floor of Health Sciences Unit A, and nonprint resource materials are located in the Learning Resources Room on the eighth floor of Health Sciences Unit A.

Boynton Health Service

Medical care and health counseling are provided at the Boynton Health Service for all students who pay the student services fee. For a detailed explanation of health care benefits, see the *General Information Bulletin*.

Coffman Memorial Union

The Coffman Memorial Union, located on the East Bank of the Minneapolis campus, provides a variety of recreational and rest facilities for students. The cafeterias and lunchrooms, meeting rooms, lounges for men and women, game rooms, bowling alleys, pool and billiard rooms, offices of student organizations, barber shop, beauty parlor, artcraft studio, and ballrooms are among the features that make the building a popular center of campus life.

Student Affairs

Each year the undergraduate students are requested to elect their class officers. These officers constitute the School of Dentistry Community Council, which serves as a liaison between the student body and the faculty. The council convenes with

General Information

faculty advisers to discuss matters of mutual concern to the students and faculty, and promotes and works on numerous projects and activities of interest and benefit to the students and the dental school in general.

The Student Affairs Committee, composed of students and faculty members, is assigned responsibilities for certain student activities and needs. These concerns include membership and participation in local and national student organizations, student ethics, students counseling, tutorial assistance, student financial aid and outside employment, alumni relations pertaining to students, student publications, housing, and special opportunities for students such as fellowships, internships, and residencies.

Information on student affairs and faculty and staff activities appears in *Contact Points*, the School of Dentistry newsletter published during the academic year and distributed to students, faculty members, and employees.

Four dental fraternities are active on the campus: Alpha Omega, Delta Sigma Delta, Psi Omega, and Xi Psi Phi. Matters of common concern to these fraternities are considered jointly by representatives of the four organizations. Each fall the fraternities sponsor a rushing event together.

Omicron Kappa Upsilon, the national dental honor fraternity, is represented at Minnesota by the Beta Beta Chapter. Students are elected to membership in the fourth year by the faculty. Election is on the basis of scholarship, character, and conduct. A maximum of 12 percent of the class is eligible.

Undergraduates are encouraged to become members of the American Student Dental Association and Minnesota Dental Association. For a nominal membership fee students receive the *Journal of the American Dental Association* and can participate in the insurance programs of the ADA. Membership in the Minnesota Dental Association permits students to participate in the loan and insurance programs of this association. Many students are also becoming active in the Council of Students of the American Association of Dental Schools.

The Council for Health Interdisciplinary Participation (CHIP) is an organization for health sciences students whose two major goals are to promote the interdisciplinary approach to health care delivery, and to provide services for and help meet the needs of health sciences students.

Student Personnel Services

Campus Assistance Center: 107 Temporary, North of Appleby

CHIP (Council for Health Interdisciplinary Participation) Office: 1-425 Health Sciences Unit A

Commonwealth Terrace Cooperative (Student Family Housing): 1250 Fifield Street, St. Paul 55108

Health Sciences Minority Program: 2-194 Frontier Hall

Health Sciences Student Personnel Services: 175 Frontier Hall

Health Service and Mental Health Clinic: Boynton Health Service, 410 Church Street S.E.

Housing Office: Comstock Hall, 210 Delaware Street S.E.

International Student Advisers Office: 717 East River Road

Minnesota Division of Vocational Rehabilitation: DVR Liaison Office, N588 Elliott Hall

Minnesota Women's Center: 306 Walter Library

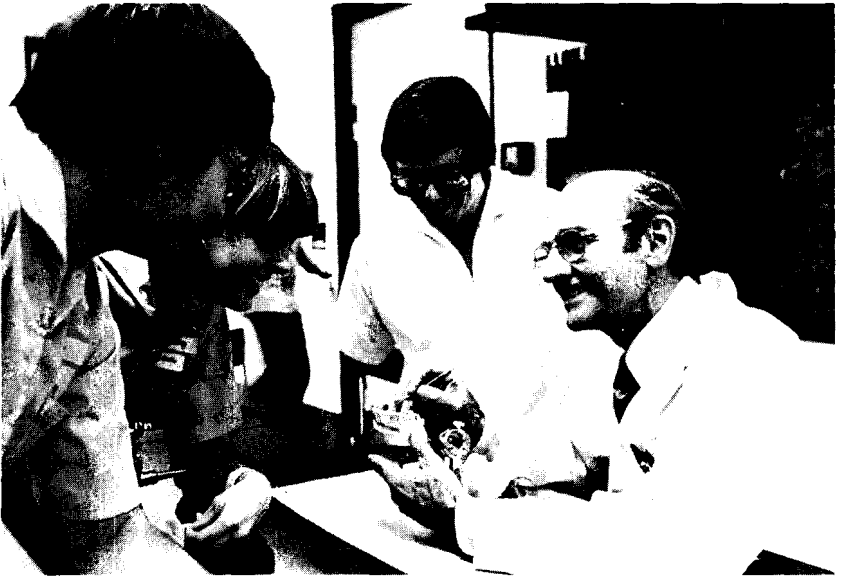
- Reading and Study Skills Center:** 101 Eddy Hall
Religious Activities Coordinator: 350 Coffman Union
Speech and Hearing Clinic: 115 Shevlin Hall
Student Activities Center: 350 Coffman Memorial Union
Student Counseling Bureau: 101 Eddy Hall
Student Employment Service: 6 Morrill Hall
University Student Legal Service: 720 Washington Avenue S.E.
Work-Study Program: 107 Armory



Dr. Burton Shapiro and Laura Sweney conducting a study using the scanning electron microscope



Dr. Dinh Quan demonstrating root canal preparation to students in clinical endodontics



Dr. Hubert Serr reviewing occlusal anatomy with students in the fixed prosthodontics laboratory

II. DOCTOR OF DENTAL SURGERY PROGRAM

The professional program in the School of Dentistry is a 4-academic-year curriculum. The fall quarter starts the Wednesday after Labor Day and runs for 14 weeks. The winter and spring quarters of 10 weeks each coincide with the University calendar. Students have the option of completing a portion of their clinical experiences during a summer term.

Teaching dentistry requires that students, patients, and faculty be brought together in a clinical environment in which all of the necessary instruments, supplies, and support personnel are available. Developing such an environment and bringing students and patients together within that environment is the responsibility of the clinical systems group. A computer-assisted records system provides the basis for selecting and assigning patients and for monitoring patient care, student progress, and clinic utilization. Records flow, cash flow, clinic communications, patient assignments, instrument sterilization, instrument and supplies distribution, and supervision of clinic support personnel are also under the direction of the clinical systems group.

Admission Requirements

General—A first-year class is admitted to the program in dentistry once a year, in the fall, although students planning to enter dental school can begin their pre dental studies at any time.

While high school credentials are not examined as part of the admission evaluation, students anticipating dental careers are urged to take a sound academic program in high school to prepare properly for the pre dental and dental programs. Classes should include mathematics, chemistry, physics, biology, foreign languages, English, and social studies.

A minimum of 135 quarter credits or 90 semester credits from an accredited college is required. (One semester credit is equivalent to 1½ quarter credits.) While acceptance is based primarily on quality of performance, applicants with a broad liberal education are looked upon with favor.

To help achieve the goals of a liberal education, the School of Dentistry prefers all students distribute some part of their pre dental college course work in areas of study other than those related to the biological and physical sciences. Pre dental students are urged to plan their course work to satisfy the University's liberal education distribution requirements (see page 12 of this bulletin for specific requirements).

The minimum scholastic average that will be considered is C, but acceptance is on a competitive basis and an average well above C is usually necessary to achieve admission.

Courses and minimum credits required for admission are listed below. Required courses must be completed by the end of the regular academic year (spring quarter) for enrollment the following fall. Therefore, completing required courses in the summer preceding fall admission is not acceptable.

Science course work must include both lecture and laboratory instruction. Exemptions and advanced courses with fewer credits will be recognized, but transcripts or other academic records must clearly identify these and individual evaluations will be made. Courses in biology, chemistry, and physics may be considered outdated if taken more than 5 years prior to the time of application. Only under unusual circumstances will satisfactory credits on a satisfactory-no credit grading system be accepted for required courses. Applicants may submit a maximum of the following percentage of S credits in elective courses: 10 percent of total credits for 3-year students, and 15 percent of total credits for 4-year students. It must also be emphasized that incomplete grades are looked upon with disfavor by the Admissions Committee. Any incomplete grades and any withdrawal grades in excess of one per academic year must be explained in the application.

Doctor of Dental Surgery Program

Required Courses

1. English—12 quarter credits. If the basic English course is less than 12 quarter credits, additional credits must be completed in composition, literature, speech, humanities (with emphasis on literature), or etymology to satisfy the minimum requirement.
2. General Biology or Zoology—10 quarter credits. General zoology alone is acceptable but not preferred. If the general course is less than 10 credits, additional credits can be taken in either area.
3. Physics—10-12 quarter credits. Complete the basic course required.
4. General Principles of Chemistry—12 quarter credits. These credits can include a course in qualitative analysis or quantitative analysis.
5. Organic Chemistry—8-10 quarter credits. The course content must include study of both the aliphatic and aromatic series. One-semester courses do not generally carry sufficient credits and are not of sufficient depth to be acceptable.
6. Mathematics—Applicants are expected to demonstrate by college validation or college credit a background in mathematics through college algebra.
7. General Psychology—5 quarter credits.

Elective Courses

Elective courses should be selected to achieve as broad and liberal an education as possible. A proper distribution of courses in the following categories of knowledge is recommended: (a) communication, language, symbolic systems; (b) physical and biological sciences; (c) man and society; (d) artistic expression.

Students are expected to select the following preferred electives if feasible: speech, art (e.g., basic drawing and sculpturing), cell biology, genetics, and child and adolescent psychology. Additional electives can be chosen from among the following subjects: analytical chemistry, accounting, anthropology, business (practical courses), classics, comparative anatomy, economics, etymology, history, humanities, logic, higher mathematics, political science, sociology, and a foreign language.

Individuals considering dental careers are urged to gain information on dentistry through discussions with professionals in the field and through direct observation of dental treatment and laboratory procedures in dental offices, dental laboratories, and dental school clinics and laboratories.

Prospective dental students anticipating the possibility of pursuing graduate study following completion of the D.D.S. degree should prepare themselves during their pre-dental studies by taking additional course work in higher mathematics and the sciences.

Required Entrance Tests—All applicants are required to take the Dental Admission Test prepared by the American Dental Association. It is given two times a year, usually in October and April, in many testing centers throughout the United States and in several foreign countries. It is administered on the Minneapolis campus of the University of Minnesota. Many applicants take the test as soon as they have completed the courses in biology, general chemistry, and organic chemistry.

Candidates must take the test by October of the preceding academic year for enrollment the following fall. The April testing date is not acceptable for candidates desiring admission the following fall. Although the test generally measures aptitudes rather than special knowledge, some specific questions are asked in biology, general chemistry, and organic chemistry; thus a review of these subjects prior to taking the test is suggested, particularly if courses in these areas have been taken more than 1 year before the test. An application form and a brochure describing the test, testing

centers, and dates the test is offered are available from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455, and from the School of Dentistry. These materials can also be obtained by writing to the Division of Educational Measurements, American Dental Association, 211 East Chicago Avenue, Chicago, Illinois 60611.

All candidates must also take the Minnesota Multiphasic Personality Inventory (MMPI) and the Strong-Campbell Interest Inventory (SCII). Instructions for taking these tests will be sent to applicants after their initial application is received through the American Association of Dental Schools Application Service.

Residence Requirements—First priority for admission is given to Minnesota residents, second to residents of neighboring states that do not have dental schools, and third to other nonresidents who have acceptable reasons for attending the University of Minnesota School of Dentistry.

Personal Interview—Candidates may be requested to appear for an interview at the discretion of the Admissions Committee. Prospective students may request an appointment if they wish to discuss matters relative to their application and their pre-dental course of study. It is suggested that candidates write or call for an appointment to assure that a faculty member will be available. Contact the Dean's Office, School of Dentistry, 15-106 Health Sciences Unit A, 515 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455; telephone (612) 373-3454.

Application Procedures

The University of Minnesota School of Dentistry participates in the American Association of Dental Schools Application Service (AADSAS), a national agency coordinating dental application services. All students seeking admission to the school must apply through this service, whether they are new applicants or reapplicants. Application materials may be obtained from the AADSAS through an Application Request Card, which is available from the School of Dentistry, 515 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455; or from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455. After the application materials are completed, they should be mailed to the AADSAS, P.O. Box 4000, Iowa City, Iowa 52240.

After the University of Minnesota has received the AADSAS application, each applicant will be sent a University of Minnesota School of Dentistry application form to be completed and a request for the following additional information:

1. One *official* transcript from each college attended. These must be submitted to the School of Dentistry at the time of application and after each quarter or semester of subsequent work until a decision is made on the application. These transcripts are in addition to those submitted to AADSAS. Transcripts marked "student copy" or with a similar reference are not acceptable. Accepted students must continue to submit a transcript after each quarter or semester of study until completion of all course work.
2. Three written recommendations, submitted on special recommendation forms sent to the applicant with the request for supplemental information. These recommendations should come from persons closely familiar with the applicant within the last 4 years. At least one recommendation should come from an employer if possible. Others could come from peers, college teachers, college recommendation committees, college counselors, and other appropriate individuals. All recommendations must be accompanied by a

Doctor of Dental Surgery Program

letter of reference in addition to the completed form. All recommendations must be submitted directly from the recommender to the School of Dentistry.

3. Official reports on two required tests: the Minnesota Multiphasic Personality Inventory (MMPI) and the Strong-Campbell Interest Inventory (SCII).

Applications should be filed between August 1 and December 1 of the preceding academic year for entry the following fall. The AADSAS application must be received by AADSAS by December 1. Early filing is encouraged.

Students Now Attending the University of Minnesota

1. Complete the American Association of Dental Schools application.
2. Apply for a change of college at the Office of Admissions and Records, 240 Williamson Hall.
3. If you have attended any other colleges or universities before entering the University of Minnesota, you must submit one official transcript from each institution attended previously to the School of Dentistry after receiving the request for supplemental materials from the school. Appearance on the University of Minnesota transcript of courses and credits transferred from other colleges and universities is *not* sufficient. Following completion of each semester or quarter of work until a decision is made on the application, you must submit one official transcript of your grades to the School of Dentistry. Accepted students must continue to submit transcripts until they have completed all course work.

Students Now Attending Other Colleges and Universities

1. Complete the American Association of Dental Schools application.
2. Submit one official transcript from each institution attended to the School of Dentistry after receiving the request for supplemental materials from the school.
3. Following completion of each semester or quarter of work until a decision is made on the application, you must submit one official transcript of your grades to the School of Dentistry. Accepted students must continue to submit transcripts until they have completed all course work.

Expenses¹

Tuition Fee (for full-time students, per quarter)

Residents	\$ 622.00
Nonresidents	1,679.00

Credit Hour Tuition Fee (for students carrying less than 12 credits, per quarter)

Residents	52.00
Nonresidents	140.00

Record Service Fee (applicable only to students new to the University of Minnesota)

.....	3.00
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Student Services Fee (per quarter)

.....	55.00
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Graduation Fee

Large diploma	17.50
Small diploma	10.00

¹The following fees were charged for the 1977-78 academic year and are subject to change. Information about current fees is available in the *General Information Bulletin*.

Other Fees

Credentials examination fee	
New students	15.00
Students who have previously attended the University	5.00

Credit by special examination. Such examinations may be taken only upon approval of the appropriate committee. (No fee for such examinations if taken within the first quarter of registration) 20.00

Late Fees—The fee for late registration or late payment of fees is \$6 through the first week of classes, \$10 through the second week of classes, and \$20 thereafter.

Special Fees—

Precious Metals	
First year—spring	130.00
Second year—fall	200.00
Typodonts	
First year—two needed	90.00
Second year—one needed	45.00
Gowns (option to purchase or rent from School of Dentistry)	
Rental fee for entire time in school	17.50
Books	
First year	320.00
Second year	275.00
Third year	80.00

Estimated Costs for Dental Equipment and Supplies—The School of Dentistry provides virtually all the dental instruments and supplies needed by students. This system reduces costs for students, provides a convenient and efficient instrument and supplies system, and permits the school to maintain control over the sterility and maintenance of the instruments and supplies used in the clinics. As part of the financial support of this system, students pay a usage fee. The usage fee per quarter is \$150 for 1977-78. Increases in this fee will depend on inflation factors.

Financial Aids

Financial aid is available from a number of loan and scholarship funds. Academic achievement, professional promise, and financial need are required for eligibility for support from the majority of these funds. Most of the loans and scholarships are administered by the Office of Student Financial Aid in consultation with the School of Dentistry. This office is located in 107 Armory, Minneapolis campus.

LOAN FUNDS

The following loan funds are available for support of undergraduate dental students. Students are encouraged to investigate other loan funds available through various private and public sources.

1. American Dental Trade Association—Junior and Senior Student Loan Fund
2. Dr. Alfred Owre Loan Fund

Doctor of Dental Surgery Program

3. Health Professions Student Loan Fund sponsored by the federal government
4. Special Bank Fund for junior and senior students sponsored by the Minnesota Dental Association
5. Guaranteed Student Loan Fund sponsored by the state of Minnesota and by commercial banks in consultation with the Office of Student Financial Aid
6. Jerome Joseph Hiniker Loan Fund
7. Robert Wood Johnson Loan Fund
8. American Fund for Dental Health
9. University of Minnesota Trust Fund—A general fund and many special funds provide financial aid for dental students through contributions by individuals, graduating classes, foundations, philanthropic groups, societies, and commercial firms. The special funds administered by the Office of Student Financial Aid for dental students are as follows:

American Society of Dentistry for Children (Minnesota Unit)
Delta Sigma Delta Loan Fund
1936 Dental Memorial Fund
Duluth District Dental Society Auxiliary
Dr. Ambert B. Hall Loan Fund sponsored by Dr. Oscar C. Nord
W. K. Kellogg Foundation
William S. Lindsley Dental School Loan Fund
International College of Dentists
Minneapolis District Dental Society Auxiliary
St. Paul District Dental Society Auxiliary
School of Dentistry Loan Fund sponsored by students, alumni, and friends of the School of Dentistry
Southeastern District Dental Society

SCHOLARSHIPS AND FELLOWSHIPS

Scholarship funds are very limited, but a number of awards are available. Research fellowships are increasing in number. The following scholarship and fellowship funds are available to dental students:

Allan T. H. Bluhm Memorial Scholarship
Elbert Lafayette Fenske Memorial Fund
Ronald R. Jones Dentistry Scholarship
James and Alice O'Neill Scholarship
Regents' Student Aid Fund
School of Dentistry Century Club Scholarships
School of Dentistry Scholarships sponsored by students, alumni, and friends of the School of Dentistry
Undergraduate Summer Research Fellowships sponsored by the School of Dentistry Century Club and other special funds

SPECIAL AWARDS AND HONORS

Several special awards for scholarly achievement and excellence in specific aspects of dental practice are available to dental students. Sponsors include the following:

Academy of General Dentistry
American Academy of Dental Radiology

American Academy of Gold Foil Operators
American Academy of Oral Pathology
American Academy of Periodontology
American Association of Endodontists
American College of Stomatologic Surgeons
American Dental Society of Anesthesiology
American Society of Dentistry for Children
Community University Health Care Center
Irwin A. Epstein
Minnesota Academy of Restorative Dentistry
Minnesota Association of Periodontists
Minnesota Prosthodontic Society
Minnesota Society of Oral Surgeons
Minnesota Society of Orthodontists
Minnesota Unit of Alpha Omega Professional Dental Fraternity
Minnesota Unit of the American Society of Dentistry for Children
C. V. Mosby Company
Omicron Kappa Upsilon
Prosthodontic Faculty
School of Dentistry Century Club
Umschoedent Oral Radiology
Union Gospel Mission

Class of 1925 Research Award

Sponsor: Contributors from the 1925 graduating class of the School of Dentistry

William H. Crawford Undergraduate Research Award

Sponsor: Minnesota Section of the International Association for Dental Research

Fourth-Year Dental Student Showing Greatest Professional Development and Growth

Sponsor: International College of Dentists

Highest Ranking Fourth-Year Dental Student

Sponsor: Alpha Omega Professional Dental Fraternity

SELF-SUPPORT AND GRANTS-IN-AID

The Student Employment Service assists students who find it necessary to earn money to pay part or all of their expenses. However, the program in dentistry is a full one, and students will find it difficult to devote many hours a week to outside employment. Occasionally, a few research assistantships are available in the School of Dentistry.

At the present time, the federal government provides, through the Health Professions Scholarship Fund, special grants-in-aid for students in extreme financial need.

Requirements for Graduation

A candidate for the degree of doctor of dental surgery must have:

1. complied with the rules and regulations of the school;
2. demonstrated sound moral character;
3. completed satisfactorily all requirements of the curriculum;

4. returned all equipment and supplies assigned to him or her for use;
5. earned a minimum grade point average of 2.00 (C);
6. discharged all financial obligations to the University; and
7. been recommended by the faculty of the School of Dentistry for the degree.

National Board Dental Examinations

The National Board Dental Examinations are held three times a year on the Minneapolis campus. Part I of the examination is usually taken by third-year students and Part II by fourth-year students in July. Virtually all students elect to take these written examinations, which are recognized by the licensing boards in 48 states, the District of Columbia, Puerto Rico, and the Virgin Islands.



Evaluation of speech and oral physiology problems using the ultragraph

Program in Dentistry

	Fall Qtr		Winter Qtr		Spring Qtr		Total	
	Cr	Hrs	Cr	Hrs	Cr	Hrs	Cr	Hrs
FIRST YEAR								
Dent 5001—Fixed Prosthodontics Technic					2	20	2	20
Dent 5026—Introduction to Health Ecology			5	50			5	50
Dent 5150—Operative Dentistry I					2	20	2	20
Dent 5152—Operative Dentistry Laboratory					2	60	2	60
Dent 5401—Pediatric Dentistry I					1	10	1	10
Dent 5601—Biomaterials			2	20			2	20
Dent 5649—Oral Anatomy	6	110					6	110
Dent 5725—Oral Histology and Embryology			3	40			3	40
Dent 5750—Occlusion I			3	30			3	30
Dent 5775—Oral Radiology I			2	20			2	20
Anat 5105—Dental Microscopic Anatomy	6	100					6	100
Anat 5108-5109—Gross Human Anatomy for Dental Students			6	120	6	120	12	240
Anat 5110—Neurosciences for Dental Students					2	20	2	20
MdBc 5202—Biochemistry for Dental Students	8	120					8	120
Phsl 5100—Neurosciences for Dental Students					2	20	2	20
SECOND YEAR								
Dent 5002-5003—Fixed Prosthodontics Technic	3	98	3	70			6	168
Dent 5004—Fixed Prosthodontics Laboratory					1	30	1	30
Dent 5050—Dental Ergonomics					1	10	1	10
Dent 5100—Genetics: An Introduction for Dental Students			1	10			1	10
Dent 5151—Operative Dentistry I	2	20					2	20
Dent 5153-5154—Operative Dentistry Laboratory	3	98	2	60			5	158
Dent 5260—Oral Pathology Introduction			2	20			2	20
Dent 5310-5311—Oral Surgery I and II			1	10	1	10	2	20
Dent 5317—Anesthesia	2	20					2	20
Dent 5375—Development of Occlusion	3	30					3	30
Dent 5402—Pediatric Dentistry II	1	10					1	10
Dent 5451—Periodontology I	2	30					2	30
Dent 5452—Periodontology II			1	10			1	10
Dent 5453—Periodontology III and IV					3	30	3	30
Dent 5464—Clinical Periodontology I					1	30	1	30
Dent 5550—Removable Prosthodontics			3	70			3	70
Dent 5555—Removable Prosthodontics and Laboratory					4	80	4	80
Dent 5623-5624—Endodontics Technic	1	20	1	15			2	35
Dent 5625—Endodontics					2	20	2	20
Dent 5751—Occlusion II					1	10	1	10
Dent 5776—Principles of Radiology	2	20					2	20
Dent 5780—Radiation Biology					1	10	1	10
Dent 5802—Treatment Planning					1	30	1	30
LaMP 5100—Pathology for Dental Students					5	90	5	90
MicB 5201—Microbiology for Dental Students	7	80					7	80
Phsl 5101—Human Physiology			7	90			7	90
THIRD YEAR								
Dent 5006—Fixed Prosthodontics I			1	10			1	10
Dent 5007—Fixed Prosthodontics II			1	10			1	10
Dent 5012—Fixed Prosthodontics Clinic					6	180	6	180
Dent 5036—Management and Supervision of Dental Practice	3	30					3	30
Dent 5044—Team Dentistry			1	30			1	30
Dent 5054—Clinical DAU Program					2	60	2	60
Dent 5160—Operative Dentistry II					1	10	1	10
Dent 5161-5162-5163—Operative Dentistry Clinic	3	90	3	90	3	90	9	270
Dent 5251-5252—Oral Pathology			3	40	4	60	7	100

Doctor of Dental Surgery Program

Dent 5255-5256—Medicine for the Dentist			10	2	10	2	20
Dent 5315—Oral Surgery III	1	10				1	10
Dent 5404—Pediatric Dentistry III			1	10		1	10
Dent 5409—Clinical Pediatric Dentistry	1	30				1	30
Dent 5410—Clinical Pediatric Dentistry					2	60	2 60
Dent 5455—Periodontology V			1	10		1	10
Dent 5465—Clinical Periodontology II					4	120	4 120
Dent 5560—Removable Prosthodontics III	1	10				1	10
Dent 5562-5563-5564—Removable Prosthodontics Clinic	2	60	2	60	2	60	6 180
Dent 5610—Dental Jurisprudence and Ethics					2	20	2 20
Dent 5626—Endodontics Clinic					2	60	2 60
Dent 5675—Oral Biology: Fundamental and Applied			2	20		2	20
Dent 5751—Occlusion II	2	20				2	20
Dent 5778—Clinical Roentgenology					2	60	2 60
Dent 5779—Roentgenographic Interpretation					1	10	1 10
Dent 5800—Treatment Planning Clinic					1	30	1 30
MdBc 5203—Topics in Dental Biochemistry					2	20	2 20
Phcl 5103-5104—Pharmacology for Dental Students	5	70	4	40		9	110

After completion of the third year, the following course numbers are to be used when registering in each discipline while completing the clinical requirements.

Dent 5015—Fixed Prosthodontics Clinic	6 cr
Dent 5165—Clinical Operative Dentistry	6 cr
Dent 5316—Oral Surgery Clinic	2 cr
Dent 5466—Clinical Periodontology III	6 cr
Dent 5565—Removable Prosthodontics Clinic	6 cr
Dent 5801—Treatment Planning Clinic	3 cr
Dent 5999—Dental Clinic	
Full Time	fall ... 14 cr winter, spring ... 10 cr
Part Time	fall ... 7 cr winter, spring ... 5 cr

Evaluation of Student Performance

Class committees make quarterly evaluations of each student's academic achievement and personal conduct. Recommendations on a student's status and promotion are transmitted to the Executive Committee for action.

Students are expected to act as mature, professional individuals. A personal conduct code, prepared by a student-faculty committee, stipulates guidelines for student behavior. It prescribes respect for school property and certain other rules and regulations. Students can be dismissed from school for disciplinary as well as scholastic reasons.

Students must exercise their clinical responsibilities with discretion and must display concern for the dignity and importance of the individual patient.

While every effort is made to aid students in their studies and counsel them on their academic and personal problems, certain standards of performance must be maintained. Students with major scholastic deficiencies will not be allowed to advance to the next academic year.

Counseling

The class committee chairperson serves as the major adviser for each class. Counseling is also available through the dean's office in the School of Dentistry, the Health Sciences Student Personnel Services office, the Student Counseling Bureau of the University, and from faculty members of the student's own choice.

A special counseling program assigns a full-time or part-time faculty member to

advise each dental student during the entire year. This informal counseling system gives students a faculty member with whom they can discuss academic or personal matters on an unofficial basis.

Course Descriptions

Dentistry (Dent)

DIVISION OF ENDODONTICS

Professor

James R. Jensen, D.D.S., M.S.D., *chairman*

Clinical Associate Professor

Carl J. Olson, D.D.S., M.S.D.

Assistant Professor

Dinh Quan, M.S.D., Ch.D.
Abbas Tabibi, D.D.S., M.S.

Clinical Assistant Professor

Edward L. Crain, D.D.S.
William A. Gavin, D.D.S.
Frank D. Jensen, D.D.S.
Donald G. McMillan, D.D.S.
James E. Spitzmueller, D.D.S., M.S.D.
Walter F. Teske, D.D.S.

Instructor

Kenneth L. Zakariasen, D.D.S., M.S.

Clinical Instructor

Mazin E. Askar, D.D.S.
Phillip M. Engel, D.D.S.
Jeffrey D. Erickson, D.D.S.
Mark R. Jensen, D.D.S.
John D. Nydahl, D.D.S.
Kenneth J. Zucker, D.D.S.

5623. ENDODONTIC TECHNIC. (Cr ar) Jensen, Zakariasen

The student attends seminars and performs laboratory exercises in endodontics.

5624. ENDODONTIC TECHNIC. (Cr ar) Jensen, Zakariasen

The student attends seminars and performs laboratory exercises in endodontics.

5625. ENDODONTICS. (2 cr; 20 lect hrs) Jensen, Zakariasen

Diagnosis and treatment of pulp and periapically involved teeth are studied through clinical demonstrations, seminars, and lectures.

5626. ENDODONTICS CLINIC. (2 cr; 60 clin hrs) Jensen, Zakariasen

The basic principles of diagnosis and treatment of pulp and periapically involved teeth are studied through seminars, clinical demonstrations, lectures, and practical experience with clinical patients.

5630. ENDODONTICS: INDEPENDENT STUDY. (Cr and hrs ar)

5631. SURGICAL ENDODONTICS ELECTIVE. (Cr ar) Jensen

Clinical demonstration and participation in surgical technics in endodontics.

DIVISION OF FIXED PROSTHODONTICS

Professor

Douglas H. Yock, D.D.S., M.S., *chairman*
Hubert H. Serr, D.D.S., M.A.
Robert D. Jeronimus, D.D.S.

Associate Professor

James L. Donahue, D.D.S.

Clinical Associate Professor

James D. Dresen, D.D.S., M.S.
Lee C. Hermann, D.D.S.
Robert R. Hoover, D.D.S.
Charles B. McAllister, D.D.S.
Eugene A. Moll, D.D.S.
Kenneth D. Salo, D.D.S.

Clinical Assistant Professor

Carl Haedge III, D.D.S.
Michael J. Harrison, D.D.S.
Peter Holm, D.D.S.
Jerald B. Johnson, D.D.S.
Thomas K. Johnson, D.D.S.
George LeMay, D.D.S.
Stephen G. Nagy, D.D.S.
George T. Nishida, D.D.S.
Hugh E. Norsted, D.D.S.
Daniel O. Odegaard, D.D.S.
Donald F. Richards, D.D.S.
Anthony J. Scholtis, D.D.S.
Richard C. Stoffel, D.D.S.
Nerwin A. Theige, D.D.S.
Jay Wilcox, D.D.S.

Doctor of Dental Surgery Program

Clinical Instructor

Steven C. Keck, D.D.S.
Richard E. Kraft, D.D.S.
Daniel T. Nistler, D.D.S.
Miodrag Popovich, D.D.S.
Lawrence Paul Rossoff, D.D.S.
Terry L. White, D.D.S.

Lecturer

Arthur R. Schmidt, D.D.S.

5001-5002-5003. FIXED PROSTHODONTICS TECHNIC. (Cr ar) Serr

Lectures, seminars, and demonstrations covering clinical and laboratory procedures. Includes exercises in casting, soldering, and the construction of a mandibular hygienic bridge, maxillary posterior bridge, maxillary and mandibular anterior bridges, resin and porcelain crowns. An illustrated syllabus aids students in carrying out each project. Weekly lectures cover laboratory techniques and fundamental principles.

5004. FIXED PROSTHODONTICS. (1 cr) Keck

Laboratory course on the technical aspects of porcelain fired to metal restorations.

5005. FIXED PROSTHODONTICS: INDEPENDENT STUDY. (Cr and hrs ar)

5006. FIXED PROSTHODONTICS I. (1 cr; 10 lect hrs) Jeronimus, Donahue, Yock

Prosthodontics, nomenclature and definitions, and diagnosis and treatment planning as they relate to types of abutments, retainers, and pontics.

5007. FIXED PROSTHODONTICS II. (1 cr; 10 lect hrs) Yock, Donahue, Jeronimus

Ceramics and resins are related to aesthetics in clinical restorative dentistry. Fundamental principles and technics proven to be biologically and mechanically sound. Review of the literature in fixed prosthodontics. Lectures, slides, movies, and seminar discussions.

5012. FIXED PROSTHODONTICS CLINIC. (6 cr; 180 clin hrs) Yock

Small group clinical demonstrations designed to orient the student in the clinical practice of dentistry. Instruction in the diagnosis, design, and construction of fixed prosthodontic cases.

5015. FIXED PROSTHODONTICS CLINIC. (Cr ar) Yock

DIVISION OF HEALTH ECOLOGY

Professor

Lawrence H. Meskin, D.D.S., M.S.D.,
M.P.H., Ph.D., *chairman*
John G. Geier, Ph.D.

Associate Professor

Leslie V. Martens, D.D.S., M.P.H.,
associate chairman
Lester E. Block, D.D.S., M.P.H.
David O. Born, Ph.D.
Hubert D. Foglesong, D.D.S.
P. Jean Frazier Geist, M.P.H.
Ralph V. Katz, D.M.D., M.P.H., Ph.D.
Michael J. Loupe, Ph.D.

Assistant Professor

Anthony J. DiAngelis, D.M.D., M.P.H.
Bernard M. Flavian, D.D.S., M.P.H.
Michael A. Johnson, J.D.
James B. Kenney, Ph.D.
Allan Lange, Ph.D.

Instructor

Craig W. Amundson, D.D.S.
James F. Blahnik, M.S.
David W. Dvorak, D.D.S.
Brenda G. Johnson, R.D.H., M.P.H.
Steven M. Posnick, D.D.S.
Michael J. Scheller, D.D.S.
Ned W. Windmiller, D.D.S.
Kenneth L. Zakariasen, D.D.S., M.S.

TEAM Program Staff

Irene G. Penner, *clinic coordinator*
Nancy E. Asta, C.D.A., R.D.A.
Elizabeth J. Bjornson, R.D.H., B.S.
Theresa A. Campbell, C.D.A., R.D.A.
Colleen M. Doerer, C.D.A.
Alison T. Dornack, R.D.H., B.S.
Kristin L. Greene, R.D.H., B.S.
Susan E. Hamilton, C.D.A., R.D.A.
Mary C. Madsen, R.D.H., B.S.
Christine L. Mogren, C.D.A., R.D.A.
Susan M. Peckels, C.D.A., R.D.A.
Cynthia A. Welters, C.D.A., R.D.A.

DAU Program Staff

Eileen F. Stombaugh, *acting clinic coordinator*
Marie A. Baudek, C.D.A., R.D.A.
Sharon M. Bonkosky, C.D.A., R.D.A.
Cheryl L. Hart, C.D.A., R.D.A.
Barbara A. Johnson, C.D.A., R.D.A.
Catherine A. Lane, C.D.A., R.D.A.
Michelle J. Lokensgard, C.D.A., R.D.A.
Sharon E. Schultz, C.D.A., R.D.A.
Patricia A. Southerling, C.D.A., R.D.A.

Health Ecology is a multidisciplinary unit whose broad purpose is to develop dental professionals able to relate effectively, both personally and professionally, to

their contemporary social and economic environment. Sensitization to this environment is accomplished by introducing students to (a) the basic principles of epidemiology and health assessment in order that they may be able to evaluate the nation's health needs, (b) the role and practice of dentistry as a health care delivery system in order that they may be able to assess the nation's health service resources, and (c) the social, political, economic, behavioral, and professional factors that influence the availability and utilization of health services. Four main courses are offered. An elective option is available for extended study in a variety of individualized areas.

5026. INTRODUCTION TO HEALTH ECOLOGY. (5 cr)

The broad spectrum of areas that influence the dental profession in its role in the nation's health care delivery system. Lectures, demonstrations, and small group discussions on such topics as dental epidemiology, dental public health, preventive dentistry, patient education and management, political and economic influences in dentistry, human resources problems, consumerism and sociocultural implications for dental health.

5028. THE ECOLOGY OF DENTAL PRACTICE. (4 cr)

Essential elements of successful dental practice management. Through lectures and discussions, students will be introduced to the areas of decision making; jurisprudence and ethics; models of practice and financing sources; office design and site selection; office management procedures (i.e., tax obligations, patient scheduling, payment systems, cost analysis, and auxiliary selection); methods of building a practice; methods for patient education, personal and professional management.

5030. HEALTH ECOLOGY: UPDATE. (2 cr)

Update of issues raised in 5026. Emphasis on areas that affect dentistry's role in the nation's health care delivery system; their impact on the profession of dentistry and on the oral health of the nation. Seminars, demonstrations, field experiences, and lectures.

5036. MANAGEMENT AND SUPERVISION OF THE DENTAL PRACTICE. (3 cr)

Designed to develop skills in planning, organizing, leading, and controlling the dental office. Emphasis on the effective utilization of available human resources in dental care delivery. The management system of AMPS (Accountability Management Planning System) in both theory and application; TEAM building, setting goals and objectives, accountability procedure, and performance appraisal.

5044. TEAM DENTISTRY LABORATORY. (1 cr)

Intensive training for all dental students in the practical application of management knowledge in order to select personnel, manage interpersonal and organizational problems, and assess the quality of employee job performance and the cost effectiveness of applied management methods. Consists of an intensive 3-day experience in small groups during which various forms of group interaction, individual work, discussions, and simulations are used to provide students with experience in applying knowledge to solve problems related to the management of a dental practice.

5050. DENTAL ERGONOMICS AND AUXILIARY UTILIZATION. (1 cr; 10 hrs)

Lectures and clinical seminars on the principles of ergonomics. Emphasis on how recognition of these principles in dentistry increases productivity and quality, and enhances human values such as health, safety, and comfort for the dental operating team and patient. Course serves as a preparation for participation in the Dental Auxiliary Utilization Clinic.

5054. DENTAL AUXILIARY UTILIZATION CLINIC (DAU I). (2 cr, 5 clinic hrs)

Practice of four-handed, sit-down dentistry techniques with experienced chairside assistant instructors to aid the student in increased proficiency efficiency. Daily evaluations, seminars, and lectures supplement the clinical experience. Criteria for dental equipment selection and dental operatory design.

5055. HEALTH ECOLOGY: INDEPENDENT STUDY. (Cr and hrs ar)

5060. TEAM DENTISTRY INTERNSHIP. (2 cr; elective)

Students apply, in a clinical setting, previously learned management and supervisory concepts and techniques. Consists of a 2-week block period in one of the following settings:

TEAM Clinic—Students manage and supervise a team of traditional and expanded function auxiliaries in the rendering of routine restorative and preventive care for TEAM Clinic patients. Each student has a solo and a partnership experience in managing a multilevel team.

Elementary Schools—Students manage and supervise a team of traditional auxiliaries and dental hygiene students in the rendering of screening, comprehensive preventive and educational services, and referrals for elementary school children in selected inner-city Minneapolis public schools.

5070. HEALTH ECOLOGY ELECTIVE. (Cr ar)

Allows highly motivated students to undertake study and receive academic credit for activities in special-interest areas. Individual offerings depend on student needs and staff specialization. Areas in which student work has been initiated include advanced preventive dentistry, patient management, biostatistics, community health problems, and the rural preceptorship program. Considerable flexibility exists in structuring this course.

Doctor of Dental Surgery Program

- 5080. DENTAL AUXILIARY UTILIZATION CLINIC.** (1 cr; prereq 5054; 35 clinic hrs; elective)
Students train a dental auxiliary student in effective chairside assisting with emphasis on four-handed, sit-down dentistry techniques. Through clinic and evaluation sessions supervised by experienced DAU personnel, students develop a structured method to efficiently train auxiliaries.

DIVISION OF HUMAN AND ORAL GENETICS

Professor

Carl J. Witkop, D.D.S., M.S., *chairman*
Burton L. Shapiro, D.D.S., M.S.D., Ph.D.

Associate Professor

Jaroslav Cervenka, M.D., C.Sc.
Kathleen M. Keenan, Ph.D.
Richard A. King, M.D., Ph.D.
Karlind T. Moller, Ph.D.
John J. Sauk, Jr., D.D.S., M.S.

- 5100. GENETICS: AN INTRODUCTION FOR DENTAL STUDENTS.** (1 cr; 10 hrs) Shapiro
Lectures on the chemical basis of heredity; cytogenetics, genetic ratios, methodology of human genetics, heredity and environment, and mutation and radiation. Genetic principles are related to specific problems in dentistry.

- 5102. HUMAN AND ORAL GENETICS: INDEPENDENT STUDY.** (Cr and hrs ar)

DIVISION OF OPERATIVE DENTISTRY

Clinical Professor

Anthony D. Romano, D.D.S.

Associate Professor

Ronald E. Geistfeld, D.D.S., *acting chairman*

Clinical Associate Professor

William F. Braasch, D.D.S.
Kenneth J. Buechele, D.D.S.
Peter S. Gregus, D.D.S.
Miles B. Hirschey, D.D.S.
Kenji Horita, D.D.S.
Ralph J. Werner, D.D.S.
Edgar F. Ziegler, D.D.S.

Assistant Professor

Gary Lee Hill, D.D.S., M.S.
Thomas D. Larson, D.D.S., M.S.

Clinical Assistant Professor

Mark A. Anderson, D.D.S.
Anthony F. Antoncich, D.D.S.
Donald S. Benson, D.D.S.
Perry W. Dungey, D.D.S.
David W. Dvorak, D.D.S.
William F. Hudelson, D.D.S.
George L. Posavad, D.D.S.
Thomas H. Rollin, D.D.S.
George H. Winn, D.D.S.

Clinical Instructor

Steven A. Aaker, D.D.S.
Jay A. Anderson, D.D.S.
Wallace J. Anderson, D.D.S.
Jerome L. Appeldoorn, D.D.S.
Robert C. Beattie, D.D.S.
Paul C. BelveJere, D.D.S.
Lynn C. Boehland, D.D.S.
Kenneth R. Brisson, D.D.S.
Daniel Carlson, D.D.S.
David K. Dungey, D.D.S.
Norman J. Edwards, D.D.S.
Edward J. Eifert, D.D.S.

John F. Englund, D.D.S.
Russell N. Frys, D.D.S.
David L. Gadola, D.D.S.
Edward N. Grayden, D.D.S.
James D. Guptill, D.D.S.
Robert L. Helleen, D.D.S.
Dana J. Isaacson, D.D.S.
Leonard R. Jacobsen, D.D.S.
Ross H. Johnson, D.D.S.
Michael W. Jorgenson, D.D.S.
Mark J. Juettten, D.D.S.
L. Randolph Julian, D.D.S.
Ronald J. Kent, D.D.S.
Thomas J. Kuzma, D.D.S.
Paul C. Lanzer, D.D.S.
Lee C. Lerberg, D.D.S.
David A. Linde, D.D.S.
Thomas B. Lyke, D.D.S.
Ernest E. Martin, D.D.S.
Daniel H. Menser, D.D.S.
Frank H. Neufeld, D.D.S.
Scott R. Northey, D.D.S.
James J. O'Brien, D.D.S.
Allan D. Olson, D.D.S.
Edward L. Olson, D.D.S.
Scott C. Osborn, D.D.S.
Richard N. Overby, D.D.S.
Anthony A. Pasola, D.D.S.
Martin J. Rathmanner, D.D.S.
David M. Remes, D.D.S.
Michael C. Remes, D.D.S.
Warren E. Scamp, D.D.S.
M. Lawrence Schroeder, D.D.S.
Mark S. Simmons, D.D.S.
Gary R. Smisek, D.D.S.
Douglas P. Smith, D.D.S.
Michael J. Spencer, D.D.S.
Douglas V. Streed, D.D.S.
Dean P. Sullivan, D.D.S.
John Van Valkenburg, D.D.S.
Warren P. Zenk, D.D.S.
Edgar F. Ziegler, D.D.S.

- 5150-5151. OPERATIVE DENTISTRY I.** (2 cr per qtr) Romano, Larson, Hill, Eliasson
Lectures on the nomenclature of operative dentistry, cavity design and classification, composition of materials, instrumentation, and the fundamental basis of the technics employed.
- 5152-5153-5154. OPERATIVE DENTISTRY LABORATORY.** (3-2 cr) Romano, Buechelle, Larson
The technics and principles of cavity preparation, manipulation of restorative materials, and instrumentation.
- 5158. OPERATIVE DENTISTRY: INDEPENDENT STUDY.** (Cr and hrs ar)
- 5160. OPERATIVE DENTISTRY II.** (1 cr; 10 lect hrs) Romano, Geistfeld
Advanced clinical technics with emphasis on the concepts and modifications of cavity design as well as the biological and technical considerations in the application of new materials in operative dentistry.
- 5161-5162-5163. OPERATIVE DENTISTRY CLINIC.** (3 cr per qtr; 270 cln hrs) Romano, Geistfeld, Eliasson, Hill
Students gain experience and acquire efficiency in the practice of operative dentistry on assigned patients under the close supervision of staff.
- 5165. CLINICAL OPERATIVE DENTISTRY.** (Cr ar) Romano, Geistfeld, Eliasson, Hill, Larson
- 5170. SEMINAR: OPERATIVE DENTISTRY.** (1 cr) Romano, Geistfeld, Eliasson, Hill
A series of seminar topics (to be selected by the students) on the clinical aspects of various types of restorative materials and procedures.

DIVISION OF ORAL BIOLOGY

Professor

Burton L. Shapiro, D.D.S., M.S.D., Ph.D.,
chairman
Quenton T. Smith, Ph.D.

Associate Professor

Harold H. Messer, M.D.Sc., Ph.D.

Assistant Professor

Greg R. Germaine, Ph.D.

Lecturer

Richard W. Joos

- 5675w. ORAL BIOLOGY: FUNDAMENTAL AND APPLIED.** (2 cr, 20 lect hrs)
Discussions of major and current problems of dentistry and oral biology are conducted by specialists.
- 5677. DENTAL RESEARCH TRAINING.** (3 cr; hrs ar; elective) Basic science and clinical faculty
Undergraduate dental students are given an opportunity to work on a research project in the laboratory or clinic with a faculty member. Following completion of the research project, students are required to submit a written report describing their research activities.
- 5680. ORAL BIOLOGY: INDEPENDENT STUDY.** (Cr and hrs ar)

DIVISION OF ORAL PATHOLOGY

Professor

Robert J. Gorlin, D.D.S., M.S., *chairman*
Robert A. Vickers, D.D.S., M.S.D.
Jaroslav Cervenka, M.D., C.Sc.

Associate Professor

Heddie O. Sedano, D.D.S., Dr. O.
William G. Young, B.D.S., M.Sc.

- 5250. ORAL PATHOLOGY: INDEPENDENT STUDY.** (Cr and hrs ar)
- 5251-5252. ORAL PATHOLOGY.** (7 cr total) Young
Diseases of oral and paraoral tissues and teeth including embryologic considerations. Special pathology of the oral region as well as the relation of local pathologic findings to systemic conditions and to general pathology emphasized. Lectures, laboratory assignments, and clinical seminars.
- 5255-5256. MEDICINE FOR THE DENTIST.** (2 cr total) King
Principles of diagnosis, cardiovascular disease, and other systemic problems of dental consequence. Common medical emergencies in the dental office.
- 5260. ORAL PATHOLOGY INTRODUCTION.** (2 cr) Witkop
Introduction to oral diagnosis. Basic methods of oral and facial examination and diagnosis. Review of normal anatomy and details of normal variations. Clinical aspects of common pathological conditions and scientific medical terminology in describing oral lesions emphasized. Includes demonstrations and practical sessions.
- 5275. ORAL HISTOLOGY AND EMBRYOLOGY.** (3 cr) Sedano
Lectures and self-taught laboratory sessions designed to aid the study of embryology and histology of human oral structures as well as other parts of the head and neck region. The histology and embryology of teeth, mandible, maxilla, palate, tongue, and salivary glands stressed and, when possible, correlated to abnormalities of development. Basic electron microscopy of hard dental tissues.

Doctor of Dental Surgery Program

DIVISION OF ORAL SURGERY

Professor

Daniel E. Waite, C.D.S., M.S., *chairman*
Mellor R. Holland, D.D.S., M.S.D.
Norman O. Holte, D.D.S., M.S.

Associate Professor

Myer S. Leonard, D.D.S.

Clinical Associate Professor

Dean S. Brandsness, D.D.S.
Ralph O. Christensen, D.D.S., M.S.D.
William P. Frantz, D.D.S., M.S.D.

Assistant Professor

Daniel J. Gatto, D.D.S.
Roscoe P. Hylton, D.D.S.
Mark T. Jaspers, D.D.S., M.S.
Michael W. Lehnert, D.D.S.

Clinical Assistant Professor

Dale V. Olson, D.D.S., M.S.D.
Robert O. Rydell, D.D.S., M.S.D.

Clinical Instructor

Hak Joo Kwon, D.D.S.
Huynh Anh Tuan

- 5310. ORAL SURGERY I.** (1 cr; 10 lect hrs) Jaspers and staff
Principles of surgery; armamentarium; asepsis; fundamentals of exodontia; mucoperiosteal flap design; multiple extraction; alveoloplasty; and complicated exodontia.
- 5311. ORAL SURGERY II.** (1 cr; prereq 5310; 10 lect hrs) Waite and staff
Complications in oral surgery; minor preprosthetic surgery; immediate dentures; biopsy; cysts; and benign oral neoplasms.
- 5315. ORAL SURGERY III.** (1 cr; prereq 5311; 10 lect hrs) Lehnert and staff
TMJ; salivary glands; trauma; developmental deformities; oral malignancies; and facial space infections.
- 5316. ORAL SURGERY CLINIC ROTATION.** (2 cr; prereq 5311) Jaspers and staff
Clinical experience in the Oral Surgery Clinic of the School of Dentistry, which is divided into two sessions: 1) clinical assistant—exposure to clinic procedures, aseptic technique, and chairside oral surgical assisting; and 2) student operator—experience in the performance of exodontia, alveoloplasty, minor preprosthetic surgery, soft tissue corrections, and biopsy. Postoperative treatment of surgical complications. The student will apply related basic science principles of anatomy, pharmacology, physiology, local anesthesia, and oral surgery in this clinical experience.
- 5317. ANESTHESIA.** (2 cr; 20 lect hrs) Holte and staff
Lectures and demonstrations on the use of local and general anesthetic agents in the practice of dentistry. Theory and administration of local anesthetics as well as the principles of sedation and analgesia with inhalation, intramuscular, and intravenous drugs.
- 5320. ORAL SURGERY: INDEPENDENT STUDY.** (Cr and hr ar)
- 5322. OFFICE EMERGENCIES.** (1 cr; hrs ar; elective) Gatto and staff
Lectures on the prevention and treatment of important dental office emergencies.

DIVISION OF ORTHODONTICS

Professor

T. Michael Speidel, D.D.S., M.S.D.

Clinical Professor

Frank W. Worms, D.D.S., M.S.D.

Associate Professor

Richard R. Bevis, D.D.S., Ph.D.,
acting chairman

Assistant Professor

Gerald D. Cavanaugh, D.D.S., Ph.D.
Thomas A. Daniels, D.D.S., M.S.

Clinical Assistant Professor

Robert B. Nemeth, D.D.S., M.S.D.

- 5375. DEVELOPMENT OF OCCLUSION.** (3 cr; 30 lect hrs) Daniels, Speidel
Factors contributing to the normal and abnormal development of the deciduous, mixed, and permanent dentitions.
- 5376. ORTHODONTIC LABORATORY.** (1 cr; 20 lab hrs; elective) Speidel
Practical applications of analysis of developing occlusions. Fundamentals of orthodontic appliances.
- 5380. ORTHODONTICS.** (2 cr; 20 lect hrs; elective) Bevis
The principles and procedures in preventive, interceptive, and corrective orthodontics are interrelated by case analysis and treatment planning.

- 5381. HEAD AND NECK ANATOMY REVIEW.** (1 cr; hrs ar; elective) Cavanaugh
Vascular supply and innervation, facial planes and their relationship to the spread of infection, and radiographic anomalies.
- 5385. ORTHODONTICS: INDEPENDENT STUDY.** (Cr and hrs ar)

DIVISION OF PEDIATRIC DENTISTRY

Professor

Michael J. Till, D.D.S., Ph.D., *chairman*

Associate Professor

Louise B. Messer, B.D.Sc., M.D.Sc.
Paul O. Walker, D.D.S., M.S.D.

Assistant Professor

Jay T. Cline, D.D.S., M.A.
Gary C. Hollman, D.D.S., M.S.
Daniel W. Shaw, D.M.D., M.S.

Clinical Assistant Professor

John Collier, D.D.S.
Tad G. Gates, D.D.S.
Donald J. Jeronimus, D.D.S., M.S.D.
Kiran Kamdar, B.D.S.
Peter Mielke, D.D.S.
James L. Walton, D.D.S., M.S.

Clinical Instructor

Richard J. Baylon, D.D.S.
Christopher E. Carroll, D.M.D.
Stephen J. Goepferd, D.D.S.
Monica Jungbluth, D.D.S.
Paul M. Schneider, B.D.Sc.

- 5401. PEDIATRIC DENTISTRY I.** (1 cr; 10 lect hrs) Till and staff
Development of the dentition; restorative dentistry and pulpal therapy in the primary dentition; and principles of preventive dentistry.
- 5402. PEDIATRIC DENTISTRY II.** (1 cr; 10 lect hrs) Till and staff
The physical and emotional development of the child; patient management; congenital disorders and their treatment; treatment of traumatic dental injuries; and the clinical aspects of preventive, interceptive, and corrective orthodontics in the primary and mixed dentitions.
- 5404. PEDIATRIC DENTISTRY III.** (1 cr; 10 lect hrs) Till and staff
Handicapping conditions frequently encountered by the general practitioner, including significant dental aspects, and medical management during dental treatment.
- 5405. PEDIATRIC HOSPITAL DENTISTRY.** (1 cr; elective) Walker
Clinical dental treatment of special children in the outpatient clinics and operating rooms of University and community hospitals. Seminars and directed experiences related to the care of the special child.
- 5407. MINOR TOOTH MOVEMENT.** (1 cr; hrs ar; elective) Walker
Discussions of appliances for space maintenance, simple crossbite, correcting tipped teeth for restorative treatment, and replacement and stabilization of avulsed teeth.
- 5409. CLINICAL PEDIATRIC DENTISTRY.** (1 cr) Cline and staff
A clinic-seminar program in which clinical topics and techniques are reviewed, and selected patients are treated under faculty supervision.
- 5410. CLINICAL PEDIATRIC DENTISTRY.** (2 cr) Cline and staff
Students perform diagnosis, treatment planning, and restorative procedures on children aged 2 to 12 years. Careful patient selection and allocation to ensure that each student acquires a broad experience in all phases of pediatric dentistry.
- 5420. PEDIATRIC DENTISTRY: INDEPENDENT STUDY.** (Cr and hrs ar) Till and staff

DIVISION OF PERIODONTICS

Professor

Carl L. Bandt, D.D.S., M.S.D., M.S.,
chairman
Richard C. Oliver, D.D.S., M.S.,
dean, School of Dentistry
Erwin M. Schaffer, D.D.S., M.S.D.

Clinical Professor

George C. Lawther, D.D.S., M.S.D.

Clinical Associate Professor

George E. Fischer, D.D.S., M.S.D.
William L. Hartwick, D.D.S.
Ronald E. LaBelle, D.D.S., M.S.D.
Joyce LeFebvre, D.D.S., M.S.D.
Eric E. Stafne, D.D.S., M.S.D.
Hussein A. Zaki, B.Ch.D., M.P.H., M.S.D.

Assistant Professor

M. Bashir Bakdash, B.D.S., M.P.H., M.S.D.
A. Marshall Fenstad, D.D.S., M.S.D., Ph.D.
Albert Frydman, D.D.S., M.S.
Bruce L. Pihlstrom, D.D.S., M.S.

Doctor of Dental Surgery Program

Clinical Assistant Professor

Robert J. Bloom, D.D.S., M.S.
Harold S. Elliott, D.D.S., M.S.D.
Patrick J. Ennen, D.D.S., M.S.
E. Robert Fowler, D.D.S.
William C. Hill, D.D.S., M.S.
Kent A. Hove, D.D.S., M.S.D.
Robert L. Jensen, D.D.S., M.S.D.
Henry J. Menke, D.D.S.

Patrick J. Murphy, D.D.S., M.S.D.
Edgar D. Rajek, Jr., D.D.S., M.S.
Gregory W. Stende, D.D.S.
Louis L. Young, D.D.S.

Clinical Instructor

Jeffrey F. Carlsson, D.D.S.
Jane M. Jensen, D.D.S.

- 5451. PERIODONTOLOGY I.** (2 cr; 10 lect and 5 lab and clinic sessions) Bakdash and staff
Emphasis on: the ecological impact of periodontal disease on oral health. Anatomy and physiology of the periodontium, etiology of periodontal disease, and clinical and histopathological aspects of gingivitis.
- 5452. PERIODONTOLOGY II.** (1 cr; 12 lect hrs and 5 lab and clinic sessions) Bakdash and staff
The basic and clinical implications of dental calculus, occlusion, and systemic disorders with respect to examination, diagnosis, and classification of periodontal disease.
- 5453-5454. PERIODONTOLOGY III-IV.** (3 cr total; 30 lect hrs) Bakdash and staff
General principles of periodontal therapy including treatment planning and presurgical and surgical procedures, evaluation of periodontal treatment and posttreatment maintenance.
- 5455. PERIODONTOLOGY V.** (1 cr; 10 lect hrs) Bakdash and staff
The interrelationship between periodontics and other disciplines in dentistry with emphasis on auxiliary utilization, dental insurance reporting, patient referral, and clinical research in periodontics.
- 5460. PERIODONTICS: INDEPENDENT STUDY.** (Cr and hrs ar)
- 5464. CLINICAL PERIODONTOLOGY I.** (1 cr; 25 clinic sessions) Bandt and staff
Students learn to recognize the characteristics of the healthy periodontium and to recognize and differentiate early periodontal pathology. Each student completes diagnosis, scaling, and root planing on at least two patients. Emphasis is on patient education and preventive periodontics.
- 5465. CLINICAL PERIODONTOLOGY I.** (2 cr) Bandt and staff
Experience in the diagnosis and treatment of diseases affecting the investing tissues of the teeth.
- 5466. CLINICAL PERIODONTOLOGY III.** (2 cr; 60 clin sessions) Bandt and staff
Opportunity to gain further experience in the surgical treatment of periodontal disease, evaluation of periodontal therapy, and implementation of a maintenance program.

DIVISION OF REMOVABLE PROSTHODONTICS

Professor

Andrew T. Morstad, D.D.S., M.S.,
chairman
Richard J. Goodkind, D.D.S., M.S.D.

Clinical Professor

Clarence N. Reiersen, D.D.S.

Associate Professor

James L. Baker, D.D.S., M.S.D.
Alfan D. Petersen, D.D.S.

Clinical Associate Professor

David G. Anderson, D.D.S., M.S.D.
Edward E. Anderson, D.D.S., M.S.
John F. Erickson, D.D.S.
Edgar H. Lechner, D.D.S.
David W. Tworrey, D.D.S., Ph.D.

Assistant Professor

Glenn T. Haggan, D.D.S.
Kenneth T. Meyer, D.D.S., M.S.D.
Timothy A. Peterson, D.D.S.
Eric J. Rasmussen, D.D.S., M.S.D.
James A. Scho'n, D.D.S., M.S.D.

Clinical Assistant Professor

George J. Hayano, D.D.S.
Jerome H. Kleven, D.D.S.
William H. Kuhlmann, D.D.S., M.S.D.
Roger A. Mondale, D.D.S.
Dennis R. Olson, D.D.S.
Eric G. Schleder, D.D.S.
Walter S. Warpeha, Jr., D.D.S., M.S.D.

Clinical Instructor

Bruce A. Bohnsack, D.D.S.
Dwight G. Buller, D.D.S.
Brian L. Bunce, D.D.S.
Colin C. Frykman, D.D.S.
Christopher B. Heringlake, D.D.S.
Gary T. Kutsko, D.D.S.
John P. Lande, D.D.S.
John C. Marker, D.D.S.
Frank J. Milnar, D.D.S.
James Osberg, D.D.S.
Fred L. Sharpe, D.D.S.
Patrick R. Smith, D.D.S.
Francis S. Tautin, D.D.S.

- 5550. REMOVABLE PROSTHODONTICS I.** (3 cr) Petersen
Lectures, demonstrations, and laboratory instruction covering the various phases of complete denture prosthetics: the manipulation and use of prosthetic dental materials, fundamental principles of complete denture construction including primary and final impressions, pouring casts, establishing jaw relationships, the arrangement of denture teeth, and principles of occlusion, prescription writing and the student relationship with dental laboratories.

5553. **REMOVABLE PROSTHODONTICS: INDEPENDENT STUDY.** (Cr and hrs ar)
5555. **REMOVABLE PROSTHODONTICS II AND LABORATORY.** (4 cr) Anderson, Baker
A series of lectures introducing the design of partial dentures laboratory instruction is coordinated with the knowledge the student is acquiring in the basic science courses Laboratory includes the construction of cast removable partial dentures on models.
5560. **REMOVABLE PROSTHODONTICS III.** (1 cr) Petersen
These lectures on complete denture prosthesis correlate the student's accumulated knowledge in the basic and clinical sciences and enable the student to carry out procedures and solve problems associated with removable denture prosthesis.
- 5562-5563-5564. **REMOVABLE PROSTHODONTICS CLINIC.** (2 cr per qtr; 180 clin hrs) Baker, Morstad, Petersen
Clinical practice in complete and partial removable denture prosthodontics. Biomechanical aspects of dental prosthesis. Proper and efficient use of auxiliary dental personnel such as the laboratory technician.
5565. **REMOVABLE PROSTHODONTICS CLINIC.** (Cr ar) Morstad
5568. **VIEW OF PARTIAL REMOVABLE PROSTHETICS.** (1 cr; hrs ar; elective) Baker
Treatment planning, case analysis, use of precision attachments, and overlay dentures.
5569. **REMOVABLE PROSTHETICS.** (Cr ar) Petersen
Recent advances in removable prosthetic dentistry.
5570. **SEMINAR: RESTORATIVE DENTISTRY.** (Cr ar) Morstad
Lectures on the clinical approach to crown and bridge, operative, periodontic, and removable prosthetic dentistry; technical procedures and biological concepts.
5575. **OVERVIEW OF IMPLANTS USED IN DENTISTRY.** (1 cr; elective) Petersen
Endosseous and subperiosteal implants used today. Includes indications for their use, surgical procedures, and prosthodontic restorations used. Slides showing actual clinical cases used.
5577. **VIEW OF COMPLETE DENTURE PROSTHETICS.** (1 cr; elective) Petersen
Various phases of complete denture prosthetics

NONDIVISIONAL COURSES, ACTIVITIES, AND PROGRAMS

ADMISSIONS, TREATMENT PLANNING, AND COMPREHENSIVE CARE

Professor

Anna T. Hampel, D.D.S., M.S.D., *director*

Associate Professor

Eugene E. Petersen, D.D.S., M.S.D.

Assistant Professor

Harold H. Roelike, D.D.S.
Robert Q. Sigford, D.D.S.

Instructor

John O. Look, D.D.S.
Dennis E. Theis, D.D.S.

5800. **TREATMENT PLANNING CLINIC**

5801. **TREATMENT PLANNING CLINIC**

5802. **TREATMENT PLANNING.** (Cr and lect hrs ar) Hampel

Principles and crucial factors in treatment planning; outlining sequence and estimating time in rendering comprehensive oral treatment; concepts of diagnosis; selection and presentation of ideal and acceptable treatment plans.

5807. **TREATMENT PLANNING: INDEPENDENT STUDY.** (Cr and hrs ar)

BIOMATERIALS

5601. **PRINCIPLES OF BIOMATERIALS.** (2 cr)

Introduction to the physical, chemical, and mechanical properties of materials used in dentistry

5602. **BIOMATERIALS: INDEPENDENT STUDY.** (Cr and hrs ar)

DENTAL JURISPRUDENCE

Professorial Lecturer

Irving R. Brand

Doctor of Dental Surgery Program

5610. DENTAL JURISPRUDENCE AND ETHICS. (2 cr) Brand

Judicial systems, administration, and proceedings; regulation of practice of dentistry; organization of practice; ethics; advertising; fee splitting; legal problems incident to purchasing and leasing real estate and purchasing personal property; accounting; taxation; wills and estate planning; contracts; malpractice; and insurance.

5611. DENTAL JURISPRUDENCE: INDEPENDENT STUDY. (Cr and hrs ar) Brand

HOSPITAL DENTISTRY

Professor

Daniel E. Waite, D.D.S., M.S., *chief*
Carl L. Bandt, D.D.S., M.S.D., M.S.
Robert J. Gorlin, D.D.S., M.S.
Norman O. Holte, D.D.S., M.S.
James R. Jenser, D.D.S., M.S.D.
Andrew T. Morstad, D.D.S., M.S.
Michael J. Till, C.D.S., Ph.D.
Robert A. Vickers, D.D.S., M.S.D.
Carl J. Witkop, D.D.S., M.S.
Douglas H. Yock, D.D.S., M.S.

Associate Professor

Richard R. Bevis, D.D.S., Ph.D.
Ralph V. Katz, D.M.D., Ph.D.
Myer S. Leonard, D.D.S., M.D.
Eugene E. Petersen, D.D.S., M.S.D.
Paul O. Walker, D.D.S., M.S.D.

Assistant Professor

Roscoe P. Hylton, D.D.S.
Mark T. Jaspers, D.D.S., M.S.
William H. Kuhlmann, D.D.S., M.S.D.
Bruce L. Pihlstrom, D.D.S., M.S.

Clinical Instructor

Jay A. Anderson, D.D.S., M.S.

5642. HOSPITAL DENTISTRY. (1 cr) Waite and staff

Lectures on and clinical experience in management of hospitalized patients, operating room protocol, admission and discharge of patients, and ambulatory patients.

OCCCLUSION

Professor

Frederick W. Noble, D.D.S.

Clinical Professor

William Branstad, D.D.S.

Clinical Associate Professor

Lee Hermann, D.D.S., *acting director*

Clinical Assistant Professor

Thomas Johnson, D.D.S.

Clinical Instructor

William G. Lawton, D.D.S.

5750. OCCCLUSION I. (3 cr: 10 lect, 30 lab, 30 clin hrs) Noble and interdisciplinary staff

Principles of occlusion including the history of occlusion, anatomy of the masticatory system, articulators and articulation of models, and occlusal analysis. Includes a laboratory exercise in the wax-added technique of developing occlusal morphology with correlated lecture material.

5751. OCCCLUSION II. (1 cr: 10 lect hrs)

Principles of occlusion with emphasis on neurology and physiology of occlusion, muscle physiology, mandibular movement, and concepts or philosophies of occlusion.

5752. OCCCLUSION III. (1 cr: 10 lect hrs plus clinic)

Principles of occlusion concerned with the pathology of occlusion, bruxism, traumatic occlusion and occlusal trauma, temporomandibular joint dysfunction syndrome, occlusal adjustment, and the examination, diagnosis, and treatment planning of patients with occlusal problems.

5753. OCCCLUSION IV. (1 cr; elective)

Principles of occlusion are discussed in a seminar format with reading from the literature in occlusion. *Clinical application of the principles of occlusion is continued with an interdisciplinary approach. Emphasis on management of occlusal problems.*

5754. OCCCLUSION II LABORATORY. (2 cr; elective)

Laboratory-clinical course designed to supplement the lecture course (5751). Includes demonstration and participation in the use of a pantograph with subsequent setting of an articulator; occlusal adjustment of mounted casts; design; waxing and demonstration of an occlusal bite plane.

5755. OCCCLUSION: INDEPENDENT STUDY. (Cr and hrs ar)

ORAL ANATOMY

Professor

Frederick W. Noble, D.D.S., *director*

Clinical Associate Professor

Herman T. Aeziman, D.D.S.
James L. Donahue, D.D.S.
Robert W. Wiethof, D.D.S.

Clinical Assistant Professor

N. J. Akimoto, D.D.S.
Norman J. Edwards, D.D.S.
Philip F. Fabel, D.D.S.
Peter M. Holm, D.D.S.
Gordon L. Lundholm, D.D.S.
Richard J. Trezona, D.D.S.

Clinical Instructor

Ronald L. King, D.D.S.
Mark J. Modjean, D.D.S.
David Alness Russell, D.D.S.
Carol Fredrickson Zehrer, D.D.S.

5649. ORAL ANATOMY. (6 cr) Noble

This lecture-laboratory course encompasses (a) nomenclature, (b) classification, identification, and methods of charting the human dentition, primary and permanent, (c) a detailed study of tooth morphology and arrangement, (d) calcification and eruption sequences as they pertain to the growth and development of the oral cavity, and (e) laboratory exercises designed to reinforce lecture material as well as to develop the manual skills and knowledge necessary to reproduce fine tooth detail.

5650. PORCELAIN FUSED TO METAL RESTORATIONS. (1 cr) Noble

Includes design, casting procedures, porcelain applications and alteration of tooth form and color.

5654. ORAL ANATOMY: INDEPENDENT STUDY. (Cr and hrs ar)

ORAL RADIOLOGY

Associate Professor

Ramesh K. Kuba, D.D.S., M.S.D.,
acting director

Instructor

John W. Brand, D.D.S.

5775. ORAL RADIOLOGY I. (2 cr; 20 lect hrs) Kuba

The study of films, roentgenograms, cassettes, and grids used in dentistry; intraoral roentgenographic surveys; roentgenographic density and contrast; geometry of image formation and application to intraoral techniques; roentgenographic quality analysis; film processing, and theory of atomic structure.

5776. ORAL RADIOLOGY II. (2 cr; 20 lect hrs) Kuba

Roentgenographic anatomy, applications of image shift principles in localization, nature and characteristics of atomic radiations, production and control of X-rays, mathematics of roentgenographic exposure, biological effects of ionizing radiations, radiation dosimetry, radiation protection, and radiation regulations.

5778. CLINICAL ROENTGENOLOGY. (2 cr; 18 preclinic, 30 clinic, 12 seminar hrs) Kuba, Brand

Students observe and participate in demonstrations of various roentgenographic procedures (intraoral and extraoral, including panoramic roentgenography) in order to develop the ability to produce acceptable complete periapical-bitewing roentgenographic surveys on mounted skulls and patients, process exposed films, qualitatively evaluate their results, mount and interpret their roentgenograms, and discuss topics relevant to oral radiology.

5779. ORAL RADIOLOGY III. (1 cr; 10 lect hrs) Kuba

This systematic study of interpretation of intraoral and extraoral roentgenograms emphasizes the establishment of differential and definitive diagnoses. Roentgenograms of a broad spectrum of developmental and acquired diseases are studied in detail.

5781. ADVANCED CLINICAL ROENTGENOLOGY. (Cr and hrs ar; elective) Kuba

5784. TMJ PATHOLOGY AND FACIAL PAIN. (1 cr; elective) Brand

5785. ORAL RADIOLOGY: INDEPENDENT STUDY. (Cr and hrs ar) Kuba, Brand

PUBLIC COMMUNICATION

5760. PUBLIC COMMUNICATION. (1 cr; limited to 50 students each qtr; elective) Smith

Designed to increase the dental student's knowledge and understanding of people and communication—verbal and nonverbal—and to further his or her development as a speaker and a listener.

Contributing Departments

ANATOMY (Anat)

5105. **DENTAL MICROSCOPIC ANATOMY.** (6 cr; 100 hrs; prereq regis in School of Dentistry) Bauer
Minute structure of cells, tissues, and organs of the human body.
5108. **GROSS HUMAN ANATOMY FOR DENTAL STUDENTS.** (6 cr; 120 hrs; prereq #) Bauer
Lectures on and dissection of thorax, extremities, abdomen, and pelvis.
5109. **GROSS HUMAN ANATOMY FOR DENTAL STUDENTS.** (6 cr; 120 hrs; prereq #) Sorenson
Lectures on and dissection of head and neck.
5110. **NEUROSCIENCE FOR DENTAL STUDENTS.** (2 cr; *Phsl 5100; prereq regis dent fr or #) Elde
Introduction to the structure and function of the central nervous system. The correlation between morphology and physiology is emphasized.

BIOCHEMISTRY (MdBc)

5202. **BIOCHEMISTRY FOR DENTAL STUDENTS.** (8 cr; 67 lect and 13 lab hrs) Gilboe, Livingston, Singer, Smith, Vatasery
5203. **TOPICS IN DENTAL BIOCHEMISTRY.** (2 cr; 20 lect hrs) Singer

MICROBIOLOGY (MicB)

- 5201f. **MICROBIOLOGY FOR DENTAL STUDENTS.** (7 cr) Anderson, Liljemark, Reilly
Nature and diversity of microorganisms; microbial structure and function; metabolism and growth; genetics and virology; principles of sterilization and disinfection; chemotherapy, host-parasite relationships; fundamentals of immunology; pathogenic bacteria, fungi, and viruses; ecology of oral microorganisms; microbiology of dental caries and periodontal disease.

PATHOLOGY (LaMP)

5100. **PATHOLOGY FOR DENTAL STUDENTS.** (4 cr; 30 lect and 30 lab hrs; microscope required...use of microscope may be obtained by purchasing two \$3 microscope cards from bursar)
Approximately half of the course deals with basic pathological phenomena such as inflammation, healing, repair, retrogressive tissue changes, and neoplasia. The remainder is devoted to specific diseases of various organ systems. Lectures, demonstrations, and laboratory work.

PHARMACOLOGY (Phcl)

- 5103-5104. **PHARMACOLOGY FOR DENTAL STUDENTS.** (5/4 cr) Quebbemann
Lectures and laboratory exercises on the action and fate of drugs.

PHYSIOLOGY (Phsl)

5100. **NEUROSCIENCE FOR DENTAL STUDENTS.** (2 cr; *Anat 5110 required; prereq courses in biochemistry and human anatomy; 3 lect, 3 lab hrs per wk)
Basic principles of nervous function studied through neuroanatomy and neurophysiology.
5101. **HUMAN PHYSIOLOGY.** (5 cr; primarily for dental students; prereq biochemistry and Phsl 5100; 6 lect, 3 lab hrs per wk)
Principles of physiology, circulation, respiration, digestion, excretion, and metabolism.

III. PROGRAM IN DENTAL HYGIENE

The program in dental hygiene was established at the University of Minnesota in 1919. It is fully accredited by the Council on Dental Education of the American Dental Association. This health science and liberal arts program may be completed in 7 quarters. The degree of graduate dental hygienist, G.D.H., is granted upon completion of the program.

A bachelor of science degree in dental hygiene with majors in dental hygiene education or dental hygiene public health is also offered. The dental hygiene education major prepares students to teach in dental hygiene programs. The dental hygiene public health major prepares students to work in public health programs.

Students who wish to pursue an intercollege program to meet their personal and professional goals may earn a bachelor of science degree through University College on the Minneapolis campus.

Dental hygienists must obtain a license to practice in the state in which they choose to locate by passing a state board examination. A National Board Examination (written), which is currently accepted by all but two states, may be taken. The state of Minnesota requires a minimum number of hours of continuing education study every 5 years to maintain licensure.

The broad objectives of this program are to encourage and prepare students to be productive, useful, dependable citizens; to live comfortably with themselves; and to assume professional responsibilities and obligations for the betterment of human welfare. Dental hygiene graduates should have the knowledge, skills, and attitudes necessary to provide preventive dental services and teach dental health in public schools, health departments, hospitals, industrial institutions, and private dental offices.

Admission Requirements

The program in dental hygiene admits students, 18 years of age or older, to the 7-quarter program once each academic year, in the fall. One class (track) begins dental hygiene courses in the fall quarter and one class in the winter quarter. The fall quarter track students graduate 2 years later in August, and the winter quarter track students graduate 2 years later in December.

Applicants for admission to the G.D.H. degree program should be in the upper 25 percent of their high school class. Students with previous college experience should have at least a 2.00 (C) grade point average. Admission requirements include high school chemistry or its equivalent; a high school transcript with ACT or PSAT scores; transcripts of any previous college work; and the Dental Hygiene Aptitude Test results.

The Dental Hygiene Aptitude Test application form and a brochure listing the testing centers and describing the test are available from the Testing Division of the American Dental Hygienists Association, 211 East Chicago Avenue, Chicago, Illinois 60611; or from the Program in Dental Hygiene, 5-164 Health Sciences Unit A, 515 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455. The test must be completed by April 15.

Students who have previously attended college and have completed college biology are considered for acceptance into the fall quarter track. Students without previous college experience are considered for winter entry but are often advised to take courses during fall quarter to reduce the course load.

Students completing a 2-year dental hygiene program may apply for entry into the bachelor's degree program in dental hygiene. This program admits up to 50 students, 25 in the dental hygiene education major and 25 in the dental hygiene public health major, each academic year. For further information on admission requirements, contact the Coordinator of the Bachelor's Degree Program in Dental Hygiene, 5-164 Health Sciences Unit A, 515 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Application Procedures

There are three different types of applications for admission to the program in dental hygiene, depending upon the educational status of the applicant:

1. *Standard Minnesota College Admission Form*—for students applying directly from high school or with less than 1 year of accredited college or university course work.
2. *Application for Admission With Advanced Standing*—for students who will have completed at least 1 year or more of accredited college course work prior to the requested quarter of entry.
3. *Request for Change of College Within the University*—for students who have previously attended the University of Minnesota, excluding evening-only or summer-only students.

Application forms can be obtained from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455; or from the program in dental hygiene. Students should specify the extent of their educational background so that the correct form can be sent.

All applications for admission, along with the required credentials and the \$10 nonrefundable credentials examination fee, should be sent to the Office of Admissions and Records. Applications must be submitted between January 1 and April 15 of the desired year of entry. Eligible applicants are sent a Dental Hygiene Admissions Questionnaire upon clearance by the Office of Admissions and Records.

Application for admission to the bachelor's degree program in dental hygiene must be submitted between April 1 and June 15 for admission to the fall quarter class. Notice of admission status is sent to applicants by July 15. Orientation and registration information are also sent with this notice.

Expenses¹

Tuition Fee (per quarter)

Residents	\$254.00
Nonresidents	724.00

Student Services Fee (per quarter)55.00

Instrument Usage and Special Supplies Fee (per quarter)66.00

(Large pieces of equipment and most supplies needed for work in clinics and laboratories are furnished by the School of Dentistry. All instruments are provided by the school on a quarterly rental basis.)

Personal Supplies (per quarter)75.00

(Students are required to purchase uniforms, white shoes, lab coats, textbooks, and other personal supplies. Lists of required materials and textbooks are issued to students at the beginning of each quarter.)

Awards and Honors

Louise C. Ball Scholarship and Prize Fund—Annual scholarship assistance is made available to a qualified graduating senior in the program in dental hygiene, or to a hygienist who has graduated from the University of Minnesota and who wishes to further her or his education in some other department within the University.

¹The following fees were charged for the 1977-78 academic year and are subject to change. Information about current fees is available in the *General Information Bulletin*.

Sigma Phi Alpha—The national dental hygiene honor society is represented at Minnesota by Eta Chapter. This society recognizes and honors scholarship, service, and character among dental hygiene students. A maximum of 10 percent of the graduating class is eligible.

American Dental Hygienists Association—The association administers scholarships for well-qualified second-year dental hygiene students. These funds are awarded on a national competitive basis. Application may be made through the Dental Hygiene office in the School of Dentistry. The association also administers one or two postgraduate scholarships each year for graduates interested in becoming dental hygiene educators. Application may be made through the Dental Hygiene office.

Shirley Burgan Lichtwardt Memorial Scholarship — Annual scholarship assistance is made available to a second-year dental hygiene student in good academic standing who is in financial need.



Study of the function of teeth in the dental hygiene laboratory

Program in Dental Hygiene

Seven-Quarter Program in Dental Hygiene

LOWER DIVISION DENTAL HYGIENE COURSES

	Credits
DH 1001—Dental Anatomy	4
DH 1010—Survey of Dental Hygiene	2
DH 1011—Personal/Professional Development	2
DH 1012—Introduction to Dental Public Health	3
DH 1013—Dental Public Health Programs	2
DH 1014—Dental Public Health Experience	2
DH 1015—Issues in Dental Hygiene	3
DH 1049—Introduction Prophylaxis I	3
DH 1050—Dental Prophylaxis II	5
DH 1051—Dental Prophylaxis III	3
DH 1075—Dental Office Emergencies	1
DH 1076—Anesthesiology	1
DH 1110—Orthodontics for the Dental Hygienist	1
DH 1151—Biomaterials I—Introduction to Dental Materials	2
DH 1152—Biomaterials II—Occlusion	3
DH 1153—Biomaterials III—Principles and Application of Dental Materials	3
DH 1154—Biomaterials IV—Principles and Application of Dental Materials	3
DH 1230—Preventive Dentistry: Nutrition	2
DH 1250—Office Management	3
	48

OTHER LOWER DIVISION COURSES

Anat 1004—Elementary Anatomy	4
Biol 1011—General Biology	5
Engl 1001—Introductory Composition	4
Engl 1002—Introductory Composition	4
GC 1283—Psychology of Human Development (or Psy 1001—General Psychology may be substituted)	5
MdBc 1030—Biochemistry	4
MicB 1101—Elementary Microbiology	4
Phcl 1001—Pharmacology	1
Phsl 1002—Human Physiology	4
Soc 1001—Introduction to Sociology	4
Spch 1101—Fundamentals of Speech	4
	43
Total Lower Division Credits	91

UPPER DIVISION DENTAL HYGIENE COURSES

DH 3002—Head and Neck Anatomy	1
DH 3052—Dental Prophylaxis IV	3
DH 3053—Dental Prophylaxis V	3
DH 3054—Dental Prophylaxis VI	3
DH 3055—Dental Prophylaxis VII	4
DH 3176—General and Oral Pathology	3
DH 3200—Lectures in Periodontics	1
DH 3275—Introduction to Oral Roentgenology	1
DH 3276—Clinical Roentgenology	2
DH 3277—Principles of Radiology	2
DH 3278—Roentgenographic Analysis	1
Dent 5725—Oral Histology and Embryology	2
	26

OTHER UPPER DIVISION CREDITS

PubH 3004—Personal and Community Health	4
Total Upper Division Credits	30
Total Credits for Program	121

Bachelor's Degree Program in Dental Hygiene Education

Bachelor's Degree Program in Dental Hygiene Education

A total of 190 quarter credits are required to complete the bachelor of science degree in dental hygiene. Most courses completed at other institutions will apply toward this total. The total includes lower division distribution requirement credits: Group A — Communication, Language, and Symbolic Systems, 8-10 credits; Group B — Physical and Biological Sciences, 8-10 credits; Group C — Man and Society, 8-10 credits; Group D — Artistic Expression, 8-10 credits. Of the 190 credits, 75 must be in the upper division (junior-senior level courses). Of the 75 upper division credits, 30 must be in the major selected — either dental hygiene education or dental hygiene public health. The required courses for both majors are listed below. Additional supportive credits to fulfill the total required are selected by the individual student. Each student develops a program to be fulfilled during the first quarter in residence.

DENTAL HYGIENE EDUCATION MAJOR

	Credits
DH 3425—Dental Hygiene Course Development	3
DH 3426—Dental Hygiene Teaching Methods and Materials	3
DH 3427—Dental Hygiene Curriculum Development	3
DH 3449—Dental Hygiene Microteaching: Theory and Practice	3
DH 3450—Dental Hygiene Preclinical Practice Teaching	3
DH 3451—Dental Hygiene Clinical Practice Teaching	3
Ind 5303—Audiovisual Materials in Education	3
Psyf 5120—Educational Measurement in the Classroom	3

Supportive Courses

DH 3452—Dental Hygiene Course Development and Practice Teaching	ar
DH 3460—Research Foundations in Dental Hygiene	ar
DH 3475—Practicum: Teaching Dental Anatomy	3
DH 3476—Practicum: Teaching Biomaterials I	2
DH 3477—Practicum: Teaching Biomaterials II	2
DH 3478—Practicum: Teaching Biomaterials IV	3

DENTAL HYGIENE PUBLIC HEALTH MAJOR

	Credits
DH 3402—Dental Hygiene Public Health Internship	ar
DH 3403—Community Preventive Dentistry	3
DH 3404—School Dental Health	3
DH 3405—Community Dental Health	3
DH 3460—Research Foundations in Dental Hygiene	ar
PubH 5006—Introduction to Community Health	5
PubH 5010—Interpersonal Behavior in Health Organizations	4
PubH 5024—Health Aspects: Aging	3
PubH 5080—Introduction to Community Education	2
PubH 5333—Biological Bases and Epidemiology of Health and Disease	4
PubH 5413—Vital Health Statistics	1
PubH 5414—Biometric Methods I	3
PubH 5610—Principles and Issues in Maternal and Child Health	3
PubH 5615—Health: School-Aged Child	3
Soc 3505—Principles of Social Organization	5

Supportive Courses

Anth 1002—Introduction to Anthropology	5
DH 3400—Dental Hygiene Hospital Internship	ar
DH 3401—Dental Hygiene Public School Externship	ar
DH 3402—Dental Hygiene Hospital Externship	ar
Econ 1001—Principles of Macroeconomics	4
Econ 1002—Principles of Microeconomics	4
HSU courses: See <i>Health Sciences Interdisciplinary Courses Brochure</i>	
Mgmt 3001—Fundamentals of Management	4
PubH 3151—Introduction to Environmental Health	3

Program in Dental Hygiene

PubH 3600—Humar Nutrition	3
PubH 5007—Health Leadership and Effecting Change	3
PubH 5795—The Sociology of Medicine and Health Care: An Introduction to the Field of Medical Sociology	4
Soc 3501—Family System	4
Soc 5951—Minority Group Relations	4

Course Descriptions

Dental Hygiene (DH)

Associate Professor

Donna S. Aker, G.D.H., B.A., *director*

Clinical Associate Professor

Cory H. Kruckenberg, D.D.S.

Assistant Professor

Michael J. Johnson, M.A., *assistant director*
Barbara B. Linnell, G.D.H., B.A.
Kathleen J. Newell, G.D.H., M.A.

Instructor

Jane L. Anderson, G.D.H., B.S.
Roxayn R. Ball, G.D.H., B.S.
Teresa A. Berg, G.D.H., B.S.
Susan G. Donohue, B.S.D.H., M.A.
Avis L. Fellows, G.D.H., B.A.
Catherine A. Furry, G.D.H., M.S.
Emily S. Gatto, B.S.D.H.
Mary Lou Haider, G.D.H., B.S.
Mary Jo Lawless, G.D.H., B.S.
Jeanne M. Maloney, G.D.H., B.S.
Victoria A. Minsloff, B.S.D.H.
Mary H. Nelson, G.D.H., B.S.
Judith A. Puhl, G.D.H., B.S.
Hedwig M. Quam, G.D.H., B.S., M.P.H.

Barbara J. Rasmus, B.S.D.H.
Jill L. Stollenberg, G.D.H., B.S.
Barbara D. Tenney, G.D.H., B.S.
Debra D. Waggoner, B.S.D.H.
Bonita R. Wulf, B.S.D.H.

Clinical Instructor

Katherine L. Britz, G.D.H., B.S.
Kathy J. Hanson, G.D.H., B.S.
Susan W. Hovde, G.D.H., B.S.
Marilyn Ingebritson, G.D.H., B.S.
Mary J. Keyworth, G.D.H., B.S.
Debra H. Kuipers, G.D.H., B.S.
Susan J. Kyle, G.D.H., B.S.
Margaret D. Maixner, R.D.H., B.S.
Cecilia J. McCord, B.S.D.H.
Cynthia M. Nymo, R.D.H., B.S.
Joan E. Pokorney, G.D.H., B.S.
Nancy Popp, G.D.H., B.S.
Patricia P. Sander, G.D.H., B.A.
Mary E. Schwartz, B.S.D.H.
Robert K. VanErem, R.D.H., B.S.
Michelle M. Williams, R.D.H., B.S.
Jo B. Woodward, B.S.D.H.

1001. DENTAL ANATOMY. (4 cr) Fel ows

Lectures: Dental nomenclature; study of all deciduous and permanent teeth including calcification, eruption, decalcification, and shedding; tooth form, function, stress occlusion, and investing tissues; anomalies. Laboratory: Drawings and carvings of teeth.

1010. SURVEY OF DENTAL HYGIENE. (2 cr) Hovde

Introduction to the study of dental needs, delivery of dental services, dental organizational structure, and career opportunities in dental hygiene through lecture and small group discussion. Focus on students' self-awareness and how it affects career choice and professional responsibilities. Includes introduction to basic communication skills. Experiential learning process used.

1011. PERSONAL/PROFESSIONAL DEVELOPMENT. (2 cr) Puhl

Emphasizes awareness of psychosocioeconomic factors affecting behavior. Communication and human relations skills are applied to facilitate students' relations with others—patients, the community, and the dental health team.

1012. INTRODUCTION TO DENTAL PUBLIC HEALTH. (2 cr) Donohue, Nelson, Puhl

Basic dental public health philosophy examined through the study of epidemiology, elementary statistics, preventive dental measures and their acceptance by the public, and review of scientific dental literature. Students arrange and complete an outside cross-cultural experience in order to gain insight into various community problems and understanding of the health care needs of others.

1013. DENTAL PUBLIC HEALTH PROGRAMS. (2 cr) Donohue, Nelson, Puhl

The program development process, dental public health programs, and the role of the dental hygienist within existing programs. Students are required to plan school-based preventive programs to be implemented in 1014.

1014. DENTAL PUBLIC HEALTH EXPERIENCE. (2 cr) Donohue, Nelson, Puhl

In a team effort, dental hygiene students and dental students plan, implement, and evaluate a short-term school-based preventive program.

Course Descriptions

- 1015. ISSUES IN DENTAL HYGIENE.** (3 cr) Puhl
Focus on basic issues from a community or professional perspective. Topics include: alternative health care delivery systems, peer review, quality control, mass media, ethics, professionalism, dental and dental hygiene associations as political influences, ADHA policies, public interest and dental hygiene, consumerism, and dental hygiene as a career.
- 1049. INTRODUCTION TO PROPHYLAXIS I.** (3 cr) Linnell
Oral structures, oral deposits, oral hygiene, and home care procedures. Lectures and practical application.
- 1050. DENTAL PROPHYLAXIS II.** (5 cr) Linnell
Lectures, demonstrations, and practice in scaling and polishing teeth; teaching of oral hygiene and home care of the mouth to patients. Practice on mannequins is followed by practice on patients in the Dental Clinic.
- 1051. DENTAL PROPHYLAXIS III.** (3 cr) Linnell
Continuation of 1050.
- 1075. DENTAL OFFICE EMERGENCIES.** (1 cr) Holte
First aid principles and their application to emergencies in a dental office.
- 1076. ANESTHESIOLOGY.** (1 cr) Holte
Lectures and demonstrations on the principles of local and general anesthesia. Practical application of sedation, analgesia, and injection techniques are stressed.
- 1110. ORTHODONTICS FOR THE DENTAL HYGIENIST.** (1 cr) Spidel
Lectures and demonstrations presenting the basic concepts, clinical experience in orthodontics, and the role of the dental hygienist in this area.
- 1151. BIOMATERIALS I—INTRODUCTION TO DENTAL MATERIALS.** (2 cr) Tenney
General introduction to the structure and properties of dental materials and in-depth study of gypsum products and irreversible hydrocolloids.
- 1152. BIOMATERIALS II—OCCLUSION.** (3 cr) Tenney
Principles of occlusion, physiology of occlusion, occlusal relationships, causes and effects associated with occlusal problems.
- 1153. BIOMATERIALS III—PRINCIPLES AND APPLICATIONS OF DENTAL MATERIALS.** (3 cr) Maloney
Restoration and preventive dentistry; terminology; basic principles; properties of materials; techniques and procedures; recognition and indications for restorations and prosthesis.
- 1154. BIOMATERIALS IV—PRINCIPLES AND APPLICATIONS OF DENTAL MATERIALS.** (3 cr) Young
Continuation of 1153 with emphasis on the analysis of patient education and the role of the dental hygienist with regard to procedures in restorative and preventive dentistry.
- 1230. PREVENTIVE DENTISTRY: NUTRITION.** (2 cr) Sander
Fundamental principles of nutrition and their relevance to oral health and disease, a practical approach to diet counseling for the dental patient.
- 1250. OFFICE MANAGEMENT.** (3 cr) Hange
Professional ethics and jurisprudence, reception of patients, management of recall systems, fees and collections, and case presentations.
- 3002. HEAD AND NECK ANATOMY.** (1 cr) Gatto
Structures of the head and neck as they are related to dental concerns.
- 3052, 3053, 3054, 3055. DENTAL PROPHYLAXIS.** (3,3,3, 4 cr) Haider
Lectures, labs, and discussions dealing with expanded functions for dental hygienists in the areas of periodontics, hypertension screening, dental specialties, and cardiopulmonary resuscitation, as well as practical information concerning professional careers. Students work with a variety of patients in a clinical setting in the dental school and in outside clinics. Students gain practical experience in performing all procedures that dental hygienists may legally perform in the state of Minnesota.
- 3176. GENERAL AND ORAL PATHOLOGY.** (3 cr) Sedano
Circulatory disturbances, inflammation, and tumors, with special consideration of diseases affecting the oral cavity, dental caries, periodontal diseases, oral neoplasias, and similar problems.
- 3200. LECTURES IN PERIODONTOLOGY.** (1 cr) Pihlstrom
A review of the anatomy, histology, and physiology of the supporting structures of the teeth; physiotherapy; classification, etiology, and treatment of periodontal diseases.
- 3275. INTRODUCTION TO ORAL ROENTGENOLOGY.** (1 cr) Kuba
Roentgenogram identification and evaluation of intraoral roentgenographic surveys; application of geometric principles in intraoral roentgenographic techniques.
- 3276. CLINICAL ROENTGENOLOGY.** (2 cr) Kuba
Roentgenographic procedures—*intraoral* and *extraoral* — and *panographic* roentgenography.

Program in Dental Hygiene

- 3277. THEORY AND PRINCIPLES OF RADIOLOGY.** (2 cr) Kuba
The nature of particulate and electromagnetic radiations; production and control of X rays; characteristics of roentgenographic film and image; mathematics of exposure; intensifying screens, cassettes, and grids; chemistry of processing; stain removal and roentgenographic density reduction; and general survey of radiation biology, dosimetry, law, and controversy.
- 3278. ROENTGENOGRAPHIC ANALYSIS.** (1 cr) Kuba
Inconsistencies and technical errors responsible for observed discrepancies in intraoral roentgenograms produced by angle-bisector and paralleling techniques, roentgenographic anatomy, and roentgenographic evidence of deviations from the spectrum of normal anatomic variations.
- 3399. INDEPENDENT STUDY.** (Cr ar) elective
Opportunity to study an area not covered in other course offerings. May include off-campus experiences.
- 3400. DENTAL HYGIENE HOSPITAL EXTERNSHIP.** (Cr ar) Quam
Seminars on dental hygiene for hospitalized patients, hospital procedures and medical-dental relationships in a hospital setting, types of conditions and treatment implications for the dental hygienist; experience in reading and writing hospital records.
- 3401. DENTAL HYGIENE HOSPITAL EXTERNSHIP.** (Cr ar) Quam
Practical experience with hospitalized patients. Clinical experience in screening, treating, and evaluating the hospitalized patient; attendance and presentation at interdisciplinary conferences.
- 3402. DENTAL HYGIENE PUBLIC HEALTH INTERNSHIP.** (Cr ar) Quam
The community health agency; survey, analysis, program planning and operation, financing, evaluating.
- 3403. COMMUNITY PREVENTIVE DENTISTRY.** (3 cr) Quam
Basic principles of preventive dentistry as applied to the community; etiology, measurement, epidemiology, and prevention of oral disease.
- 3404. SCHOOL DENTAL HEALTH.** (3 cr) Quam
Review and discussion of current literature pertaining to school dental health programs; designing, implementing, and evaluating such a program.
- 3405. COMMUNITY DENTAL HEALTH.** (3 cr) Quam
Seminars on critical and current issues in community dental health with emphasis on various oral health delivery systems, financing and quality of dental care, training and utilization of dental professionals, and consumerism as it affects dentistry.
- 3425. DENTAL HYGIENE COURSE DEVELOPMENT.** (3 cr) Newell
Principles and procedures for selection, development, and organization of course materials; students select and organize materials for a selected course.
- 3426. DENTAL HYGIENE TEACHING METHODS AND MATERIALS.** (3 cr) Newell
Application of principles of learning as well as procedures for selecting and organizing methods and materials in developing units of instruction.
- 3427. DENTAL HYGIENE CURRICULUM DEVELOPMENT.** (3 cr) Newell
Orientation to issues and problems in developing the dental hygiene curriculum; analysis, selection, and organization of curriculum units.
- 3449. DENTAL HYGIENE MICROTEACHING: THEORY AND PRACTICE.** (3 cr) Newell
Seminars on and observation and microteaching of selected instructional skills.
- 3450. DENTAL HYGIENE PRECLINICAL PRACTICE TEACHING.** (3 cr) Newell
Seminars on and observation, videotaping, and practice teaching of manual skills in preclinical dental hygiene.
- 3451. DENTAL HYGIENE CLINICAL PRACTICE TEACHING.** (3 cr) Newell
Seminars on and preparation of didactic material; practice teaching of didactic material and of clinical skills.
- 3452. DENTAL HYGIENE COURSE DEVELOPMENT.** (Cr ar) Newell
Application of principles of course development; supervised practice in teaching and evaluation of instructional techniques.
- 3460. RESEARCH FOUNDATIONS IN DENTAL HYGIENE.** (Cr ar) Newell
Seminars on and independent projects in basic research processes; acquisition of competency in development of a research project and evaluation of health research.
- 3475. PRACTICUM: TEACHING DENTAL ANATOMY.** (3 cr) Anderson
Seminars on, observation of, and participation in teaching dental anatomy.
- 3476. PRACTICUM: TEACHING BIOMATERIALS I AND II.** (3 cr) Anderson
Seminars focusing on group process skills, observation of and participation in maxillary-mandibular relationship establishment, mounting study casts, and occlusal analysis.

3477. PRACTICUM: TEACHING BIOMATERIALS III. (3 cr) Anderson

Seminars on, observation of, and participation in teaching restorative and preventive dentistry as well as utilization of four-handed dentistry techniques.

3478. PRACTICUM: TEACHING BIOMATERIALS IV. (3 cr) Anderson

Seminars on, observation of, and participation in teaching uses and principles of dental materials.

Contributing Departments

DENTISTRY (Dent)

5725. ORAL HISTOLOGY AND EMBRYOLOGY. (2 cr) Sedano

ANATOMY (Anat)

1004. ELEMENTARY ANATOMY. (4 cr, 30 lect and 30 lab hrs)

ANTHROPOLOGY (Anth)

1002. INTRODUCTION TO ANTHROPOLOGY. (5 cr)

BIOCHEMISTRY (MdBc)

1030. PHYSIOLOGICAL CHEMISTRY FOR DENTAL HYGIENE AND NURSING STUDENTS. (4 cr; 40 lect hrs)

BIOLOGY (Biol)

1011. GENERAL BIOLOGY. (5 cr; 30 lect and 40 lab hrs)

ECONOMICS (Econ)

1001. PRINCIPLES OF MACROECONOMICS. (4 cr)

1002. PRINCIPLES OF MICROECONOMICS. (4 cr)

ENGLISH (Comp)

1001, 1002. INTRODUCTORY COMPOSITION. (4 cr per qtr; 60 lect hrs)

HEALTH SCIENCE UNATTACHED (HSU)

See Health Sciences Interdisciplinary Courses brochure.

INDUSTRIAL EDUCATION (Ind)

5303. AUDIOVISUAL MATERIALS IN EDUCATION. (3 cr)

MANAGEMENT (Mgmt)

3001. FUNDAMENTALS OF MANAGEMENT. (4 cr)

3002. PSYCHOLOGY OF MANAGEMENT. (4 cr)

Program in Dental Hygiene

MICROBIOLOGY (MicB)

1101. ELEMENTARY MICROBIOLOGY. (4 cr; 30 lect and 30 lab hrs)

PHARMACOLOGY (Phcl)

1001. DENTAL THERAPEUTICS. (1 cr; 10 lect hrs) Holte

PHYSIOLOGY (Phsl)

1002. HUMAN PHYSIOLOGY. (4 cr; 30 lect and 20 seminar hrs)

PSYCHOLOGICAL FOUNDATIONS (PsyF)

5120. EDUCATIONAL MEASUREMENT IN THE CLASSROOM. (3 cr)

PSYCHOLOGY (Psy)

Psy 1001. GENERAL PSYCHOLOGY. (5 cr; 50 lect hrs)

GC 1283. PSYCHOLOGY OF HUMAN DEVELOPMENT. (5 cr; 50 lect hrs)

PUBLIC HEALTH (PubH)

3001. PERSONAL AND COMMUNITY HEALTH. (3 cr; 30 lect hrs)

3004. BASIC CONCEPTS IN PERSONAL AND COMMUNITY HEALTH. (4 cr; 40 lect hrs) Greene, Schwanke

3151. INTRODUCTION TO ENVIRONMENTAL HEALTH. (3 cr)

3600. HUMAN NUTRITION. (3 cr)

5006. INTRODUCTION TO COMMUNITY HEALTH. (5 cr)

5007. HEALTH LEADERSHIP AND EFFECTING CHANGE. (3 cr)

5010. INTERPERSONAL BEHAVIOR IN HEALTH ORGANIZATIONS. (4 cr)

5024. HEALTH ASPECTS: AGING

5080. INTRODUCTION TO COMMUNITY HEALTH EDUCATION. (2 cr)

5333. BIOLOGICAL BASES AND EPIDEMIOLOGY OF HEALTH AND DISEASE. (4 cr)

5413. VITAL AND HEALTH STATISTICS. (1 cr)

5414. BIOMETRIC METHODS I. (3 cr)

5615. HEALTH OF THE SCHOOL-AGE CHILD. (3 cr)

5610. PRINCIPLES AND ISSUES IN MATERNAL AND CHILD HEALTH. (3 cr)

5795. THE SOCIOLOGY OF MEDICINE AND HEALTH CARE: AN INTRODUCTION TO THE FIELD OF MEDICAL SOCIOLOGY. (4 cr)

SOCIOLOGY (Soc)

1001. INTRODUCTION TO SOCIOLOGY. (4 cr; 30 lect hrs)

3501. THE FAMILY SYSTEM. (4 cr)

3505. PRINCIPLES OF SOCIAL ORGANIZATION. (5 cr)

5951. MINORITY GROUP RELATIONS. (4 cr)

SPEECH (Spch)

1101. FUNDAMENTALS OF SPEECH. (5 cr; 50 lect hrs)

IV. PROGRAM IN DENTAL ASSISTING

The program in dental assisting, established at the University of Minnesota in 1953, is a 2-year course of study offered jointly by the School of Dentistry and the General College. The program, which is accredited by the American Dental Association Commission on Accreditation, gives students the opportunity to acquire a general education as well as the training necessary to function as a skilled member of the dental health team. The associate in arts degree is awarded upon completion of the program. The program will prepare students to meet the educational requirements for national certification by the American Dental Assistants Association and for state registration by the Minnesota State Board of Dentistry.

Admission Requirements

Admission is open to students who are graduates of an accredited high school or have equivalent education. Biology, chemistry, and typing in high school are recommended. Freshman applications should include a high school transcript with MSAT and ACT scores.

Students with previous college work may enter the program with advanced standing, but must have a 2.00 average or better to be considered. High school records must be presented with the college transcript.

All candidates will be required to take the Dental Assisting Aptitude Test, complete admission requirements of the General College, and arrange an interview appointment with the Dental Assisting office for counseling prior to final acceptance into the program.

Application Procedures

Students may obtain appropriate application forms from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455. Applicants should specify whether they are applying as a freshman, an advanced standing student from an outside college, or an advanced standing student transferring from a college within the University.

Freshman are admitted to the program in the fall quarter only. The deadline for reviewing freshman applications is July 15. Applications received prior to May 1 will be given priority. Advanced standing students may be admitted to the program in any quarter, following evaluation of their previous college work.

Expenses¹

Tuition Fee (per quarter)	
Resident	\$254
Nonresident	724
Student Services Fee (per quarter)	55
Books, Uniforms, and Special Fees (total)	625

¹The following fees were charged for the 1977-78 academic year and are subject to change. Information about current fees is available in the *General Information Bulletin*.

Program in Dental Assisting

Program in Dental Assisting

FIRST YEAR

	Credits
To be taken throughout: Fall, Winter, and Spring Quarters	
GC 1131—Principles of Biology	5
GC 1132—The Human Body	5
GC 1166—Principles of Chemistry	5
GC 1283—Psychology of Human Development	3
GC 1421—Writing Laboratory: Personal Writing	4
GC 1422—Writing Laboratory: Organizing Ideas	4
GC 1461—Oral Communications	5
GC 1545—Intermediate Typing	3
	34

Winter Quarter

DA 1005—Introduction to Dentistry	1
---	---

Spring Quarter

DA 1001—Oral Anatomy	4
DA 1050—Orientation to Clinical Assisting	2
DA 1125—Biomaterials I	2
	8

Total First-Year Credits43

SECOND YEAR

Fall Quarter

DA 1010—Head and Neck Anatomy	2
DA 1051—Clinic I	3
DA 1052—Clinic Lecture I	2
DA 1100—Microbiology	1
DA 1105—Oral Histology	1
DA 1126—Biomaterials II	2
DA 1150—Introduction to Oral Roentgenology	2
DA 1160—Expanded Duties I	2
DA 1200—Office Emergencies	1
	16

Winter Quarter

DA 1011—Introduction to Occlusion	2
DA 1053—Clinic II	5
DA 1054—Clinic Lecture II	1
DA 1127—Biomaterials III	2
DA 1151—Principles of Radiology	2
DA 1161—Expanded Duties II	2
DA 1205—Dental Therapeutics	1
DA 1210—Anesthesiology	1
	16

Spring Quarter

DA 1055—Clinic III	6
DA 1056—Clinic Seminar	2
DA 1107—Orthodontics	1
DA 1110—Oral Pathology	1
DA 1155—Clinical Roentgenography	2
DA 1156—Roentgenographic Analysis	1
DA 1162—Expanded Duties III	2
DA 1175—Practice Management I	1
DA 1176—Practice Management II	1
	17

Total Second-Year Credits49

Total Credits for Program92

Course Descriptions

Dental Assisting (DA)

Associate Professor

Helen M. Tuchner, C.R.D.A., B.A., *director*

Assistant Professor

Harold H. Roelike, D.D.S.

Clinical Assistant Professor

Shirley P. Schwarzrock, Ph.D.

Instructor

Jane F. Iacono, G.D.H., B.S.

Maria R. Pintado, C.R.D.A., B.S.

Teaching Specialist

Shirley N. Hild, C.R.D.A., A.A.

- 1001. ORAL ANATOMY.** (4 cr; lect and lab ar) Pintado
Growth and development of the deciduous and permanent dentition and their investing tissues.
- 1005. INTRODUCTION TO DENTISTRY.** (1 cr; 10 lect hrs) Tuchner
The role of auxiliaries within the dental profession. Current information on their legal, ethical, and professional responsibilities as a member of the allied health team.
- 1010. HEAD AND NECK ANATOMY.** (2 cr; lect and lab ar) Pintado
Structures of the head and neck as they are related to dental concerns.
- 1011. INTRODUCTION TO OCCLUSION.** (2 cr; lect and lab ar) Pintado
Fundamental concepts of occlusion and jaw relationships. Exercises include impressions and making and mounting of casts in an articulator.
- 1050. ORIENTATION TO CLINICAL ASSISTING.** (2 cr; lect and lab ar) Hild
Introduction to dental armamentarium and its function in clinical dentistry. Operation and maintenance of dental equipment. Beginning study of basic dental procedures.
- 1051. CLINIC I.** (3 cr; 130 clin hrs) Hild
Students will rotate among clinics for practical experience in chairside assisting in various dental disciplines.
- 1052. CLINIC LECTURE I.** (2 cr; 10 lect hrs) Hild
Lectures on the nomenclature and procedures of restorative dentistry, with an introduction to basic chairside techniques.
- 1053. CLINIC II.** (7 cr; 150 clin hrs) Hild
Continuation of 1051.
- 1054. CLINIC LECTURE II.** (1 cr; 10 lect hrs) Hild
Lectures on current concepts of chairside assisting, with emphasis on auxiliary utilization.
- 1055. CLINIC III.** (6 cr; 150 clin hrs) Hild
Continuation of 1053.
- 1056. CLINIC SEMINAR.** (2 cr; 10 lect hrs) Hild
Lectures on speciality areas of dentistry.
- 1100. MICROBIOLOGY.** (1 cr; 10 lect hrs) Roelike
Historical background, morphology, production, transmission and control, with emphasis on oral ecology. Principles of sterilization and disinfection.
- 1105. ORAL HISTOLOGY.** (1 cr; 10 lect hrs) Roelike
Fundamental microscopic anatomy of the oral cavity including mucous membranes, periodontal structures, teeth, bone, and soft tissue. The embryologic development of the teeth and oral cavity with emphasis on clinical manifestations of abnormal embryologic development.
- 1107. ORTHODONTICS.** (1 cr; 10 lect hrs) Speidel
Lectures and demonstrations presenting the basic concepts and procedures in orthodontics.
- 1110. ORAL PATHOLOGY.** (1 cr; 10 lect hrs) Roelike
Diseases and developmental abnormalities of the teeth. Diseases of the gingiva, periodontium, supporting bones, oral mucosa, and paraoral tissues.
- 1125. BIOMATERIALS I.** (2 cr; lect and lab ar) Iacono
The physical, chemical, and mechanical properties of dental materials.
- 1126. BIOMATERIALS II.** (2 cr; lect and lab ar) Iacono
Continuation of 1125.

Program in Dental Assisting

- 1127. BIOMATERIALS III.** (2 cr: lect and lab ar) Iacono
The manipulation and use of dental materials in laboratory procedures.
- 1150. INTRODUCTION TO ORAL ROENTGENOLOGY.** (1 cr: 10 lect hrs) Brand
Roentgenogram identification and evaluation of intraoral roentgenographic surveys, roentgenographic density and contrast, geometry of image formation and the application of geometric principles in intraoral roentgenographic techniques.
- 1151. PRINCIPLES OF RADIOLOGY.** (2 cr: 20 lect hrs) Staff
The nature of particulate and electromagnetic radiations; production and control of X rays; characteristics of roentgenographic film and image, mathematics of exposure; intensifying screens, cassettes, and grids; chemistry of processing, stain removal and roentgenographic density reduction, and general survey of radiation biology, dosimetry, law, and controversy.
- 1155. CLINICAL ROENTGENOLOGY.** (2 cr: 20 preclinic, 34 clinic, 6 seminar hrs) Staff
Students perform roentgenographic procedures (intraoral, extraoral, and panoramic roentgenography) on mounted skulls and patients, process exposed films, qualitatively evaluate their results.
- 1156. ROENTGENOGRAPHIC ANALYSIS.** (1 cr: 10 lect hrs) Staff
Inconsistencies and technical errors responsible for observed discrepancies in intraoral roentgenograms produced by angle-bisector and paralleling techniques, roentgenographic anatomy, and roentgenographic evidence of deviations from the spectrum of normal anatomic variations.
- 1160. EXPANDED DUTIES I.** (2 cr: lect and lab ar) Roelike
Lectures, demonstrations, and practical experience to help dental auxiliaries acquire the skills necessary for performing expanded functions.
- 1161. EXPANDED DUTIES II.** (2 cr: lect and lab ar) Roelike
Continuation of 1160.
- 1162. EXPANDED DUTIES III.** (2 cr: lect and lab ar) Roelike
Continuation of 1161.
- 1175. PRACTICE MANAGEMENT I.** (1 cr: lect ar) Schwarzrock
The role of the dental assistant in dental office management.
- 1176. PRACTICE MANAGEMENT II.** (1 cr: lect ar) Schwarzrock
Continuation of 1175.
- 1200. DENTAL OFFICE EMERGENCIES.** (1 cr: 10 lect hrs) Holte
Concepts of first aid as applied to the dental office.
- 1205. DENTAL THERAPEUTICS.** (1 cr: 10 lect hrs) Holte
Drugs and their application in dental therapeutics.
- 1210. ANESTHESIOLOGY.** (1 cr: 10 lect hrs) Holte
The principles of local and general anesthesia.

Bachelor of Science Degree Program in Dental Assisting Education

The bachelor of science degree program for dental assisting educators is offered through the University College. The degree program prepares dental assisting educators to teach in, organize, and direct dental assisting programs.

Applicants must have earned an associate of arts degree (or its equivalent) from an accredited dental assisting program.

Students register in the University College and take classes in various colleges of the University. Students must satisfy the liberal education distribution requirements of the College of Liberal Arts. The balance of the program is composed of required courses in education, dentistry, public health, industrial arts, and dental assisting. A minimum of 2 calendar years are required for completion of the degree program. For further information, contact the Dental Assisting office.

BACCALAUREATE DENTAL ASSISTING COURSES (DA)

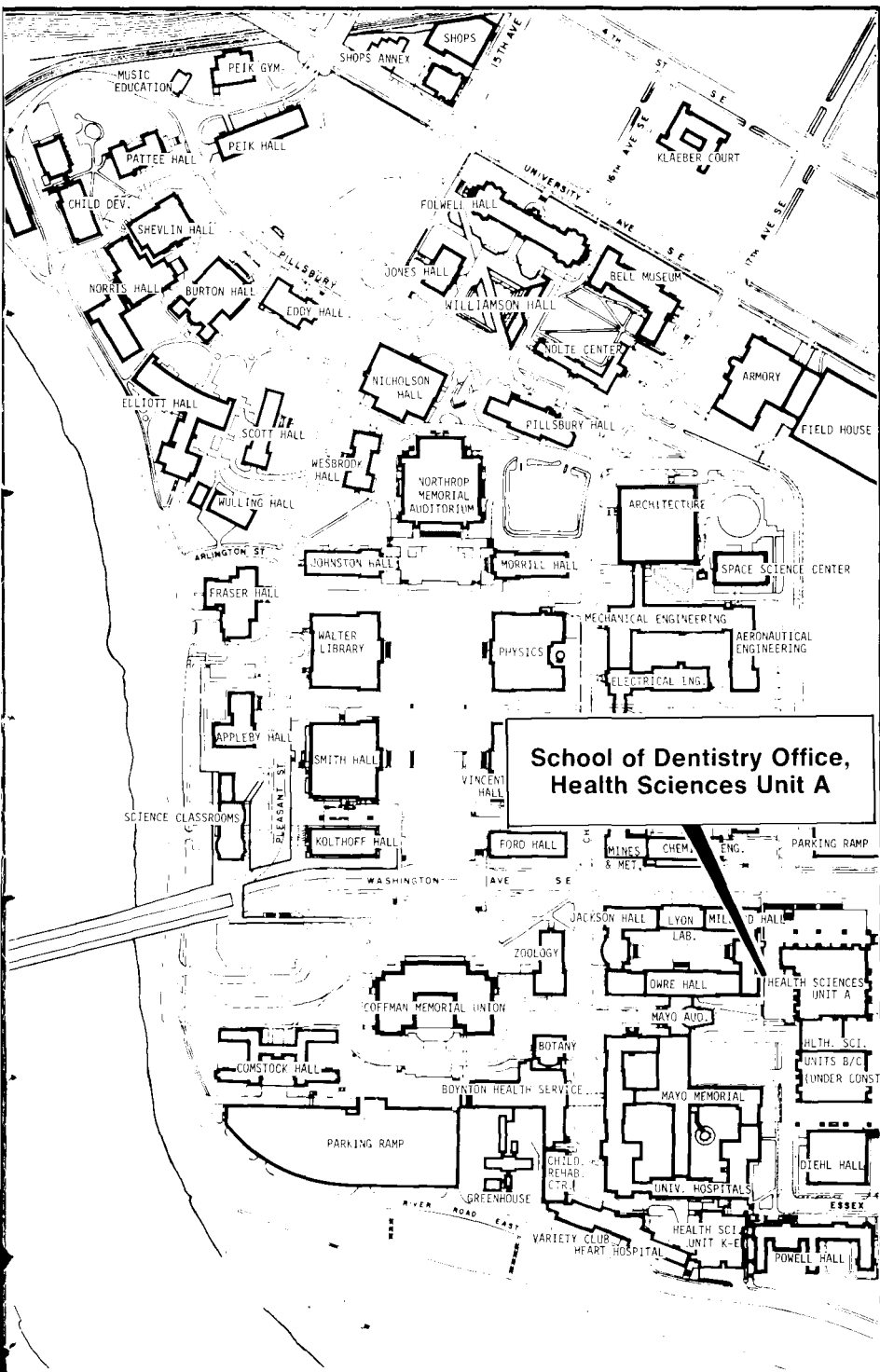
- 3025. DENTAL ASSISTING CURRICULUM DEVELOPMENT.** (3 cr; lect)
A survey of dental assisting course curricula; evaluation of existing programs; requirements of and current problems in curriculum development.
- 3026. DENTAL ASSISTING LABORATORY CURRICULUM SEMINAR.** (2 cr; lect and lab)
Analysis of criteria and established curricula for laboratory procedures in dental assisting education. Organization of units, courses, and curricula with laboratory projects and demonstrations in techniques of instruction.
- 3050. ADVANCED CHAIRSIDE ASSISTING.** (3 cr; seminar and lab)
Development or analysis of a research project based on current studies and experiments in advanced dental assisting procedures.
- 3125. DENTAL ASSISTING HOSPITAL INTERNSHIP.** (4 cr)
Orientation to and experience in management of hospitalized patients, station visits, and clinical dental assisting.
- 3150. CLINICAL INTERNSHIP-STUDENT TEACHING.** (4 cr; lect and clin)
Observation of and experience in teaching under supervision in clinical situations. Use of evaluation procedures and testing situations.
- 3151. LABORATORY INTERNSHIP-STUDENT TEACHING.** (4 cr; lab and seminar)
Observation of and experience in teaching under supervision in dental assisting laboratory situations. Testing and evaluation methods.
- 3175. DENTAL HEALTH EDUCATION.** (4 cr; lect and lab)
Survey of dental health education, its concepts and objectives. Development of oral hygiene programs that can be carried out in private practice, clinic facilities, and school programs.
- 3200. ADMINISTRATION—DENTAL ASSISTING PROGRAMS.** (3 cr; seminar)
Critique of administrative responsibilities of teaching staff, personnel, and student body. Review of curricula, funding, facilities, administrative policies, and selection of students.



Maria Pintado teaching dental anatomy in the dental assisting laboratory

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**School of Dentistry Office,
Health Sciences Unit A**

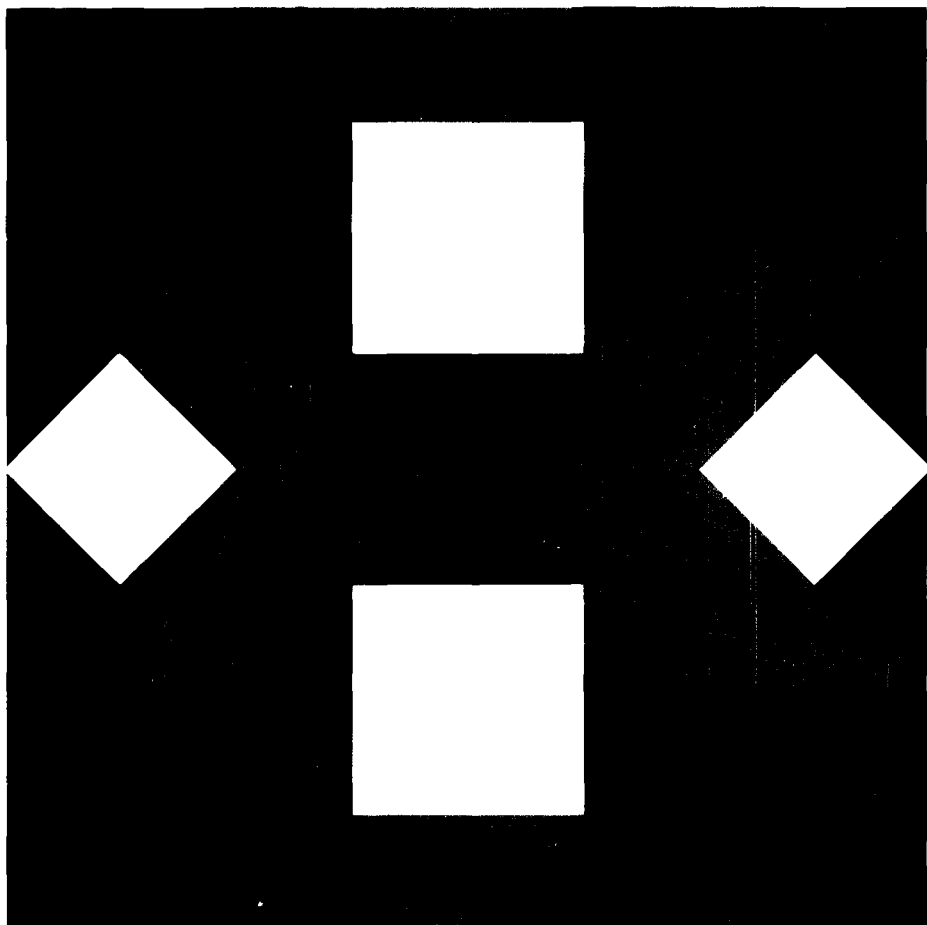
**Twin Cities Campus/Minneapolis
East Bank**

UNIVERSITY
OF MINNESOTA
BULLETIN

1978-1980

APRIL 24, 1978

DEPARTMENT OF
MORTUARY SCIENCE



Board of Regents

The Honorable Wenda Moore, Minneapolis, Chairman; The Honorable David C. Utz, M.D., Rochester, Vice Chairman; The Honorable Erwin L. Goldfine, Duluth; The Honorable Lauris D. Krenik, Madison Lake; The Honorable Robert Latz, Golden Valley; The Honorable David M. Lebedoff, Minneapolis; The Honorable L. J. Lee, Bagley; The Honorable Charles F. McGuiggan, Marshall; The Honorable Lloyd H. Peterson, Paynesville; The Honorable Mary T. Schertler, St. Paul; The Honorable Neil C. Sherburne, Lakeland; The Honorable Michael W. Unger, St. Paul.

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Department of Mortuary Science Faculty

Robert C. Slater, L.H.D., B.S., Professor of Embalming and Mortuary Management
Earl L. Burger, B.S., B.A., A.M.S., Assistant Professor of Restorative Art
Richard A. Grayson, J.D., B.A., Assistant Professor of Funeral Law
F. Phil Iacovino, B.S., Instructor in Funeral Service Management
Eugene M. Larson, B.S., Instructor in Public Health Laws and Regulations
David A. Lee, B.S., Instructor in Embalming
Michael C. Mathews, B.S., A.M.S., Instructor in Mortuary Management
Dale E. Stroud, B.S., A.M.S., Assistant Professor of Embalming

*All other appointees are full-time staff members
of the cooperating colleges and departments.*

Department of Mortuary Science

UNIVERSITY OF MINNESOTA BULLETIN

How to Use This Bulletin

This bulletin is the basic source of information about the Department of Mortuary Science. It is arranged in three sections:

I. General Information and Admission

- Development and Purpose
- Equal Opportunity Statement
- Admission Requirements
- Application Procedures
- Expenses
- Financial Aids and Awards
- Student Personnel Services
- Student Activities

II. Curriculum and Academic Regulations

- Curriculum for the Bachelor of Science Degree
- Graduation Requirements
- Honors
- Registration
- Credit Load
- Grades and Supplementary Symbols
- Scholastic Progress
- Graduate Study

III. Course Descriptions

All students and prospective students should also refer to the *General Information Bulletin*. Information on evening courses and summer offerings is contained in the *Extension Classes Bulletin* and the *Summer Session Bulletin*, respectively. These bulletins are available at the information booth in Williamson Hall or may be obtained by writing to the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455.

For information about the Department of Mortuary Science or career opportunities in funeral service, contact Dr. Robert C. Slater, Director, Department of Mortuary Science, 114 Vincent Hall, 206 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455; telephone (612) 373-3870.

Department of Mortuary Science

I. GENERAL INFORMATION AND ADMISSION

Development and Purpose

The mortuary science program, established in 1908, was the first program of its kind in this country to be organized as part of a state university. During the first almost 50 years of its existence, the program grew from a 6-week session to a 36-week course of study. In 1951, a 2-year curriculum leading to the associate in mortuary science degree was approved. The time span for study for the associate degree was expanded to 3 years in 1955. The bachelor of science degree, granted upon satisfactory completion of a 4-year curriculum, was approved by the Board of Regents in 1968. Impetus for the changes in program length and academic credentials resulted from changes in the philosophy and needs of the funeral service profession.

Since 1970, the department has come under the administrative supervision of the vice president for health sciences.

To insure each student that the curriculum meets the criteria set forth by the profession, the department is accredited by the Commission of Schools of the American Board of Funeral Service Education, an agency recognized by the United States Commissioner of Education, and the Conference of Funeral Service Examining Boards of the United States, Inc.

While funeral service provides care for the dead that shows the dignity of human life, it is best characterized by direct care for the living. Bereavement and grief are part of the continuum of life experiences. The faculty believes that helping individuals to adapt to these changes is a principal aim of funeral service.

Mortuary science students pursue a course of study that is designed to prepare them to accept their obligations to the community, both as professionals and as citizens. The faculty attempts to provide graduates with a solid academic foundation and professional guidance in order to encourage continued professional growth, ethical business practices, supportive and tactful relationships with the bereaved, and respect for public health laws and regulations. Such ethical and professional conduct can promote fuller public acceptance of funeral service and recognition of its contribution to our society.

The baccalaureate program in mortuary science is designed for those who want an expanded college experience along with the required professional training. The curriculum combines instruction in the basic sciences and the liberal arts with training in mortuary arts and sciences. The total credits required for the bachelor of science degree maintain a balance between general education, mortuary science, and related requirements. There is ample opportunity for students to develop individual interests by completing electives in other disciplines. A practicum experience gives students the opportunity to develop the first-hand knowledge, skills, and understanding essential to the practice of funeral service. Many states now require such educational background, plus internship experience, for licensure. Through a problem-solving approach, students learn to evaluate funeral service, identify funeral service problems, and develop appropriate methods of intervention.

Equal Opportunity Statement

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Section 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, 330 Independence Avenue S.W., Washington, D.C. 20201.

Admission Requirements

Students usually enter the Department of Mortuary Science at the start of their junior year. Freshmen and sophomores interested in a mortuary science major are urged to contact the department office at 114 Vincent Hall early for counsel in planning an appropriate preprofessional program. On the Twin Cities campus, students usually register in the College of Liberal Arts or the General College for their pre-mortuary science work. The *College of Liberal Arts Bulletin* and the *General College Bulletin* contain admission criteria and other information about these units. The Department of Mortuary Science accepts students transferring from any accredited college.

Applicants seeking admission to the program must have completed a total of 90 quarter credits as outlined below, with grades of A, B, C, or S. Credits of D may be used to satisfy the distribution and prerequisite requirements but may not be applied to the 90-credit total. At the discretion of the Admissions Committee, certain deficiencies may be made up after admission if such a procedure facilitates the program schedule of the individual student.

The required 90 quarter credits must include 67 credits distributed to fulfill the University-wide Council on Liberal Education (CLE) categories plus 23 additional credits from elective courses. The CLE distribution requirements are detailed below.

Group A. Communications, Language, and Symbolic Systems—15 credits

- a. English (satisfaction of College of Liberal Arts freshman English requirement)
- b. Speech
- c. Accounting—a minimum of 3 credits
- d. Electives—foreign language, philosophy, mathematics, statistics, journalism

Group B. Physical and Biological Sciences—23 credits

A general course in subject areas a,b,c,d,e with laboratory in at least two of the areas, for a minimum of 23 credits.

- a. Biology
- b. Chemistry
- c. Human anatomy
- d. Microbiology
- e. Public health
- f. Electives —physics, physiology, astronomy, geology

Group C. Man and Society — 20 credits

A minimum of 16 credits in subject areas a,b,c, including a general course in areas a and b.

- a. Psychology
- b. Sociology
- c. Anthropology
- d. Electives—history, political science, economics, geography, management

Group D. Artistic Expression—9 credits

- a. Electives—art, music, literature, theatre arts, humanities

Application Procedures

Transfer Within the University—Students already admitted to one college or campus of the University of Minnesota must submit a Transfer of College within the University form, available from the Office of Admissions and Records on any campus. Application deadlines for internal transfer are July 15 for fall quarter admission, November 15 for winter quarter admission, and March 15 for spring quarter admission.

Transfer From Outside the University—Those who have completed their pre-professional work at another university must apply for admission to the University of Minnesota. Transfer students should obtain the Admission with Advanced Standing form from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455; complete the form; and return it to that office. An official transcript from each institution outside the University where college work was attempted or completed must accompany the application. A \$10 nonrefundable credentials examination fee is also required.

Admission—An Admissions Committee, composed of departmental staff, selects students according to scholastic standing as well as character and personal fitness as disclosed by the application and/or personal interview. Applicants for fall quarter are notified of acceptance or rejection by July 1. Instructions for registration are mailed about one month before the opening of the initial quarter of enrollment.

Expenses

Students should refer to the *General Information Bulletin* for current information about tuition and incidental fees.

Financial Aids and Awards

For information concerning financial aids available to all University students, refer to the *General Information Bulletin* or write to the Office of Student Financial Aid, 107 Armory, 15 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

The following funds are available to aid mortuary science students:

The **American Board of Funeral Service Education** administers a scholarship fund available to students nationwide. Students interested in determining their eligibility should contact the board at 201 Columbia Street, Fairmont, West Virginia 26554.

Department of Mortuary Science

The **Mortuary Science Emergency Loan Fund** was established to assist those students who, due to extenuating circumstances, need small amounts of cash for a short (30-60 day) period of time. For this type of assistance, students should apply to the director.

The **Mortuary Science Service Fund** was established and is maintained by former students and friends of the department. The resources of this fund are available for special services and programs of benefit to students.

The **Past Presidents Fund** was established by former presidents of the Minnesota Funeral Directors Association. Scholarships of varying amounts are granted annually from this fund.

The **Silver Anniversary Fund** is maintained by classes celebrating the 25th anniversary of their graduation with a reunion. Several quarterly tuition grants are awarded to students nominated by faculty members on the basis of need and scholarship.

The following awards are presented annually at spring quarter graduation:

Award of Merit—The Minnesota Funeral Directors Association awards a certificate of merit to the outstanding student in mortuary science. After nomination by the graduating class, a student is selected by a committee from the association, the Minnesota State Department of Health Committee of Examiners in Mortuary Science, and the faculty. The recipient is chosen on the basis of scholarship, citizenship, professional attitude, and personality.

DIF Award—Since 1951 this award has been given to the graduating mortuary science student who best exemplifies the qualities of perseverance, diligence, and cooperation, and who shows the greatest academic improvement regardless of final grade point average. A gold key inscribed with the sentence *Diligentissime Incubuit Fortiterque*—He has applied himself with the greatest diligence and vigor—is presented.

Director's Service Award—The director of the department presents a service award to the student who has contributed the most to his or her class and to the department. In addition to personal service, the award takes into consideration attitude, leadership ability, and consciousness of citizenship responsibility. The award is a gold key appropriately inscribed.

The **J. M. Nolte Scholar Award** was established by the University Mortuary Science Education Association in honor of Julius M. Nolte, former dean of the General Extension Division of the University of Minnesota, to recognize his contribution to the organization of the association and his dedication to the advancement of funeral service education at the university level. The award is given to recognize academic and other achievement of graduating students in funeral service.

Student Personnel Services

DEPARTMENTAL

Orientation—To help students get acquainted with one another, the campus, and the department, a variety of orientation activities are offered by the Department of Mortuary Science. These activities usually last for one or two days and include individual and group meetings for testing, program planning, presentations about University resources and regulations, and socializing. Students are notified of orientation dates at the time they receive registration information.

Faculty Advisers—Each student in the Department of Mortuary Science is assigned a faculty adviser. This staff member assists the student with program and career planning, arranging finances, and other concerns the student may have. The student also may be referred to another University agency for assistance (see list below). Each quarter the adviser must approve the student's registration.

Freshman and sophomore pre-mortuary science students in the College of Liberal Arts are assigned an adviser from the Department of Mortuary Science.

Self-Support—The department assists in locating part-time work for its students in funeral homes in Minneapolis and St. Paul. However, the program in mortuary science is a full one, and students may find it difficult to devote time to outside employment.

Placement Service—The department maintains a placement service for its students and former students. Referrals for services of licensed professionals are often requested, and the department endeavors to service these requests from its files of graduates. Instructions for using placement services are given to students upon graduation.

National Certification—Graduates of the Department of Mortuary Science are eligible to take the National Board Examination for Proficiency in Mortuary Science. The department arranges to have the test given on campus by the Conference of Funeral Service Examining Boards of the United States, Inc.

ALL-UNIVERSITY SERVICES

Campus Assistance Center—The Office of Student Affairs established the Campus Assistance Center (CAC) to aid members of the University community who have problems—academic, personal, environmental. The professional staff furnishes information, helps identify problems, and refers clients to the appropriate University or community offices or departments. The CAC is located in 107 Temporary, North of Appleby. It provides 24-hour telephone service (373-1234).

Boynton Health Service—410 Church Street S.E.

Housing Office—University residence halls or off-campus housing: Comstock Hall, 210 Delaware Street S.E. Family housing: Commonwealth Cooperative Inc., 1250 Fifield Avenue, St. Paul, Minnesota 55108.

International Student Adviser—717 East River Road.

Minnesota Women's Center—306 Walter Library.

Speech and Hearing Clinic—115 Shevlin Hall.

Student Activities Centers—317 17th Avenue S.E. or 350 Coffman Memorial Union.

Student Counseling Bureau—101 Eddy Hall.

Student Employment Service—6 Morrill Hall

Student Financial Aid—107 Armory.

Student Legal Service—720 Washington Avenue S.E.

Reading and Study Skills Center—101 Eddy Hall.

Rehabilitation Services—N588 Elliott Hall.

Twin Cities Student Assembly—240 Coffman Memorial Union.

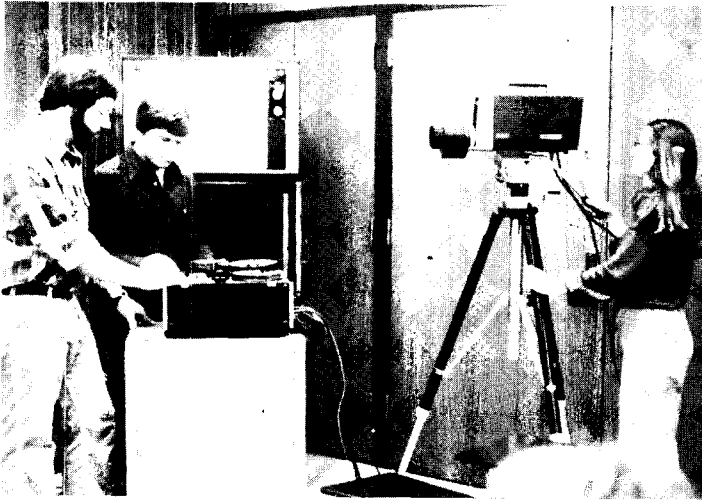
Veterans Assistance and Outreach—240 Williamson Hall.

Vocational Rehabilitation Liaison Office—N592 Elliott Hall.

Student Activities

Student Association of the Department of Mortuary Science—Each student enrolled in the department automatically becomes a member of this association. The organization serves as a forum for expressing student opinion about mortuary science education, a liaison between students and faculty, and a public relations agency for mortuary science education.

University Organizations—A variety of student organizations, reflecting recreational, social, political, vocational, and service interests, are open for student participation.



II. CURRICULUM AND ACADEMIC REGULATIONS

Curriculum for the Bachelor of Science Degree

JUNIOR YEAR	SENIOR YEAR
Mort 30014	Mort 30504
Mort 30103	Mort 30608
Mort 30304	Mort 30612
Mort 30403	Mort 30708
LaMP 30504	Mort 30712
Upper division credits15	Mort 308012
Electives12	Mort 30813
45	Mort 30901
	Mort 32702
	Mort 32711
	Electives2
	45

Graduation Requirements

To be recommended for the bachelor of science degree with a major in mortuary science, students must:

1. Complete a minimum of 180 credits with A, B, C, and S grades. Credits of D may be used to satisfy the distribution and prerequisite requirements but may not be applied to the 180-credit total. Of the 180 credits required, 90 must be in the courses required for the junior and senior year curriculum in mortuary science, and a minimum of 15 must be in upper division courses in mortuary science exclusive of prerequisite and elective courses.
2. Complete the 90 quarter credits of freshman and sophomore liberal education distribution requirements (in the categories of Communications, Language, and Symbolic Systems; Physical and Biological Sciences; Man and Society; and Artistic Expression). Distribution of these credits is detailed under Admission Requirements in section I of this bulletin.
3. Present at least one-half of the degree credits earned while a student at the University of Minnesota with grades of A, B, or C.

Students may choose to complete only those professional courses required by the state in which they intend to be licensed, rather than fulfill all of the requirements for the bachelor's degree. In such instances, the department verifies attendance and completion of course work by issuing an official transcript, provided the student has complied with all other department requirements and has completed the minimum requirements of the American Board of Funeral Service Education.

Students planning to become licensed in a state other than Minnesota should determine the qualifications for such licensure by writing to either the State Board of Health or the State Board of Embalmers and Funeral Directors in the capital city of the state being considered. These regulations are frequently changed, and students should make certain they have current information.

Honors

Students may qualify for graduation "with high distinction" if they earn a minimum of 40 upper division credits of A while registered in the department, or "with distinction" if they earn a minimum of 30 upper division credits of A while registered in the department.

Registration

Students are notified of either a special registration appointment or the specified days set aside for registration. When students report for registration they are given a set of detailed instructions and a suggested program plan for the completion of all degree requirements. These make the process of registration relatively simple. The director of the department, advisers, and office staff assist with registration.

Credit Load

Most students take about 15 credits of course work each quarter. To take fewer than 12 credits a quarter requires permission from the Scholastic Committee. Registration for more than 18 credits a quarter must also be approved by the Scholastic Committee.

Students who have special circumstances may arrange with the department to take a reduced credit load.

Grades and Supplementary Symbols

- A—Achievement that is outstanding relative to the level necessary to meet course requirements.
- B—Achievement that is significantly above the level necessary to meet course requirements.
- C—Achievement that meets the basic course requirements in every respect.
- D—Achievement that is worthy of credit even though it does not fully meet the basic course requirements in every respect.
- S—Achievement that is satisfactory to the instructor for the program in which the student is registered. Standards for S may vary from one program to another.
- N—Assigned when the student does not earn an S or a D or higher and is not assigned an I. It stands for no credit.
- V—Registration as an auditor or visitor, a noncredit, nongraded registration.
- T—Indicates credits transferred from another institution or from one college or campus to another within the University. The symbol appears immediately preceding the transferred grade in a course evaluation.
- W—Recorded when a student officially withdraws from a course after the second week. Cancellations through the second week of the quarter are not recorded.

I—Assigned by an instructor to indicate an incomplete when, in the instructor's opinion, there is a reasonable expectation that the student can complete successfully the work of the course. Instructors may set dates within the quarter for makeup examinations. An I that is not made up by the end of the student's next quarter in residence becomes an N. When an I is replaced with a grade, it is removed from the record.

X—Reported in a continuation course in which a grade cannot be determined until the full sequence of quarters is completed. The instructor will submit a grade for each X when the student has completed the sequence.

Scholastic Progress

The scholastic probation system is designed to identify, warn, and ultimately exclude from the department students who are unable to meet scholastic standards.

A student receiving two Ns, two Ds, or one N and one D within one quarter is placed on probation. The student is then required to make a contract with the Student Scholastic Standing Committee agreeing to complete a given number of credits during the following quarter with grades of C or better. If the contract is not fulfilled, the student may be dropped from the program. If the contract is fulfilled, the student will be removed from probation.

Students who have accumulated more than three Ns or a combination of four Ns and Ds may be excluded from the department for one of the following reasons:

Dropped for Low Scholarship—Students who fail to meet the terms of their probation.

Hold for Committee Clearance—Students who have scholastic difficulties that indicate they should interrupt their studies for the time being even though their record may not require official drop action. The Scholastic Committee must approve a subsequent return to the department in such cases.

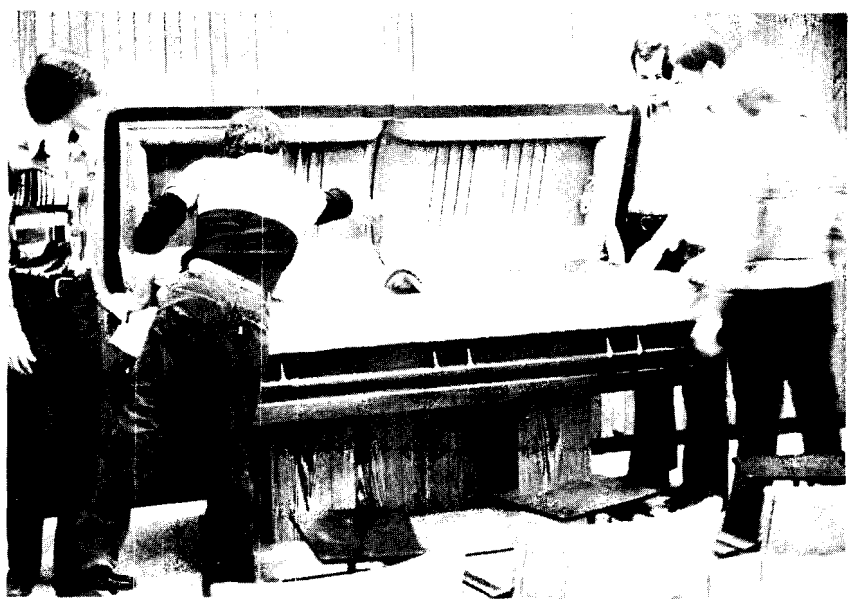
A student admitted to the department on probation must achieve satisfactory academic status during the first quarter of enrollment.

Graduate Study

The College of Education offers a master of education degree program in school health education for mortuary science students. Requirements for admission to this program include a bachelor's degree and completion of a course in mortuary science accredited by the American Board of Funeral Service Education, completion of an internship, and licensure to practice funeral service. The student's scholastic record should demonstrate high academic ability and potential to pursue advanced study.

The objective of the master of education program is to prepare qualified teachers for colleges of funeral service education. Course work includes death education, aspects of aging, psychological foundations, counseling and guidance, curriculum development, foundations of education, research, and a practicum in teaching.

Students interested in further information about this program should write directly to the director of the Department of Mortuary Science.



III. COURSE DESCRIPTIONS

Course Symbols—The following symbols, denoting repetitive course prerequisite information, are used throughout the course descriptions in lieu of page footnotes.

† Concurrent registration is required in the course listed after the paragraph mark.

Consent of the instructor must be obtained prior to registration.

§ Credit will not be granted if the equivalent course listed after the section mark has been taken for credit.

Mortuary Science (Mort)

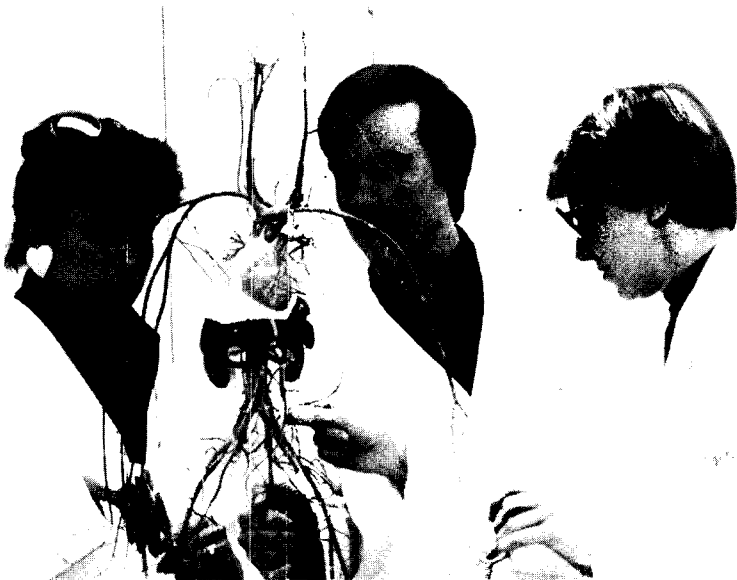
- 3001. ORIENTATION IN FUNERAL SERVICE.** (4 cr)
Introduction to an overview of the funeral service profession, including history, vocabulary, and professional experiences in the technical and management areas.
- 3010. MORTUARY LAW.** (3 cr)
Licensing; restrictions on mortuary sites; business organization; duties, rights, and liability regarding final disposition; tort liability; cemetery law; wills and administration of estates; business law.
- 3030. EMBALMING CHEMISTRY.** (4 cr; prereq introductory course in general chemistry, regis in mortuary science)
Fundamentals of organic chemistry and biochemistry. Chemical changes in the human body during life, after death, and during chemical preservation. Disinfection, solutions, toxicology, and embalming fluids.
- 3040. PSYCHOLOGY OF FUNERAL SERVICE.** (3 cr; prereq introductory course in general psychology)
Applied psychological principles helpful in dealing with clientele, especially those experiencing emotional crisis.
- 3050. RESTORATIVE ART.** (4 cr; prereq regis in mortuary science)
Basic drawing, design, and color theory. Anatomical drawing and modeling. Color in cosmetics and interior decoration; physical effect of colors on forms; psychological effect of colors on people. Special laboratory skills
- 3060. EMBALMING.** (8 cr; prereq biology, human anatomy, regis in mortuary science, or #)
Theory and procedures of embalming.
- 3061. GROSS HUMAN ANATOMY.** (2 cr; prereq biology, human anatomy, regis in mortuary science)
Gross human anatomy with emphasis on the vascular system.
- 3066. CLINICAL TRAINING.** (2 cr; prereq 3060)
Practical experience in embalming; evaluations of theory. Non-degree students only.
- 3067. CLINICAL TRAINING.** (2 cr; prereq 3066)
Practical experience in embalming; evaluations of theory. Non-degree students only.
- 3070. FUNERAL MANAGEMENT** (8 cr; prereq regis in mortuary science)
Professional overview and image; current practices and procedures; funeral direction; professional regulations; funeral home operations; records and forms. Role of the funeral licensee in public health, regulatory procedures. Field trips.
- 3071. FUNERAL MANAGEMENT.** (2 cr; prereq regis in mortuary science)
Principles, techniques, and basic helping skills of counseling as applied to the funeral arrangement conference.
- 3080. PRACTICE IN FUNERAL SERVICE.** (12 cr; prereq sr)
Practical experience during one quarter in an off-campus funeral home as assigned by the department.
- 3081. SEMINAR.** (3 cr; prereq †3080)
Funeral service survey based on practicum experience. Assigned reading of funeral service literature.
- 3090. INDEPENDENT STUDY.** (1 cr; prereq sr)
A report based on study and research in an area of the student's interest in funeral service.
- 3210. SEMINAR: FUNERAL LAW.** (2 cr; prereq #)
- 3240. SEMINAR: PSYCHOLOGY.** (2 cr; prereq #)
- 3250. SEMINAR: RESTORATIVE ART.** (2 cr; prereq #)
- 3260. SEMINAR: EMBALMING.** (2 cr; prereq #)
- 3270. FUNERAL MANAGEMENT.** (2 cr; prereq regis mortuary science; S-N grading)

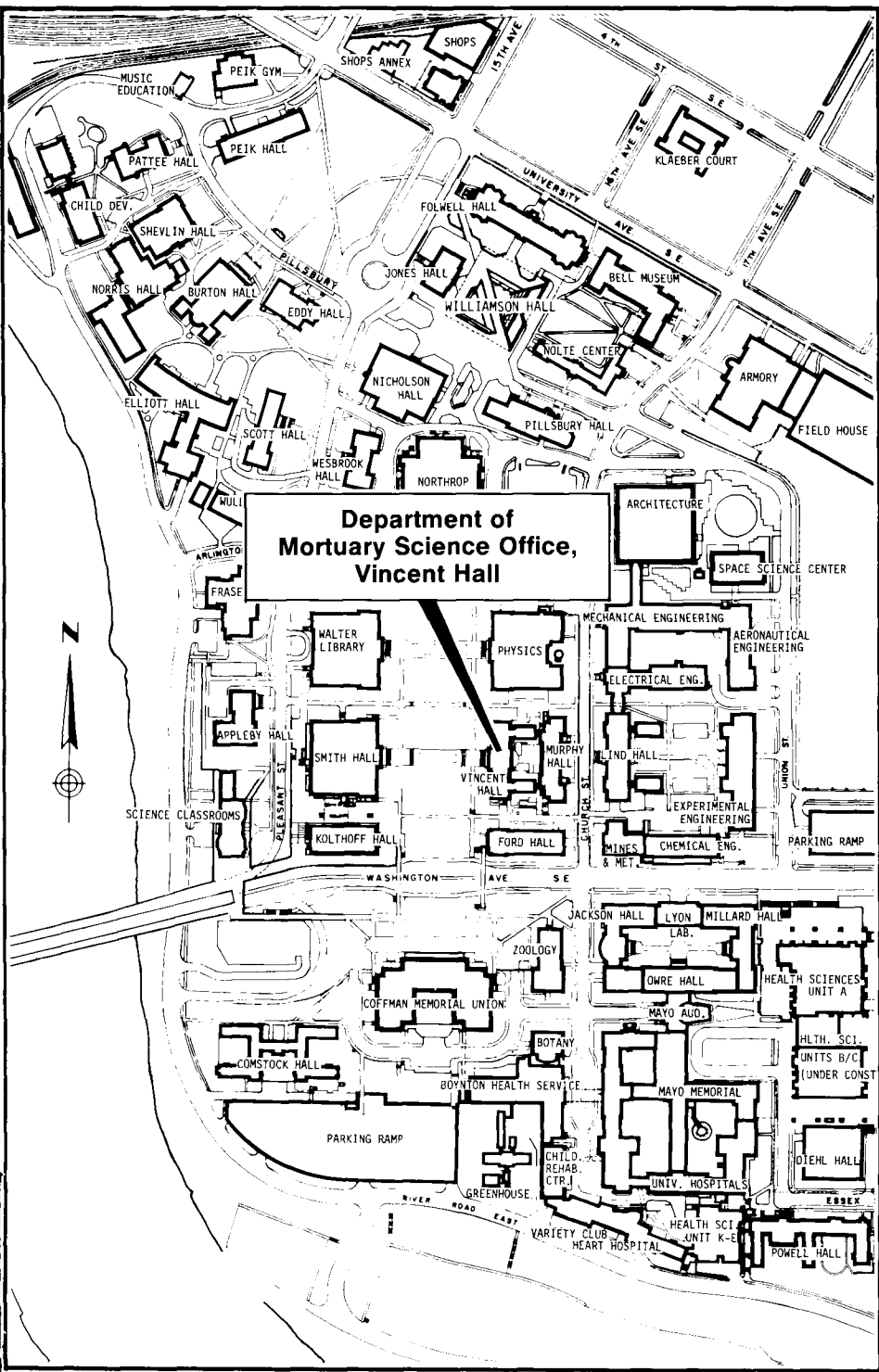
Department of Mortuary Science

3271. **FUNERAL MANAGEMENT** (1 cr; prereq regis mortuary science; S-N grading)
3275. **SEMINAR: FUNERAL SERVICE.** (2 cr; prereq #)
3980. **DIRECTED INSTRUCTION.** (Cr ar; prereq #)
5040. **DEATH EDUCATION—CONTEMPORARY SOCIETY.** (3 cr. \$Hlth 5402, \$PubH 5040; prereq #)
Concepts and attitudes toward death, grief, and bereavement with emphasis on instructional aspects.

Pathology (LaMP)

3050. **PATHOLOGY FOR MORTUARY SCIENCE.** (4 cr; prereq human anatomy, microbiology, regis in mortuary science)





**Department of
Mortuary Science Office,
Vincent Hall**

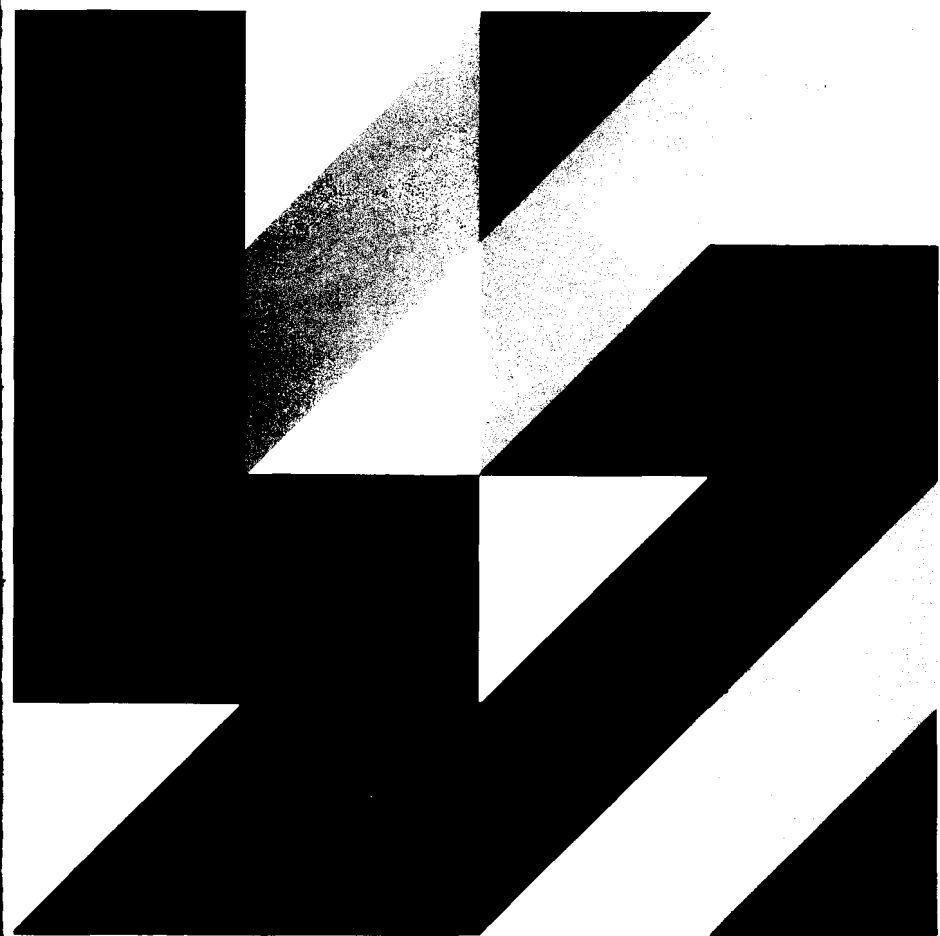
**Twin Cities Campus/Minneapolis
East Bank**

UNIVERSITY
OF MINNESOTA
BULLETIN

1978-1980

SEPTEMBER 29, 1978

Programs in
HOSPITAL and HEALTH CARE
ADMINISTRATION



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Programs in
Hospital and Health Care
Administration

UNIVERSITY OF MINNESOTA

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Programs in Hospital and Health Care Administration

I. GENERAL INFORMATION

Health care organizations have played a vital role in maintaining and safeguarding the physical and mental health of the people of our nation. In 1875 there were fewer than 200 hospitals in the United States and only 35,000 hospital beds. Rapid advances in the medical sciences during the first half of the twentieth century, together with a tremendous rise in utilization of services, created a demand for greatly expanded and improved facilities. As a result, by 1975 the number of hospitals mushroomed to more than 7,000 and the number of hospital beds to more than 1.6 million. As a group, hospitals today constitute one of our country's largest and most essential enterprises in the complex field of health care.

During the 1970s the health sciences began to emphasize to a greater degree disease prevention, rehabilitation, and containment of chronic and long-term care problems. As a result, new types of programs and institutions have been rapidly expanding. Community-based ambulatory mental health programs, rehabilitation centers, nursing homes or geriatric health centers (now numbering more than 23,000), health maintenance organizations (HMOs), multihospital systems, and other alternatives to traditional health care continue to increase in number. Health care has become the third largest industry in the United States.

As hospitals become centers of community health resources, the innate complexity of their organizational structure makes management of these institutions a very specialized responsibility. Similarly, now that nursing homes or geriatric health centers, mental health programs, HMOs, and health planning agencies emerge as integral parts of the health care system, specialized management skills are essential.

The University of Minnesota was one of the nation's first universities to recognize the need for professionally educated hospital and health care administrators. In 1946, with the assistance of a 3-year grant from the W. K. Kellogg Foundation of Battle Creek, Michigan, it established the Program in Hospital Administration within the School of Public Health. The change in name to Programs in Hospital and Health Care Administration reflects the growth of the program and faculty in response to the changing needs of our society.

Although these programs and a rapidly increasing number of other programs have prepared a substantial number of graduates, the demand for competent hospital and health care administrators remains. Opportunities in the health care field include not only hospital work, but also health care planning, prepayment agency management, mental health work, long-term care, and health maintenance organization and clinic administration.

Three major programs of study are offered in hospital and health care administration: the master's studies program, the doctoral program, and the alternative studies program.

Master's Studies Program—The master's program is designed to produce skilled health care administrators who will participate in shaping change and improving health care delivery by taking positions of leadership within their professional organizations and the community at large.

Doctoral Program—The doctoral program was initiated, through funds provided by the W. K. Kellogg Foundation, to prepare faculty for university and college hospital

General Information

and health care administration programs, scholars capable of carrying on research, as well as planners with vision and training to help unite disparate parts of the American health care network toward common purposes and goals. The emphasis of the program is more upon depth and breadth of learning than upon the acquisition of technical and management skills. Broadly conceived, the doctoral study program encompasses all elements that affect the hospital and other related health service enterprises as social institutions.

Alternative Studies Program—The alternative studies program was instituted to facilitate and provide educational alternatives to the master and doctoral courses of study. It offers continuing education programs for both graduates of the master's studies program and others who have not had professional training at the graduate level. Included in the alternative studies program are independent study offerings for hospital, long-term care, and mental health administrators who are employed full time (a 3-year program leading to a credential of advanced studies); nursing and patient care administrators (a 2-year program); and trustees of health care institutions (programs of varying lengths).

In 1971 the Upper Midwest Center for Long-Term Care Administration Education was initiated through a W. K. Kellogg Foundation grant. The center offers advisory services to organizations and facilities, career counseling for baccalaureate students at the University and at other colleges, basic courses for those entering the field, and an advanced studies program for practicing administrators.

Library and Computer Facilities

Library Facilities—The University Libraries system ranks fourteenth in size among university library systems in the United States. Diehl Hall contains the James A. Hamilton Collection of books and journals in hospital administration. Also located in Diehl Hall is the Biomedical Library, which contains an extensive collection of periodical and reference materials. The library subscribes to more than 2,600 periodicals and has over 290,000 volumes. Photoduplication services and interlibrary loans are available at the Biomedical Library.

In addition to the above facilities, a small collection of select books and periodicals is maintained in the program offices in the Mayo Memorial Building, for use by both faculty members and students in the doctoral program.

Computer Facilities—The University maintains a number of data processing and computer facilities that are available for instruction, training, and use by graduate students. The Division of Health Computer Sciences, for instance, has a CDC 3300 computer that primarily serves students and faculty members in the health sciences. Courses in computer programming and data processing are given by the division staff. In addition, the Minnesota Center for Sociological Research and the Sociology Data Center maintain a 3200 system for faculty and student use and have direct linkage to a 6600 system located off campus that is available for all forms of data processing. Finally, an extensive data processing and computer facility operated by the University of Minnesota Computer Center is located two blocks from the programs offices.

Equal Opportunity Statement

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by

Access to Student Educational Records

Section 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, 330 Independence Avenue S.W., Washington, D.C. 20201.

Access to Student Educational Records

In accordance with regents' policy on access to student records, information about a student generally may not be released to a third party without the student's permission. The policy also permits students to review their educational records and to challenge the contents of those records.

Some student information—name, address, telephone number, dates of attendance, college and class, major, adviser, and degrees earned—is considered public or directory information. To prevent release of such information outside the University while in attendance at the University, a student must notify the records office on his or her campus.

Students are notified annually of their right to review their educational records. The regents' policy, including a directory of student records, is available for review at the information booth in Williamson Hall, Minneapolis campus, and at the records offices on other campuses of the University. Questions may be directed to the Office of the Coordinator of Student Support Services, 260E Williamson Hall, (612) 373-2106.

II. PROGRAMS OF STUDY

Master's Studies Program

The objective of the master's studies program is to prepare men and women capable of becoming chief executives and other top level administrators in health industry planning, delivery, and financing organizations (after the requisite years of practical experience in responsible managerial positions). These organizations include hospitals, long-term care institutions, mental health programs or institutions, health insurance payment agencies, health maintenance organizations, clinics, health planning agencies and multiunit health delivery systems. The program emphasizes the knowledge, skills, and attitudes necessary to effectively participate in decision making to improve the operation of health care organizations.

The master's studies program has its own diversified teaching staff and draws faculty from other divisions of the School of Public Health, departments of the University at large, as well as outside health care organizations.

The University of Minnesota is well located for this program. Opportunities for observation and fieldwork abound in the more than 30 hospitals of varying sizes and types of ownership and control, multihospital delivery systems, state and local comprehensive community health programs and agencies, health planning agencies, mental health and long-term care facilities, professional associations, health maintenance organizations, and prepayment health insurance organizations that are located in the Twin Cities area. Participation of these organizations and institutions is an integral part of the program.

The master's studies program offers a flexible curriculum that attempts to accommodate individual student backgrounds and career goals. The program emphasizes the interrelation as well as full integration of all health care activities. Students are encouraged to use the full resources of the program, the University, and the community as appropriate to their individual needs and chosen area of concentration in health administration. The master of hospital administration (M.H.A.) degree is awarded upon completion of the program. It represents an ability to apply knowledge as a generalist administrator.

The program of study begins in the fall of each year.

ADMISSION

Students who apply for admission to the master's studies program represent varying backgrounds. They have included physicians, registered nurses, business administration graduates, members of the clergy, graduates of specialized professional programs within the health and welfare field, and others with special interest in and aptitude for administration of health care organizations. It is felt that this diverse student body contributes greatly to the overall educational experience.

All applicants must possess a bachelor's degree from an accredited institution prior to entering the program. Individuals with a broad liberal arts education as well as persons with a more specialized undergraduate degree are considered. Work experience in health care institutions is desirable but not essential. An increasing number of applicants seek practical experience in health care administration prior to entering the program to gain exposure to management activities and attitudes and to the health system and environment.

While few specific courses are required, applicants must have completed at least one college-level course (3 credits) in basic principles of accounting. Courses in the following areas are desired but not required: principles of economics, principles of sociology, English composition, business law, mathematics, business policy, cost

accounting, government regulation of business, labor problems and trade unionism, public administration, recent social legislation, psychology, public speaking, statistics, social research methodology, principles of management theory, and fundamentals of financial management.

Applications for admission will be supplied upon request. All applications must be received by January 1 of the year in which the candidate intends to enter the program and must include the following items:

1. Two copies of the Professional School Application supplement.
2. One copy of the Academic Record and General Information form.
3. A letter detailing previous work experience, regardless of how it relates to the field, and specific reasons for selecting a career in health care administration. This letter should also include an in-depth description of personal goals and objectives.
4. A \$10 nonrefundable credentials examination fee. Checks should be made payable to the University of Minnesota. This is not required of students who have previously attended the University, with the exception of those who attended summer or continuing education classes only.
5. Two certified transcripts of the applicant's academic record, sent directly from each college or university attended.
6. Results of the applicant's performance on the aptitude section of the Graduate Record Examination (GRE), sent directly from the school where it was taken or from the Educational Testing Service, Box 955, Princeton, New Jersey 08540. The GRE is normally offered six times a year, during the months of January, February, April, June, October, and December. Test scores should be received by the program by January 1. Scores over 5 years old will not be accepted.
7. Three letters of reference, preferably from individuals connected with hospitals or health fields or familiar with the applicant's work experience or academic studies. Letters should be sent directly to the program office.

Applicants are also expected to have two personal interviews with persons designated by the master's studies program.

Applicants are notified of their acceptance or rejection in late April.

All communications and requests for application materials should be addressed to the Coordinator, Master's Studies Program, Programs in Hospital and Health Care Administration, 1260 Mayo Memorial Building, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

FINANCIAL AID

Since federal funding varies from year to year, information on its availability will be made after the applicant has been accepted to the program.

Student Loans—Loan funds are normally available during the academic year to students in need of financial aid. The Office of Student Financial Aid administers funds available through the University. Information about and application forms for these funds can be obtained from the Office of Student Financial Aid, 107 Armory, 15 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Loans after the first quarter are available through the University Alumni Association's Educational Trust Fund, which is administered by the officers of the Alumni Association. Information regarding these funds can be obtained through the office of the Programs in Hospital and Health Care Administration.

Students are also encouraged to seek loans from their local bank or savings and loan organization.

Programs of Study

Student Employment—The program discourages outside employment during the school year because the academic schedule is very demanding and time consuming. Students who must work may use the Student Employment Service, located in 6 Morrill Hall, to find employment. The service maintains a file of available full-time and part-time jobs on the University campus and in the Twin Cities.

The responsibilities of students during the residency year are great, and outside employment on either a full-time or part-time basis is not permitted.

PROGRAM OF STUDY

Program Options—Three alternative programs of study are offered for the M.H.A. degree:

Option 1—This option involves full-time study of 10 months beginning in the fall quarter followed by an administrative residency of 11 months. Completion of 70 quarter credits and an acceptable thesis are required. This option is intended for persons planning to begin their careers in general administrative positions.

Within option 1, an experimental 2-year program, jointly sponsored by the master's studies program and the Department of Psychiatry in the Medical School, is offered in mental health administration. This program is designed to train individuals for leadership positions in mental health services. A special curriculum has been developed for students in this program. A brochure describing this program is available from the project director of the Mental Health Administration Program.

Option 2—This option involves full-time study of 2 academic years followed by a fellowship of 1 year. Completion of 90 quarter credits and an acceptable thesis are required. The degree is awarded during the fellowship year. This option is intended for individuals planning to begin their careers in corporate administrative positions.

Dual degrees in public affairs and public health are available under this option upon successful completion of joint programs of study totaling approximately 106 quarter credits. Students intending to complete dual degree programs may enroll initially in either the master's studies program or the School of Public Affairs; they will work closely with advisers in both areas. Health administration students will complete additional work in social policy concerns, policy analysis, and planning. Public affairs students will complete additional work in health administration, health systems, and health planning.

Option 3—This option involves part-time study in the Independent Study Program for Hospital and Health Care Facility Administrators followed by 18 quarter credits of full-time study. Completion of 73 quarter credits and an acceptable thesis are required. This option is available only for employed administrators. For a description of this option, see the Alternative Studies Program section.

Options 1 and 2 are also available for a limited number of part-time students who begin their program of study with 1 quarter of full-time enrollment.

The residency or fellowship requirements for options 1 and 2 may be waived at the discretion of the program director for persons who have had 3 years of experience as a chief executive officer or as a second-level generalist administrator in health services organizations with third-level generalist administrators, and who complete the required 2-year academic program.

Academic Study—The academic study includes courses structured around content areas concerned with management in health care environments. These

content areas focus on general management, including problem solving and decision making; financial management; quantitative and research methods used in management; interpersonal relations; the health system, including the social, economic, and political aspects of health care; and acculturation to the health care environment such as the hospital, nursing home, planning agency, community health center, and mental health organization.

Students are assigned to Twin Cities health care organizations under the tutelage of a first-year clinical preceptor during the fall quarter. Winter and spring quarters are spent in various types of health planning and health care delivery organizations, such as planning councils and agencies, community health centers, and organizations with specialized health roles. The clinical assignments provide opportunity for students to become familiar with the roles and objectives of the principal participants in health care delivery, including administrators, doctors, members of boards of trustees, and consumers.

All students plan each quarter's study with a faculty adviser. Selection of courses is made from required and elective offerings of the master's studies program, the School of Public Health, and other units of the University.

In addition to the course work and field assignments, a thesis is required, which should be completed during the residency or fellowship year. The thesis is based on a research project that is designed to allow students to gain an appreciation and understanding of research design and methodology. The thesis subject is selected by the student but must be approved by both the preceptor and the student's major adviser.

The method of teaching is largely based on lectures and seminars, with managerial and problem-solving skills courses taught by the case method. Practitioners from a variety of health care settings help students correlate theory and practice in the field. Small-group seminars are conducted, and field contacts in a community clinical setting are required in many courses.

Residency or Fellowship Year—The program faculty guides and assists students in obtaining administrative residencies or fellowships with clinical preceptors who are chief executive officers of various types of approved hospitals and health care planning, delivery, and financing organizations throughout the country. These preceptors hold University faculty appointments on a continuing basis. Each student receives a monthly stipend during the residency or fellowship year. The amount varies with the appointment.

The residency and fellowship curriculum allows a high degree of flexibility. It has been developed by the clinical and academic faculty to meet specific objectives and to afford full opportunity for the student to put into practice the management skills learned during the academic study. Specific personal objectives are identified by each student with the assistance of the academic adviser, and it is largely on the basis of these objectives that the residency or fellowship experience is developed.

The schedule during the residency or fellowship varies with the individual site. Usually, the student begins with a rotation through various departments of the organization, offering an opportunity to observe and participate in the work of the departments. This rotation allows the student to gain insight into the roles the various departments play in the institution's program as well as the departments' organization, standards of performance, methods of control, and major problems of operation. Following the rotation period, the resident or fellow normally functions as a member of the administrative staff. Under the supervision of the preceptor, the student usually assumes specific management problems that carry some independent responsibility. Exposure to external health care organizations is also an important part of this experience.

The residency or fellowship period is carefully coordinated so that the student's experiences in the program become part of a continuum in a comprehensive pro-

Programs of Study

gram of study. Much thought, time, and effort on the part of the faculty members, clinical preceptors, and students are involved in achieving this goal. While on campus, the student prepares for the residency or fellowship experience. Correspondingly, the student's projects, activities, and areas of involvement during the residency or fellowship year are planned to utilize, as well as further develop and refine, the skills, knowledge, and attitudes acquired during the academic study.

Several features of the residency and fellowship year are summarized below.

Faculty Visits—Normally a faculty member visits each student and preceptor during the year. Such visits enable the faculty to determine the student's progress, to evaluate the various residency and fellowship programs, and to assist in coordinating the on-campus and residency and fellowship experiences.

Student Evaluation Reports—Students are formally evaluated by their preceptors on the skills they are expected to develop during the residency or fellowship period and on their personal characteristics. The preceptors submit these evaluations quarterly to the program faculty after discussing them with the students.

Preceptors Meetings—A successful administrative residency or fellowship depends, in large measure, upon the role assumed by the clinical preceptors and his or her relationship to the student. The clinical preceptors and academic faculty meet annually at the University to evaluate the residency or fellowship period, to develop a mutual understanding of the objectives and content of the program, and to coordinate the on-campus and residency and fellowship years.

Residents and Fellows Institutes—In June preceding graduation, students return to the University for a week of lectures, seminars, and discussions on a variety of topics in hospital and health care operation and administration; medical care; planning, provision, and delivery of total health care services; financial management; and related subjects. This provides an appropriate ending to the students' formal education and, in addition, gives students an opportunity to review and evaluate their residency or fellowship experience. By sharing this experience with others, students also gain insight into various types of hospitals and health care operations and their methods of administration and control; planning skills; and current issues and problems in the planning, provision, and delivery of health care services in the United States.

Doctoral Program

The doctoral program offers in-depth studies in a broad range of topics for those intending to pursue careers in teaching, research, or planning in the field of health care. The program, which is organized within the Graduate School and offered under the aegis of the School of Public Health (through the Programs in Hospital and Health Care Administration), is interdisciplinary in character. All applicants and degree candidates must meet the academic requirements of the Graduate School.

ADMISSION

All applicants must have as a minimum a bachelor's degree from an accredited educational institution. Applicants are expected to have demonstrated high scholastic ability as well as potential for independent study and research. An acceptable score (i.e., a raw score of 60 or above) on the Miller Analogies Test, graduate level, is required for admission. In addition, although optional, results of the Graduate Record Examination may also be taken into consideration.

While attainment of a master's degree in hospital and health care administration is normally considered to be the first step in the acquisition of the doctoral degree,

students with advanced training in such allied fields as business administration, industrial relations, medical sociology, public administration, comprehensive planning, public health, nursing, or medicine are encouraged to seek enrollment as well. A broad background in the social sciences, statistics, and administration is considered advantageous. Graduate work satisfactorily completed prior to admission may be applied for credit where appropriate and in accordance with the requirements of the Graduate School.

Application for the program may be initiated by writing to the Coordinator, Doctoral Program in Hospital and Health Care Administration, 1260 Mayo Memorial Building, University of Minnesota, Minneapolis, Minnesota 55455. Admission materials will be supplied upon request. Applications should include:

1. Completed application forms provided by the Graduate School.
2. Two certified transcripts of the applicant's academic record, undergraduate and graduate.
3. A statement indicating the applicant's reasons for seeking doctoral training in the field of health care.
4. Three letters of reference from individuals capable of attesting to the applicant's scholastic ability, personal character, and fitness for a career in teaching, research, or planning.
5. The results of the applicant's performance on the Miller Analogies Test. Results of the Graduate Record Examination are optional.

All application materials should be sent directly to the Graduate School, 316 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, Minnesota 55455. Although initial enrollment normally is in the fall quarter, applications may be submitted for admission at any time.

Each applicant will be considered on his or her individual merit. The final decision for admission rests with the Graduate School.

FINANCIAL AID

Due to a reduction in the level of federal support for doctoral training, financial assistance remains quite limited. A number of opportunities for related employment are periodically made available on a competitive basis. These include participation in projects in the University's Center for Health Services Research.

PROGRAM OF STUDY

The curriculum is multidisciplinary in nature and is organized around three major content areas: the organization and administration of health care services; the social, political, and economic aspects of health care; and research and statistical methods in health and health care. Where appropriate, additional areas of interest, such as comprehensive health planning, long-term care, public health nursing, and other topics, may be included as well.

The course of study is designed to give students opportunity to:

1. Gain a better understanding of the relationships between health and social behavior.
2. Expand their knowledge of the organization, development, and planning of health services.
3. Develop an appreciation for the interrelationship of major social institutions with the health care system through analysis of changing needs and alternative patterns of care, both in the United States and abroad.

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4. Acquire knowledge and training in the application of research theory and methods to the problems of health and health care.
5. Engage in teaching activity, in both the master's studies program and the Independent Study Program for Hospital and Health Care Facility Administrators, under the guidance of the doctoral program faculty.

While each student's program of study will be planned individually with the guidance of a faculty adviser, it will normally include the following course work:

Area I: The Organization and Administration of Health Care Services

- PubH 5750—Principles of Health Administration (4 cr)
- PubH 5751—Principles of Organization and Management in Health Services Organizations (4 cr)
- PubH 8760—Topics in Hospital and Health Care Administration (3 cr)
- PubH 8761—Readings in Theory and Principles of Hospital and Health Care Administration (3 cr)

Area II: Social, Political and Economic Aspects of Health Care

- PubH 5795—Sociology of Medicine and Health Care (4 cr)
- PubH 8750-8751—Seminar: Alternative Patterns of Health Care (6 cr)
- PubH 8752—Seminar: Comparative Health Care Systems (3 cr)
- PubH 8762—Contemporary Problems of Hospital and Related Health Services (3 cr)
- PubH 8770—Seminar: Health and Human Behavior (3 cr)
- PubH 8790—Seminar: Political Aspects of Health Services (3 cr)
- PubH 8795—Seminar: Economic Aspects of Health Care (3 cr)
- PubH 8796—Topics in Health Economics (3 cr)

Area III: Research and Statistical Methods in Health and Health Care

- PubH 5404—Introduction to Biostatistics and Statistical Decision Making (3 cr)
- PubH 5785—Quantitative Methods Applied to Health Administration Problems (4 cr)
- PubH 8780—Advanced Statistical Methods in Health Care Research (3 cr)
- PubH 8781—Seminar: Research Studies in Health Care (3 cr)
- PubH 8782—Research Practicum (6 cr)

Period of Training—While the academic program usually takes 3 years to complete, the period of training may vary depending upon the student's prior training and the nature of the program pursued.

Supporting Program—In addition to work in the major field, students must complete a supporting program of 24 credits involving one or more related areas, such as business administration, economics, sociology, industrial relations, public administration, or political science. The supporting program must meet the requirements of the Graduate School and must have the approval of the major adviser.

Language and Collateral Field of Knowledge—A reading knowledge of one foreign language or working knowledge of one computer language plus at least 9 credits of advanced statistics (5000-level courses or higher) are required.

Thesis—A dissertation demonstrating originality and independent research and dealing with a significant problem in the area of health care is required. Upon successful completion of the language requirement and a written and oral preliminary examination, the student may officially be admitted to candidacy by the Graduate School and may begin her or his dissertation under the guidance of a faculty adviser.

Opportunities for Teaching—During the course of study, each doctoral student is given an opportunity in PubH 8760 and 8761 to develop curricula, present course materials, and advise practicing administrators as a part of the Independent Study Program for Hospital and Health Care Facility Administrators.

Research Activities—In view of the growing importance of research and planning in the field of health care, doctoral students are given an opportunity to develop skills in these areas through participation in a research practicum and through association with the University of Minnesota Center for Health Services Research. Past projects have included: "An Evaluation of Children and Youth Demonstration Projects," "Health Care and the Family: A Three-Generation Analysis," "A Comparison of Patient Care, Costs, and Nursing Behavior on a Circular Versus Rectangular Nursing Unit," "The Sharing of Hospital Services Demonstration Project," "The Physician Mobility Study," and "The University of Minnesota Rural Health Care Study."

Alternative Studies Program

The alternative studies program offers a variety of educational programs as well as fee-for-service consultation to help meet the needs of managers and supervisors of the many health care organizations in the Midwest region. Credits earned in some of the programs may be applied toward selected degrees. A credential of advanced studies is awarded upon successful completion of the independent study programs for Hospital and Health Care Facility Administrators, Health Care Trustees, Patient Care Administration, Long-Term Care Administration, and Mental Health Administration. The W. K. Kellogg Foundation has provided grant support for development of the Patient Care Administration, Health Care Trustees, and Long-Term Care Administration programs. The National Institutes of Mental Health have provided grant support for the Mental Health Administration Program. Details about these programs are presented in individual brochures. To obtain any of these brochures or information about admission requirements, contact the Coordinator, Alternative Studies Program, Programs in Hospital and Health Care Administration, School of Public Health, 1260 Mayo Memorial Building (Box 97), 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455

Information about the independent study programs offered by the Alternative Studies Program is presented below.

INDEPENDENT STUDY PROGRAM FOR HOSPITAL AND HEALTH CARE FACILITY ADMINISTRATORS

An extensive survey conducted throughout the Upper Midwest region documented the expressed need by currently employed hospital administrators for a program in management development. Management programs across the country were studied in terms of format, method, and content; they included review of key principles of learning modalities, behavioral objectives, and geographical logistics. As a result, a unique course of study with rigorous performance requirements was developed. The intent of this 3-year independent study program is to improve the administration of health care delivery institutions. A multimethod approach is used, which includes centralized residential sessions, with students in the Independent Study Program for Patient Care Administration, regional seminars, home study, monthly clinical preceptor-student dialogues, and centralized review sessions. Three courses make up the program, and these are described below.

Admission is open to administrators presently employed by hospitals and health care delivery organizations in the Upper Midwest and Northwest regions of the

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United States and adjoining parts of Canada. There is no academic prerequisite for admission to the program.

Students who have successfully completed the three courses of the Independent Study Program for Hospital and Health Care Facility Administrators may apply the 55 credits earned in the program toward the M.H.A. degree, provided that none of the credits have been applied to another degree and that the individual has met entrance requirements for and has been admitted to the master's studies program. In addition to the three courses required for the independent study program, students must complete 18 graduate credits, 9 of which must be taken at the University of Minnesota, and a master's thesis of acceptable quality for the M.H.A. degree. Students may elect to complete the master's thesis in conjunction with a course III project. Students may apply for admission to the master's studies program upon entry into their second year of independent study or thereafter.

Course I—Management and Organization in Hospital and Health Care Facilities

Designed for and open to presently employed hospital administrators (under certain conditions only, also to associate or assistant administrators) who do not have graduate degrees in health care administration. This is not a preservice course and is not intended as preparation for entrance into the field. Fifteen quarter credits are awarded upon satisfactory completion of course I requirements. Course I includes 11 units in the following areas of study: management; organizational behavior; personnel management; the role of the chief executive; problem solving; hospital development and organization; financial control and business office function; direct patient care functions. This course is officially designated PubH 5775. It is 12 months in duration.

Course II—Administrative and Professional Relationships Within the Health Care Facility

Enrollment requirements for course II are the same as for course I. Course II is only open to those who have successfully completed course I or, in exceptional cases, to administrators who can document completion of studies equivalent to the content of course I. Fifteen quarter credits are awarded upon satisfactory completion of course II requirements. Course II includes 11 units in the following areas of study: the board of trustees; the role of the administrator in the development and implementation of policies related to direct patient care functions; nursing, medical staff, and medical records; the administrative role in planning; programming and facility development; the hospital: part of the community system; administrative responsibility for continuing education. This course is officially designated PubH 5776. It is 12 months in duration.

Course III—External Forces Affecting Health Care Delivery

Open to those who have successfully completed courses I and II in the Hospital Administration, Long-Term Care Administration and Mental Health Administration programs; to persons who have earned graduate degrees in health care administration; and to executives of health agencies and organizations. Course III emphasizes four major forces affecting the delivery of health care services: financing; human resources development and utilization; organization of alternatives for delivery of care; and public policy. Because the external forces affecting health care delivery are continually changing, course III is designed so that students may enroll in it year after year, on a continuing basis or on a periodic basis. Course III emphasizes self-directed study and regional seminars and includes a demonstration or research project supported by a scholarly paper. It requires substantial

reading, seminar preparation, and evidence of application of the subject matter studies to an actual local situation or program. Twenty-five quarter credits are awarded upon successful completion of course III, which is officially designated PubH 5777. An audit option is also available for those who have completed course II and wish to enroll as an active participant, but without the project requirement.

INDEPENDENT STUDY PROGRAM IN PATIENT CARE ADMINISTRATION

The opportunities open to employed administrators of patient care for participation in ongoing educational programs are few. In recognition of the expressed need of directors of nursing services, the Independent Study Program in Patient Care Administration was developed for practicing directors of nursing and a limited number of associate directors. The program is designed to improve the practice of patient care administration through the development and updating of management skills, knowledge, and attitudes. A multimethod approach is used, which includes on-campus sessions, regional seminars, independent study, and monthly meetings with clinical faculty. Students participate with hospital administration independent study students in a deliberate effort to develop a more viable, efficient use of the management team. Two courses make up the program, and these are described below.

Course I—Patient Care Management and Organization Within the Hospital and Health Care Organization

Designed for and open to presently employed administrators of patient care (directors of nursing, some first-level associate directors, or equivalent) who feel their academic preparation in administration is insufficient to meet present or projected levels of responsibility. Course I includes 11 units of study: management; organizational behavior; personnel management; hospital development and organization; administrative and professional relationships; the role of the patient care administrator (two units); legal aspects; budget preparation; policy development; and continuing education.

Course II—Managing Multiple Forces: Internal and External Aspects of Patient Care Administration

Designed for persons who have completed course I or anyone who can document similar background. Course II focuses on materials and methods concerned with initiation and management of change, utilization of human and material resources, and alternative systems of care and evaluation.

INDEPENDENT STUDY PROGRAM FOR HEALTH CARE TRUSTEES

This program offers a continuing education opportunity for members of governing boards of health institutions located in the Upper Midwest and Northwest regions of the United States and adjoining parts of Canada. The program is designed to enable participants to gain competency in and understanding of their roles and responsibilities as trustees, and to improve the quality of health care governance. Up-to-date concepts and methods in the practice of trusteeship are the focus of the two independent study courses, each approximately 7 months in length. A multimethod format is used, which includes independent study, written assignments, faculty critique of assignments, suggested readings, and four 1-day residential seminars

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that bring together all students enrolled in each course. Two courses make up the program, and these are described below.

Course I—The Evolving Trustee

Deals with seven major concepts: responsibilities and functions of trustees; financial issues for boards; legal implications for health care trustees; political aspects of health governance; human resources issues in health care; and planning as a board function.

Course II—The Creative Trustee

Builds upon course I and examines four critical relationships between trustees and other members of the health care delivery team: relationships with the community, with administration, with the medical staff, and with the governing board. Each participant completes an extended project concerned with a significant issue or problem affecting their institution and writes a final report on the project.

INDEPENDENT STUDY PROGRAM IN MENTAL HEALTH ADMINISTRATION

Many administrators of mental health services are former clinicians whose previous training did not include studies in the management of complex organizations and systems, while many program directors and administrative staff members within large institutions come from strictly administrative backgrounds and are faced with managing an unfamiliar specialized type of clinical service. This program is designed for such people who are interested in advanced study in mental health administration but are unable to return to school full time to do so. The format of each course includes student-faculty-preceptor involvement, residential sessions, independent study, and regional workshops. Three year-long courses make up the program, and these are described below.

Course I—Eleven units concerned with internal aspects of a mental health facility. Fifteen quarter credits are awarded upon successful completion of the course requirements.

Course II—Eleven units concerned with interagency and external process of facility administration. Fifteen quarter credits are awarded upon successful completion of the course requirements.

Course III—Concerned with social, political, economic, and organizational forces that affect the role and services of the mental health facility. Students must complete a research project on a current problem in administration and must write a paper on and present the results of the project. Twenty-five quarter credits are awarded upon completion of the course requirements.

LONG-TERM CARE ADMINISTRATION EDUCATION

A grant from the W. K. Kellogg Foundation provided funds to establish the Upper Midwest Center for Long-Term Care Administration Education. The following programs are offered by the center staff:

Independent Study Courses—Two 6-credit courses combining on-campus seminars with correspondence study and a 300-hour practicum are available to persons wishing to become licensed nursing home administrators.

For practicing administrators holding a baccalaureate or graduate degree, a 3-year advanced program in long-term care administration offers in-depth study of

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management, gerontology, and services for the long-term care patient. The program involves on-campus seminars, correspondence study, and application of knowledge on the job. This program leads to a credential of advanced studies; some students may be eligible for the M.H.A. degree option described under the Independent Study Program for Hospital and Health Care Administrators.

Baccalaureate Degree—On-campus students enrolled in several other colleges of the University may pursue a concentration in long-term care administration. Students interested in this opportunity are urged to consult with the center staff by their junior year.

Baccalaureate students enrolled in other state colleges or universities may enroll in the independent study courses. Credits earned in these courses are transferable in most instances. Consultation with the center staff by the junior year is recommended.

Master's Studies—Students enrolled in the master's studies program may pursue an emphasis in long-term care administration.

III. COURSE DESCRIPTIONS

Hospital and Health Care Administration (PubH)

Symbols—The following symbols are used throughout the course descriptions in lieu of page footnotes:

- § Credit will not be granted if the equivalent course listed after the section mark has been taken for credit.
- † All courses preceding the dagger must be completed before credit will be granted for any quarter of the sequence
- # Consent of the instructor is required prior to registration

- 5750. **PRINCIPLES OF HEALTH ADMINISTRATION.** (4 cr; prereq #) Westerman, Dornblaser, Sweetland, staff
Lectures, seminars, selected health care organization placement. Management problem solving with emphasis on problem definition.
- 5751. **PRINCIPLES OF ORGANIZATION AND MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS.** (4 cr; prereq #) Culbertson
Lectures, case studies on the role of health care services administrators, principles of management, and the administrative process.
- 5752. **CLERKSHIP.** (4 cr; prereq 5755) Bieter, staff, clinical preceptors
Survey and solution of management problem within a local administrative organization and preparation of formal report.
- 5753. **MANAGEMENT PROBLEMS IN HOSPITAL AND HEALTH CARE ADMINISTRATION.** (4 cr; prereq 5751, 5752) Westerman, Dornblaser, Sweetland, staff
Assignment and solution of specific managerial problems.
- 5755. **ADMINISTRATIVE RESIDENCY.** (Cr ar; prereq #) Dornblaser, staff
Eleven months of fieldwork in an approved health care planning or operating organization, rotation through departments, solution of management problems, and special projects. Preparation of research thesis.
- 5756. **PLANNING PRACTICUM.** (Cr ar; prereq #) Dornblaser, staff
Eight weeks of fieldwork in an approved planning agency, solution of special problems, and preparation of formal report.
- 5763. **HEALTH ORGANIZATIONS, STANDARDS AND EVALUATION.** (3 cr) Culbertson
Characteristics of health organizations and current standards in the health care field; implications for hospitals and health care management; relationship of standards to health care evaluation.
- 5764. **PRINCIPLES OF FINANCIAL MANAGEMENT IN AMBULATORY CARE ORGANIZATIONS.** (4 cr)
Accounting principles and practices applicable to health care organizations with emphasis on hospitals and ambulatory care services; total financial requirements, cost finding methodologies; third party payer negotiation; internal control; internal and external financial reporting.
- 5767. **HOSPITAL FACILITIES PLANNING ROLE AND PROGRAM PLANNING FOR HEALTH CARE ORGANIZATIONS.** (3 cr; prereq #) Sweetland, Bieter
Lectures, discussions, and projects on the planning of hospitals and health care facilities, roles, and programs. Principles, methodologies, and strategies of planning. The complete planning process, roles of various members of the planning team, and external and internal forces.
- 5768. **LONG-TERM CARE.** (3 cr; prereq #) Stryker-Gordon
Management within long-term care organizations; emphasis on institutional living in nursing homes. Lectures, field visits, and research papers.
- 5769. **CORPORATE PLANNING IN HEALTH CARE ORGANIZATIONS.** (3 cr; prereq #) Orr
Seminar on corporate planning; what is it and how should it be used, strategic planning, strategic objectives, creating action and contingency plans, environmental scanning—use of data, managing external forces, and the human side of planning.
- 5770. **TOPICS: HOSPITAL AND HEALTH CARE ADMINISTRATION.** (Cr ar; prereq #) Staff
Selected readings in hospital and health care with discussion based on these readings.
- 5773. **MENTAL ILLNESS AND MENTAL RETARDATION: LEGAL ASPECTS, IMPLICATIONS, AND TRENDS.** (3 cr) Staff
Issues and developments in the legal sphere that affect mental health and mental retardation workers. Prominent legal issues; ways in which these issues develop; resolutions and legal remedies.
- 5774. **MENTAL HEALTH FINANCIAL MANAGEMENT.** (4 cr; prereq 5764, 5791, #) Farrell, staff
Application of financial management principles taught in fall and winter quarters to mental health settings and issues

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- 5775. MANAGEMENT AND ORGANIZATION IN HOSPITAL AND HEALTH CARE FACILITIES.** (15 cr; prereq current employment as health care facility administrator, #) Weckwerth, staff
A 12-month program of on-campus study (3 weeks) and independent study that includes periodic seminars and monthly sessions with clinical preceptors. Management, organizational behavior, problem solving, executive role, personnel management, financial management, and patient care and support services.
- 5776. ADMINISTRATIVE AND PROFESSIONAL RELATIONSHIPS WITHIN THE HEALTH CARE FACILITY.** (15 cr; prereq 5775 or #) Weckwerth, Gordon, Malban, Heinemann, staff
A 12-month program of on-campus study (3 weeks) and independent study that includes periodic seminars and monthly sessions with clinical preceptors. Organizational behavior, change theory, governance, medical staff, legal aspects, medical records, planning, community health systems, continuing education.
- 5777. EXTERNAL FORCES AFFECTING HEALTH CARE DELIVERY.** (25 cr; prereq 5776 or #) Weckwerth, staff
A 10-month program of on-campus study (3 weeks) and independent study that includes three regional seminars. Financing, personnel, organizing, social policy, and project planning and design. Requires a project, which can be either a management study or a research thesis. Course ends with a week-long symposium in which students present and defend their projects.
- 5778. PATIENT CARE MANAGEMENT AND ORGANIZATION WITHIN THE HOSPITAL AND HEALTH CARE ORGANIZATION.** (25 cr; prereq present employment as director of nursing or equiv, #) Weckwerth, Danielsen, staff
A 12-month program of on-campus study (3 weeks), independent study, monthly meetings with clinical preceptors, and one required seminar. Principles of management, organizational behavior, hospital development and organization, personnel management, administrative and professional relationships within the hospital, role of the patient care administrator, legal aspects, budget, policy development, continuing education.
- 5779. MANAGING MULTIPLE FORCES: INTERNAL AND EXTERNAL ASPECTS OF PATIENT CARE ADMINISTRATION.** (Cr ar; prereq present employment as director of nursing or equiv, 5778, #) Weckwerth, Danielsen, Gordon, staff
A 12-month program of on-campus study (3 weeks) and independent study that begins with a 1-week introductory residential session each August. Seminars on planning, organizing, staffing, directing, and controlling. Students return to campus the following summer to share and demonstrate the research projects they have prepared with their peers.
- 5780. ADMINISTRATION OF LONG-TERM CARE FACILITIES.** (6 cr) Woehrer, staff
A 16-week program of on-campus seminars (5 days) and independent study. General principles of administration and specific aspects of administrative organization, personnel administration, personnel administration, and fiscal management applicable to the area of long-term care.
- 5781. SERVICES FOR LONG-TERM CARE PATIENTS.** (6 cr) Woehrer, staff
A 16-week program of on-campus seminars (5 days) and independent study. Physical and psychosocial aspects of aging, paramedical services, nursing services, environmental standards, statutory and legal requirements.
- 5782. PRACTICUM IN LONG-TERM CARE ADMINISTRATION.** (6 cr; prereq 5780, 5781 or #) Woehrer, staff
A 300-hour practicum in a nursing home setting under the guidance of a preceptor. Includes a 4-day seminar on campus.
- 5785. QUANTITATIVE METHODS APPLIED TO HEALTH ADMINISTRATION PROBLEMS.** (4 cr; prereq hospital administration student or #) Weckwerth
Application of quantitative methods, including analysis of cyclicities, PERT, data handling systems, multiple linear regression, linear programming, cost benefit analysis, and inventory control, to the solution of health problems at administrative levels.
- 5786. RESEARCH METHODOLOGY IN HOSPITAL AND HEALTH CARE ADMINISTRATION.** (2 cr; prereq 5404 and #) Litman, Weckwerth
A 20-hour course designed to provide students with a rudimentary knowledge of research methods and their application to the health care field. Designed to assist students with preparation of their M.H.A. theses.
- 5787. ADMINISTRATION OF THE LONG-TERM CARE ORGANIZATION.** (15 cr; prereq #) Gordon, Stryker-Gordon, others
A 10-month course of independent study with 3-weeks on campus. Problem solving in management, personnel management, financial management, organizational behavior, legal aspects, and quality assurance areas.
- 5788. PROGRAM MANAGEMENT FOR LONG-TERM CARE.** (15 cr; prereq #) Gordon, Stryker-Gordon, Anderson, others
A 10-month course of independent study with 3-weeks on campus. Program for long-term care patients; gerontology, interdisciplinary health care services, marketing, change theory, environmental control, planning community services, and special needs of the mentally ill, mentally retarded, and chemically dependent patient.
- 5790. SOCIAL, ECONOMIC, AND POLITICAL ASPECTS OF MEDICAL CARE.** (3 cr; prereq #) Dickler
Social, economic, and political forces shaping health care systems; possible future impact of these forces.

Course Descriptions

- 5791. HOSPITAL AND OTHER HEALTH CARE ORGANIZATION FINANCIAL PLANNING: THE BUDGETING PROCESS.** (4 cr)
The financial planning process in health care organizations with emphasis on hospitals and ambulatory care organizations; case studies of operational budgeting, i.e., statistical (production and productivity forecasting), expense, capital, revenue and cash flow. Pricing strategies and rate setting methodologies. Includes a full day financial management seminar at Minnesota Blue Cross/Blue Shield.
- 5793. HOSPITAL AND OTHER HEALTH CARE ORGANIZATION FINANCIAL STATEMENT ANALYSIS.** (3 cr)
Case studies involving the measurement of direct patient care profit-loss margins of hospital, ambulatory care, and other health care organizations; balance sheet ratios concerned with liquidity, long-term debt coverage, composition activity (turnover), and profitability. The previous 2 years of financial statements and third party payer cost reports from residency sites are analyzed.
- 5794. HOSPITAL AND OTHER HEALTH CARE ORGANIZATION FINANCIAL MANAGEMENT SEMINARS.** (3 cr)
Major financial management topics presented by outside practitioners: the role of the external auditor, the investment banker and long-term debt financing, leasing and other alternative sources of major equipment financing, hospital-based physician fee negotiation, rate review/rate setting, the certificate of need process associated with capital acquisition, cost containment practices, others.
- 5795. THE SOCIOLOGY OF MEDICINE AND HEALTH CARE: AN INTRODUCTION TO MEDICAL SOCIOLOGY.** (4 cr, §Soc 5855) Litman
Social and psychological components of health and medical care. Organization and delivery of health care services, *their problems and perspectives*; focus on the patient, the provider of care, and the environment within which health care services are dispensed.
- 5796. INTERNAL OPERATIONS OF A MENTAL HEALTH FACILITY.** (15 cr; prereq 1 year's experience as mental health facility administrator and #) Malban, staff
A 12-month program of on-campus study (2 weeks) and independent study that includes periodic seminars and monthly classes under program preceptors. Principles of management, organizational behavior, personnel, problem solving and decision making, financial management, mental health professionals and paraprofessionals, and mental health programs and services.
- 5797. EXTERNAL RELATIONSHIPS AFFECTING THE ROLE AND FUNCTION OF THE MENTAL HEALTH FACILITY.** (15 cr; prereq 5796) Malban, staff
A 12-month program of on-campus study (2 weeks) and independent study that includes periodic seminars and monthly classes under program preceptors. Governance, legal aspects, public education and information, evaluation of mental health programs, prevention and primary treatment in mental health, current trends and concepts, biostatistics and quantitative methods.
- 5798. SOCIAL, POLITICAL, ECONOMIC, AND GOVERNMENTAL FORCES AFFECTING THE ROLE AND SERVICES OF THE MENTAL HEALTH FACILITY.** (25 cr; prereq 5797 or practicing administrator with an advanced degree and 3 years' experience, and #) Malban, staff
A 12-month program of on-campus study (2 weeks) and independent study that includes periodic seminars and monthly classes under program preceptors. *Completion of demonstration and research projects.* Mental health; community, regional, state, and national planning; legislation; affirmative action; consumerism and citizen participation; economics of mental health; political and social issues.
- 5799. MENTAL HEALTH ADMINISTRATION SEMINAR.** (2-3 cr; prereq mental health administration student) Malban
Readings group discussion, debate, and presentation of current issues in the mental health field. Field trips. Follow-up to the A. K. Rice Institute experience.
- 8750-8751†. SEMINAR: ALTERNATIVE PATTERNS OF HEALTH CARE.** (3 cr per qtr; prereq #; offered 1978-1979 and alt years) Litman
Alternative approaches to health care problems of ambulatory care, aging and chronic disease, physical rehabilitation, maternal and child care, mental health, and poverty.
- 8752. SEMINAR: COMPARATIVE HEALTH CARE SYSTEMS.** (3 cr; prereq #; offered fall 1979 and alt years) Litman
Examined on and comparison of the origin and development of various national systems of health care and their relationship to the social, political, economic, and cultural characteristics of the countries involved.
- 8760. TOPICS: HOSPITAL AND HEALTH CARE ADMINISTRATION.** (3 cr; prereq #) Weckwerth, Dornblaser
Independent study under tutorial guidance of selected problems and current issues in the field of health and health care.
- 8761. READINGS IN THEORY AND PRINCIPLES OF HOSPITAL AND HEALTH CARE ADMINISTRATION.** (3 cr; prereq #) Weckwerth, Dornblaser
Applications of theory to practice and advising of independent study program students.
- 8762. CONTEMPORARY PROBLEMS OF HOSPITAL AND RELATED HEALTH SERVICES.** (3 cr; prereq #) Weckwerth
Current concepts, problems, principles, and future developments in health and health care.

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- 8770. SEMINAR: HEALTH AND HUMAN BEHAVIOR.** (3 cr; prereq 5795; offered spring 1980 and alt years) Litman
Sociology of health and health care; social and personal components of behavior in sickness and in health; community health, relationship of social and cultural factors in the organization and delivery of health care services.
- 8780. ADVANCED STATISTICAL METHODS IN HEALTH CARE RESEARCH.** (3 cr; prereq 5450 or #) Weckwerth
Survey and analysis of the application of nonparametric statistics to health care research.
- 8781. SEMINAR: RESEARCH STUDIES IN HEALTH CARE.** (3 cr; prereq #: offered spring 1979 and alt years)
Litman
Review and appraisal of design, measuring instruments, research methodology, and findings of contemporary studies in health care.
- 8782. RESEARCH PRACTICUM.** (6 cr; prereq #) Litman, Weckwerth, staff
Summer field experience in health care research. Supervised independent and team research on selected topics and problems in health care.
- 8790. SEMINAR: POLITICAL ASPECTS OF HEALTH CARE.** (3 cr; prereq #: offered winter 1979 and alt years)
Litman
Interrelationships between government, politics, and health care; the political and social bases of health legislation and community decision making in provision and modification of health services.
- 8795. SEMINAR: ECONOMIC ASPECTS OF HEALTH CARE.** (3 cr; prereq #) Bognanno
Economic analysis of American's health care sector, emphasizing problems of pricing, production, and distribution. Evaluating health care services as one factor contributing to the nation's health.
- 8796. TOPICS IN HEALTH ECONOMICS.** (3 cr; prereq economics course, #) Dahl
General principles of health economics are applied to current issues in health such as insurance, licensure, family practice, malpractice, and hospital costs. Models of hospital functioning, area planning, and disease intervention are presented within the framework of economic analysis and used to explain and predict health behavior. Concepts of cost benefit and cost effectiveness analysis are discussed and applied to problems in health care delivery.

IV. FACULTY

Academic Faculty

Bright M. Dornblaser, M.H.A., Professor, Director, Programs in Hospital and Health Care Administration
Theodor J. Litman, Ph.D., Professor, Coordinator, Doctoral Studies Program
Vernon E. Weckwerth, Ph.D., Professor, Coordinator, Alternative Studies Program
George Kenneth Gordon, Ed.D., Associate Professor, Coordinator, Long-Term Care Administration Education
John H. Westerman, M.H.A., Associate Professor
Sharon Danielsen, M.S., M.A., Assistant Professor, Project Director, Independent Study Program for Patient Care Administration
John R. Malban, M.S., Assistant Professor, Project Director, Mental Health Administration Program
William W. Metcalfe, Ph.D., Assistant Professor, Project Director, Independent Study Program for Health Care Trustees
Richard J. Oszustowicz, B.A., Assistant Professor
Ruth Stryker-Gordon, R.N., M.S., Assistant Professor, Coordinator, Advanced Studies in Long-Term Care Administration Education

ADJUNCT FACULTY

N. Tor Dahl, N.H.H., Associate Professor
Willy DeGeyndt, Ph.D., Associate Professor
Jerome T. Bieter, M.H.A., Assistant Professor
John Sweetland, M.H.A., Assistant Professor
Robert M. Dickler, M.H.A., Instructor
Carol Woehrer, M.A., Instructor, Assistant Coordinator, Basic Studies in Long-Term Care Administration

CLINICAL FACULTY

Richard Culbertson, M.H.A., Assistant Professor
Aliakbar Hassanshahi, M.B.A., Assistant Professor
Forough Kihl, English Nursing Certificate, Assistant Professor
Mohammed Reza Molavi, M.B.A., Assistant Professor
Kaivon Saleh, Dr. P.H., Assistant Professor
LaVand Sverson, M.S., Assistant Professor, Co-Coordinator, Clinical Preceptors
Robert Taylor, M.H.A., Assistant Professor, Co-Coordinator, Clinical Preceptors
Amer Hassan Zahrai, M.D., Assistant Professor
Russell Farrell, M.H.A., Instructor
Greg Hart, M.H.A., Instructor
Charles A. Heinemann, M.H.A., Instructor
Bruce C. Miller, M.H.A., Instructor
Steven R. Orr, M.H.A., Instructor
Peter H. Sammond, M.H.A., Instructor
Darrell K. Stewart, M.H.A., Instructor
Hans R. Tronnes, M.H.A., Instructor
Donald C. Wegmiller, M.H.A., Instructor

AFFILIATE FACULTY

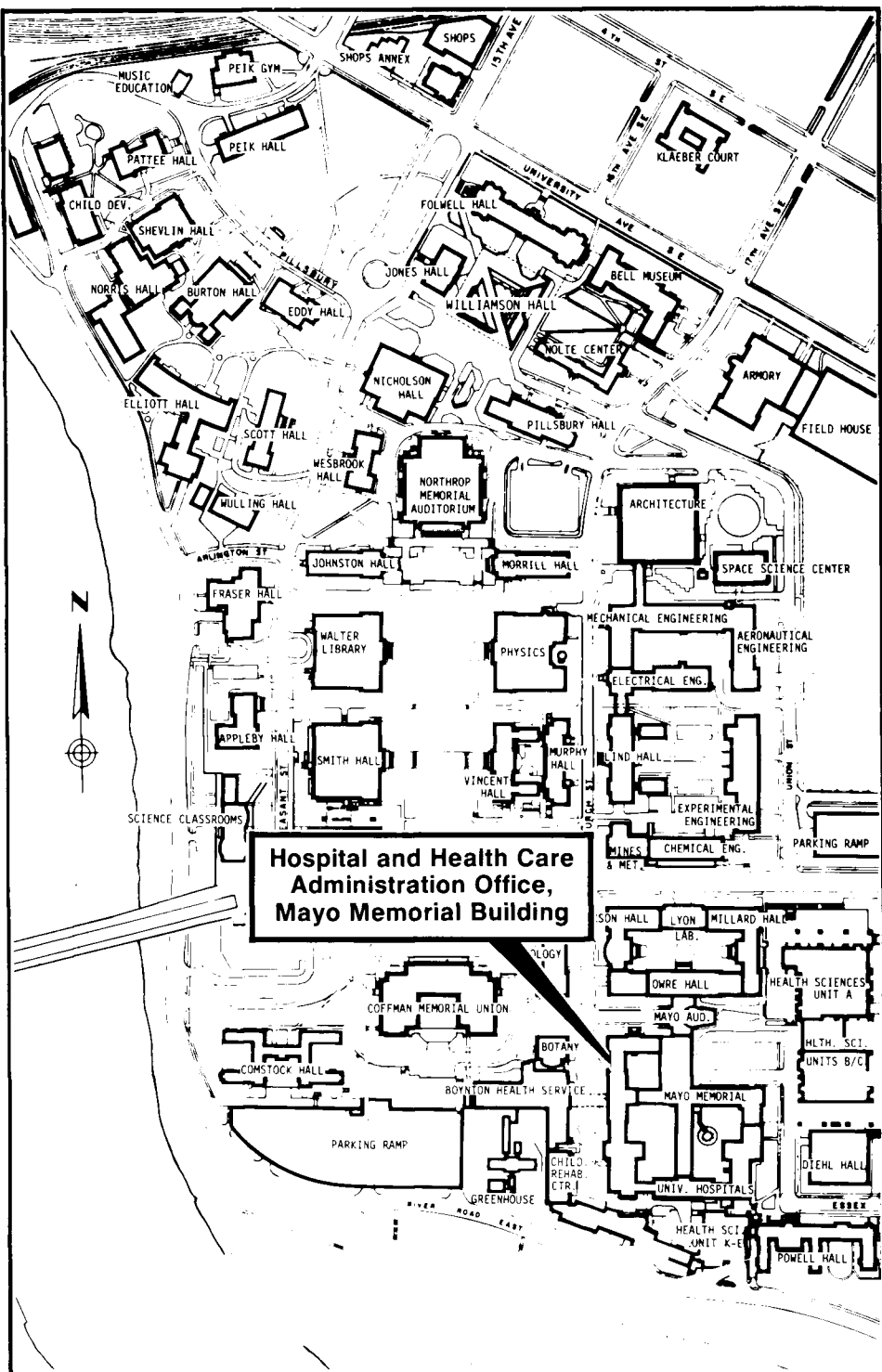
Nancy N. Anderson, Ph.D., Associate Professor, Hubert H. Humphrey Institute of Public Affairs
Mario F. Bognanno, Ph.D., Associate Professor, Industrial Relations
Douglas A. Fenderson, Ph.D., Associate Professor, Medical School
Jay N. Greenberg, Ph.D., Assistant Professor, Center for Health Sciences Research and Hubert H. Humphrey Institute of Public Affairs

Clinical Preceptors

LaVand Sverson, Director, St. Paul-Ramsey Hospital, St. Paul, Minnesota; Co-Coordinator, Clinical Preceptors
Robert Taylor, Executive Director, Hospital and Health Services, Hennepin County, Minneapolis, Minnesota; Co-Coordinator, Clinical Preceptors
J. Roger Asplin, Administrator, St. Louis Park Medical Center, St. Louis Park, Minnesota
Richard Barr, Administrator, Presbyterian Hospital Center, Albuquerque, New Mexico
William Byron, Deputy Commissioner, Department of Mental Health, Albany, New York
Robert J. Burastero, Administrative Vice President, Kaiser Foundation International, Oakland, California
Harvey Caldwell, Assistant Commissioner, Mental Health Services, Minneapolis, Minnesota
Daniel W. Capps, Administrator, University Hospital, Tucson, Arizona
William C. Christenson, Executive Director, Newton Wellesley Hospital, Newton Lower Falls, Massachusetts
L. Melvin Conley, President, Midway Hospital, St. Paul, Minnesota
Daniel Cooney, Director, Veterans Administration Hospital, Minneapolis, Minnesota

Faculty

- Jeptha W. Dalston, Director, University of Michigan Hospitals, Ann Arbor, Michigan
Samuel Davis, Director, Mount Sinai Hospital, New York, New York
Robert A. Derzon, Administrator, Health Care Financing Administration, Washington, D.C.
Earl G. Dresser, Executive President, Methodist Hospital, Minneapolis, Minnesota
Elmer M. Ediger, Administrator, Prairie View Mental Health Center, Newton, Kansas
Gatlin Edwards, Administrator, Houston International Hospital, Houston, Texas
James M. Ensign, President, Creighton Omaha Regional Health Care Corporation, Omaha, Nebraska
Kirby Erickson, Administrator, Fairview-Southdale Hospital, Edina, Minnesota
Roy A. Ettinger, Executive Director, Marlboro Psychiatric Hospital, Marlboro, New Jersey
Saul Feldman, Director, Office of Mental Health Education and Staff Development, National Institute of Mental Health, Rockville, Maryland
Gerard W. Frawley, Administrator, St. Joseph's Hospital, St. Paul, Minnesota
William R. Gemma, Associate Administrator, Health Services Administration, HEW, Rockville, Maryland
Elbert W. Gilbertson, Administrator, St. Luke's Hospital, Boise, Idaho
Henry H. Harvey, Administrator, Connecticut Mental Health Center, New Haven, Connecticut
James Haimarck, University of Pennsylvania Hospitals, Philadelphia, Pennsylvania
David Hitt, Associate Executive Director, Baylor University Medical Center, Dallas, Texas
Robert F. Hoffman, Administrator, Fergus Falls State Hospital, Fergus Falls, Minnesota
Lloyd L. Hughes, President, Rhode Island Hospital, Providence, Rhode Island
Charles V. Keeran, Associate Director, Neuro-Psychiatric Institute, UCLA Center for the Health Sciences, Los Angeles, California
William B. Kerr, Director, University of California Hospitals and Clinics, San Francisco, California
Chapin Key, Executive Director, Health Programs, Ministry of Health, Vancouver, British Columbia, Canada
John C. King, Senior Vice President for Corporate Services, Fairview Hospital, Minneapolis, Minnesota
William Kreykes, Executive Director, Vanderbilt University Hospital, Nashville, Tennessee
William S. Lacey, Deputy Director for Institutional Administration, Binghamton Psychiatric Center, Binghamton, New York
Roger G. Larson, President, Metropolitan Hospitals, Inc., Portland, Oregon
David A. Leonard, Department of Administration, Mayo Clinic, Rochester, Minnesota
Charles C. Lindstrom, Executive Vice President, St. Luke's Hospital, Kansas City, Missouri
Eugene Loubier, Executive Director, Franklin County Public Hospital, Greenfield, Massachusetts
Sister Mary Madonna, President, St. Mary's Hospital, Minneapolis, Minnesota
Harry M. Malm, President, Lutheran Hospitals and Homes Society of America, Fargo, North Dakota
Thomas R. Mattison, Administrator, Hennepin County Medical Center, Minneapolis, Minnesota
Thomas J. Mattson, Executive Vice President, Mercy Medical Center, Coon Rapids, Minnesota
Ralph Mayer, President, Robert Packer Hospital, Sayre, Pennsylvania
Kurt W. Metzner, Administrator, Lutheran Deaconess Hospital, Minneapolis, Minnesota
Donald C. Mills, Administrator, Bethesda Lutheran Hospital, St. Paul, Minnesota
Malcolm Mitchell, Director, Metropolitan Health Board, St. Paul, Minnesota
Colonel John E. Murphy, Director, Office of Planning and Policy Analysis, Office of the Assistant Secretary of Defense for Health Affairs, Washington, D.C.
Edmund K. Nelson, Administrator, Lutheran Deaconess Hospital, Minneapolis, Minnesota
Stanley R. Nelson, Executive Vice President, Henry Ford Hospital, Detroit, Michigan
Larry W. Nikkel, Administrator, Prairie View Mental Health Center, Newton, Kansas
Donald R. Olscn, Associate Administrator, Mason Clinic-Virginia Mason Hospital, Seattle, Washington
Merlin I. Olson, Executive Director of Hospitals, Colorado Medical Center, Denver, Colorado
John Wyn Owen, District Administrator, St. Thomas' Hospital, London, England
Lowell E. Palmquist, Executive Director, Swedish Medical Center, Englewood, Colorado
Scott J. Parker, President, Intermountain Health Care, Salt Lake City, Utah
David R. Pitts, Executive Vice President and Hospital Director, Oschner Medical Foundation, New Orleans, Louisiana
Carl N. Platou, President, Fairview Community Hospitals, Minneapolis, Minnesota
James A. Prevoost, Director, Richard H. Hutchings Psychiatric Center, Syracuse, New York
Jack W. Rivall, Executive Vice President, Eitel Hospital, Minneapolis, Minnesota
Stephen Rogness, Executive Director, Minnesota Hospital Association, Minneapolis, Minnesota
Peter Sammond, Executive President, Mount Sinai Hospital, Minneapolis, Minnesota
Gordon Sprenger, President, Abott-Northwestern Hospitals, Minneapolis, Minnesota
Thomas B. Stage, Director, Northern Virginia Mental Health Institute, Falls Church, Virginia
Cris A. Stang, Executive Vice President, Golden Valley Health Center, Minneapolis, Minnesota
Eugene L. Staples, Director, West Virginia University Hospital, Morgantown, West Virginia
John F. Stockwell, Administrator, Cape Cod Hospital, Hyannis, Massachusetts
Richard J. Thamasett, Deputy Director, Broome Development Services, Binghamton, New York
Samuel J. Tibbitts, President, Lutheran Hospital Society of Southern California, Los Angeles, California
L. V. Truitt, President, Vancouver General Hospital, Vancouver, British Columbia
Paul J. Vogt, President, Portland Metro Health, inc., Portland, Oregon
William N. Wallace, President, United Hospitals, Inc., St. Paul, Minnesota
Frank S. Walter, President, Metropolitan Medical Center, Minneapolis, Minnesota
Donald C. Wegmiller, Senior Executive Vice President, Health Central, Inc., Minneapolis, Minnesota
John H. Westerman, General Director, University of Minnesota Hospitals, Minneapolis, Minnesota
Russell B. Williams, Vice President, Kaiser Foundation Hospital, Los Angeles, California
Howard M. Winholtz, Executive Director, Rochester Methodist Hospital, Rochester, Minnesota



**Hospital and Health Care
Administration Office,
Mayo Memorial Building**

**Twin Cities Campus/Minneapolis
East Bank**

UNIVERSITY
OF MINNESOTA
BULLETIN

1978-1980

APRIL 20, 1978

SCHOOL OF PUBLIC HEALTH



Board of Regents

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School of Public Health Administrative Officers

Lee D. Stauffer, Dean
Robert L. Veninga, Associate Dean

School of Public Health

UNIVERSITY OF MINNESOTA

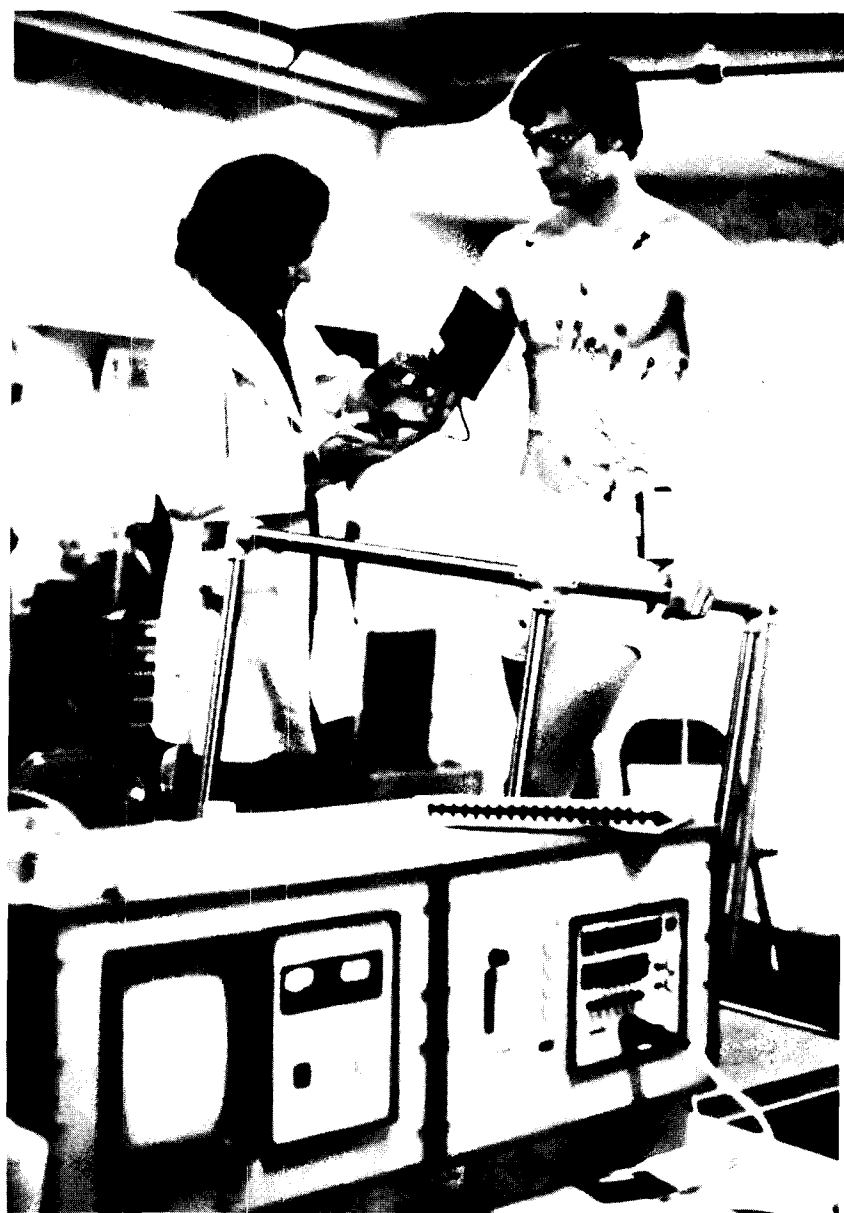


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To Prospective Students:

Thank you for your inquiry concerning the School of Public Health at the University of Minnesota. We appreciate your interest in the school and hope you will join us within this academic community.

The School of Public Health offers opportunities to motivated individuals who are concerned about the prevention of disease and the resolution of public health problems. Recognizing that a wide spectrum of knowledge and skills is needed if community health problems are to be dealt with properly, the school offers educational experiences in a variety of areas. In addition to the educational experiences offered through the school, students are encouraged to utilize curricular resources offered by other schools of the University of Minnesota.

In the School of Public Health you will be joining a group of talented men and women who have the common goal of completing a high quality education to prepare for a career of service in the protection and improvement of the public's health. We welcome your application and trust that the information contained in this bulletin will provide the information you need to know about the school. The directors of the programs of study offered through the school would be pleased to hear from you and will, upon request, forward additional information to you.

*Lee D. Stauffer
Dean*

School of Public Health

I. GENERAL INFORMATION

The School of Public Health at the University of Minnesota has established a strong reputation for its educational programs as a result of more than a half century of teaching, research, and community service. The school's beginnings date to 1918, when the Program in Public Health Nursing—one of the first of its kind in the country—was established. Because of the increased need for health education and for trained leaders in public health, a separate Department of Preventive Medicine and Public Health was established in 1922. In 1935, health officers of adjacent states selected the University of Minnesota to train public health personnel under provisions of the Social Security Act. Curricula for the training of health officers and public health engineers were established at that time. The Board of Regents authorized expansion of the Department of Preventive Medicine and Public Health into the School of Public Health in 1944. The College of Medical Sciences was reorganized in 1970 into the Health Sciences, consisting of six units: Dentistry, Medicine, Nursing, Pharmacy, Public Health, and University Hospitals.

The School of Public Health is located within the Health Sciences complex on the East Bank of Minneapolis campus.

Mission of the School

The mission of the School of Public Health is to promote the public welfare through the interrelated functions of education, research, and service.

Providing students with the basic knowledge and skills essential to their professional area within the field of public health is the school's educational goal. The school's faculty believes that this aim is best accomplished by offering a variety of programs with flexibility for individualized student learning. Included in the educational experience are opportunities for students to work with community residents, health professionals, and faculty to improve the health of a given community.

The school's research goal is to provide faculty members and students with the environment, support, and opportunity to participate in research as well as to become knowledgeable about research completed by others in the areas of disease prevention, health maintenance, and health care delivery. It is the goal of the school to use the results of its research to define, assess, and resolve community health problems.

The school's community service goal is to provide faculty and student aid to health institutions and agencies as a part of the educational and research process. The community service component of the educational program is a planned experience appropriate to the needs of the community as well as the career interests and goals of the individual student.

Educational Objectives—At the conclusion of their graduate program, students should be able to demonstrate:

1. Technical competence in their areas of specialty.
2. Knowledge of and ability to apply:
 - a. biological, chemical, and physical principles that affect the health of the community;

General Information

- b. sociological, cultural, political, and economic principles that affect the health of the community; and
 - c. principles of the operation and components of health services delivery systems, including facilities and professional resources.
3. Knowledge of and ability to apply the methods, techniques, and procedures of:
 - a. information collection, storage, retrieval, analysis, and dissemination (includes principles of epidemiology and biometry); and
 - b. environmental monitoring, analysis, and manipulation.
 4. An ability to help solve public health problems through crossdisciplinary cooperation.
 5. Skills in:
 - a. identifying and evaluating community health needs;
 - b. preparing and analyzing plans to solve community health problems;
 - c. marshaling resources (administrative, physical, etc.) to implement a program; and
 - d. evaluating the effectiveness of plans to solve community health problems.
 6. The ability to recognize when and what kind of consultation is needed to solve various public health problems.
 7. The ability for self-motivated learning and recognition of a lifelong need for professional development

It is the responsibility of the student and his or her academic adviser to design a program that meets these educational objectives. The student's academic program is evaluated before graduation to determine whether the objectives have been successfully met.

Equal Opportunity Statement

The University of Minnesota is committed to the policy that all persons shall have equal access to its programs, facilities, and employment without regard to race, creed, color, sex, national origin, or handicap. In adhering to this policy, the University abides by the requirements of Title IX of the Education Amendments of 1972, by Section 504 of the Rehabilitation Act of 1973, and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to Lillian H. Williams, Director, Office of Equal Opportunity and Affirmative Action, 419 Morrill Hall, 100 Church Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, (612) 373-7969, or to the Director of the Office of Civil Rights, Department of Health, Education, and Welfare, 330 Independence Avenue S.W., Washington, D.C. 20201.

Divisions of the School

The School of Public Health consists of six divisions: Biometry, Community Health Services, Epidemiology, Health and Human Behavior, Health Services Administration, and Human Health and the Environment.

The Division of Biometry provides instruction to students in its Program in Biometry and to public health and other health science students. The division offers consultative assistance to health science investigators through its Biometry Consulting Laboratory, conducts collaborative biometric research in clinical and field stud-

Divisions of the School

ies, and supports biometric research by individual faculty members. The director of the division is Dr. Marcus O. Kjelsberg.

The Division of Community Health Services includes the programs in Dental Public Health, Maternal and Child Health, Interdisciplinary Studies, and Public Health Nursing. Each of these programs is designed to prepare qualified professionals for leadership positions in the health services system. The curricula of these programs emphasize the importance of disease prevention and health maintenance within comprehensive health services. A typical program consists of courses in public health, courses in the student's professional major, plus elective courses that may be drawn from other areas of the University. Through close collaboration with a wide range of public health agencies, faculty members and students have opportunities to work on a variety of individual as well as team projects. The director of the division is Professor Alma Sparrow.

The Division of Epidemiology is dedicated to teaching, research, and community service in the epidemiology and control of diseases. The division includes the programs in Epidemiology and Veterinary Public Health. The division provides courses in epidemiology for its own students as well as for other students in programs in the School of Public Health. Its research activities embrace a diversity of epidemiological investigations in both human and animal populations. The division also provides consultative services in epidemiology to the school, departments in the Health Sciences and the University at large, and to community agencies. The director of the division is Dr. Leonard Schuman.

The Division of Health and Human Behavior is composed of the programs in Health Education, Public Health Nutrition, and the Laboratory of Physiological Hygiene. The basic educational objective of this division is to prepare professionals competent in carrying out public programs in disease prevention and health promotion. The research program of the division explores hypotheses about causes of major health and disease problems. Research programs in progress include testing of strategies for change in health behavior and measurement of the impact of such changes on the general population. The director of the division is Dr. Henry Blackburn.

The Division of Health Services Administration includes the programs in Hospital and Health Care Administration and Public Health Administration. Its goals are to prepare generalist and specialist administrators for the full range of health system organizations; to prepare teachers and researchers; to conduct health services research; and to provide community service in order to improve health services in the state and nation. Individuals planning health services careers may earn a master of hospital administration degree (in hospital and health care administration); master of public health degree (in public health administration); a combination of these degrees; a combination of these degrees and a master of arts (in public administration); or a Ph.D. degree (in hospital and health care administration) from the Graduate School. The director of the division is Professor Bright M. Dornblaser.

The Division of Human Health and the Environment offers the Program in Environmental Health. This program is concerned primarily with the prevention of disease through the implementation of appropriate biological, chemical, engineering, and physical control measures. The program focuses on the naturally occurring or anthropogenic agents responsible for acute and chronic diseases that are encountered in various environments and in products used and consumed by human beings. Studies include the movement of these agents through various environments, the populations at risk, and control measures effective in minimizing internal and external exposure. The director of the division is Dr. Conrad P. Straub.

Degree Programs

The school offers programs of study leading to the professional degrees of master of public health (M.P.H.) and master of hospital administration (M.H.A.). In addition, under the administration of the Graduate School but utilizing the advising and teaching faculty of the School of Public Health, several programs leading to the academic degrees of master of science (M.S.) and/or doctor of philosophy (Ph.D.) are offered. All degree programs offered by the School of Public Health or through the Graduate School are fully accredited by the appropriate national accrediting agencies. The school does not offer the doctor of public health (Dr.P.H.) degree.

The decision to apply directly to the School of Public Health for study toward a professional degree (M.P.H. or M.H.A.) or to the Graduate School for study toward an academic degree (M.S. or Ph.D.) will depend upon a number of considerations, including the applicant's chosen program of study, long-term career needs and goals, prior experience and academic preparation, and future academic plans. It is recommended that applicants correspond with the director of the appropriate program in the School of Public Health before applying to the Graduate School.

In response to the changing public health environment and the resulting specialized needs of students and employers, the faculty has expanded the school's curricula to encompass an ever-widening variety of educational experiences. The school offers students a wide selection of general and professional courses and programs of study in the fields of public health and preventive medicine. General courses are designed for students who desire a basic knowledge of personal health as well as a sound understanding of community programming for the promotion and maintenance of personal and public health. Professional courses are designed to provide technical knowledge and skills for those seeking a specific career in public health. Throughout the school's curricula, preventive health concepts and the interdisciplinary team approach to health services are stressed.

In addition to the broad selection of School of Public Health offerings, many other educational opportunities throughout the University are available to public health students. Programs of study have been developed in close collaboration with other departments in the health sciences and in collateral fields such as the biological sciences, business administration, education, engineering, public administration, and the social sciences. Practical field experience and observation are provided through close working relationships with many official and voluntary public health agencies throughout the state. Staff members from the Minnesota Department of Health participate in classroom, laboratory, and field instruction. In addition, the school has formal and informal teaching affiliations with over 100 health and health-related agencies and organizations in the Twin Cities metropolitan area and nearby outstate areas. Through these channels students can obtain supervised practical experience in a wide range of areas.

MASTER OF PUBLIC HEALTH

This advanced professional degree is granted in recognition of scholastic attainment in public health to individuals with suitable previous education and experience. The requirements for the M.P.H. degree programs are guided by criteria established by the Council on Education for Public Health. Applicants should possess a graduate degree from an acceptable institution in a discipline relevant to public health, or a bachelor's degree from an acceptable institution in a discipline relevant to public health, gained either through study or experience or a combination of the two.

Programs of Study—Professional programs leading to the M.P.H. degree are offered in the areas of biometry, dental public health, environmental health, epidemi-

ology, health education, interdisciplinary studies and associated programs (including physical and occupational therapy), maternal and child health (including family planning administration and population studies), physiological hygiene, public health administration, public health nursing, public health nutrition, and veterinary public health. The length of time required to complete the degree may vary depending upon the program and the student's educational background and work experience. However, 11 months of approved study are generally regarded as a minimum.

Application and Admission Procedures—Each program has its own admission and curriculum requirements, which are described in section II of this bulletin. However, the following procedure should be followed in applying for all M.P.H. programs:

1. Articulate in your letter of inquiry your present or previous professional experience; future career goals and needs including the professional role you see yourself performing; and, when possible, the type of agency, organization, or setting in which you plan to work.
2. Submit with your initial letter, or arrange to have forwarded to the program director, two certified transcripts of your complete academic record from all previous collegiate institutions attended.
3. Submit letters of recommendation, or names and addresses of individuals who would be willing to write a letter of recommendation, as required by the individual program. These letters should be written by persons capable of assessing your ability to do graduate work and your past and potential success in the field for which you are applying. Letters should be addressed to the director of the program.
4. Complete and return to the program director the application for admission along with a check, payable to the University of Minnesota, for the \$10 (U.S. currency) credentials examination fee. Former University of Minnesota students need only complete a Change of College form and are not required to pay the \$10 fee. However, some program directors may request that a completed application for admission be returned for informational purposes.
5. Arrange to have the Miller Analogies, Graduate Record Examination, TOEFL, or other requested test scores forwarded to the program director. Information on when and where such tests are administered may be obtained from the Student Counseling Bureau, 101 Eddy Hall, 192 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455, or at a student testing office of a college or university near you.

After the application and all supporting documents have been received and reviewed, applicants are officially notified by the dean of the action taken and any conditions of admission. Questions regarding admission should be addressed to the program director.

Adult Special Status—Individuals who do not immediately become candidates for degrees but who wish to pursue graduate-level studies may be admitted as adult special students. Students whose undergraduate academic preparation is deficient or whose ability to pursue graduate-level study is in doubt may also be admitted as adult special students. The academic record of each adult special student is reviewed after every quarter to determine eligibility for transfer to degree candidacy.

All adult special students, like degree candidates, must plan their program of study in consultation with a faculty adviser. With approval of the program director, a maximum of 22 credits (or 2 quarters) completed while registered as an adult special student in the School of Public Health may be applied toward the M.P.H. degree. When adult special students transfer from another college within the University, both

General Information

the program director and the dean must approve transfer credits applied to the degree.

Degree Requirements—The total number of credits required for the M.P.H. degree is stipulated by each program; however, the minimum number required is 45 quarter credits. Students desiring to transfer graduate credits from other schools should direct their request to the program director, who, in consultation with the dean, will determine the number of transfer credits accepted. All students must be in residence a minimum of 2 full-time academic quarters.

Appropriate course work is selected by the student in consultation with the adviser and in accordance with the requirements of the specific program of study. Courses should be selected so that, upon completion of the program, the student is able to demonstrate competence in the areas outlined in the school's educational objectives. Two quarters prior to the date of anticipated graduation the student should submit a program plan to the dean's office. All courses taken while a student is in the school, as well as any credits to be transferred from other colleges, must be listed. The school's Educational Policy Committee reviews each student's program plan.

All candidates for the M.P.H. degree are expected to demonstrate familiarity with the tools of research or scholarship in their field, the ability to work independently, and the ability to present the results of their investigation effectively by completing at least one Plan B project. The faculty in each program may require as many as three such projects. The program faculty specifies both the nature and extent of the options available to satisfy this requirement and whether the requirement is to be satisfied in conjunction with or independent of the course work in the student's program. The total Plan B effort should involve approximately three nominal work weeks (120 hours) for the student who has satisfied the course work requirements in her or his program.

Listings of curricular requirements for individual programs can be obtained from program directors.

Grading System—The University of Minnesota offers two grading options to all students, the letter grade system (A-B-C-D-N) and the satisfactory-no credit system (S-N). The School of Public Health, in accordance with University policy, permits students to choose which option they desire as long as no more than 20 percent of the credits applied to their degree are taken S-N (excluding topics, seminars, and field courses where only the S-N option is offered). To earn the M.P.H. degree, a minimum overall grade point average of 2.80 (based on A=4.00, B=3.00, C=2.00, and D=1.00) must be attained in all courses taken on the A-N option. Each student's record is reviewed at the end of every quarter to determine whether satisfactory progress has been made toward the degree.

Changes in grading systems after the first 2 weeks of the term will be allowed in exceptional cases only and must be approved by both the instructor and the adviser. Programs may specify additional requirements concerning choice of grading systems by their majors within their own curricular offerings.

Probationary Status—Each program sends written notification to a student, by the middle of each quarter, when the student's cumulative grade point average has fallen below 2.80 at the conclusion of the preceding quarter.

Course Evaluations—Every course in the school, including seminars, field study, and independent study projects, is evaluated by students. Summaries of student evaluations of courses are available for student review in the program office.

Comprehensive Examinations—All students must successfully complete a comprehensive examination prior to earning the M.P.H. degree.

MASTER OF HOSPITAL ADMINISTRATION

This advanced professional degree is granted in recognition of scholastic attainment in health administration to individuals with suitable previous education and experience. The goal of the M.H.A. program is to prepare graduates for chief executive positions (after the requisite years of practical experience in responsible managerial positions) in health systems delivery, financing, and planning organizations.

The program is 21 months in length, consisting of either 10 months of academic study on campus followed by a year of administrative residency experience, or 2 academic and a minimum of 6 months of supervised field experience. An alternative plan of study is available for students who successfully complete the Independent Study Program for Hospital and Health Care Facility Administrators. The academic training provides a specialized background in management, human relations, quantitative methods used in management decision making, acculturation to the health environment, and social, cultural, and political aspects of health care.

Requirements for the M.H.A. degree include satisfactory completion of a specified number of credits (presently 70, including a residency period for the majority of students), an acceptable thesis, and an overall grade point average of 2.80 for all courses taken on the A-N option.

Hospital and health care administration programs are further described in section II of this bulletin and in the *Programs in Hospital and Health Care Administration Bulletin*.

MASTER OF SCIENCE AND DOCTOR OF PHILOSOPHY

Programs of study and research leading to the M.S. and Ph.D. degrees, administered through the Graduate School, may be elected with a major or minor in biometry and health information systems, environmental health, epidemiology, and physiological hygiene. Hospital and health care administration may be elected as either a major or minor at the doctoral level. The M.S. degree in public health is also offered. For additional information about degree programs, including a minor in public health for the Ph.D. degree, consult the appropriate program description in this bulletin as well as the *Graduate School Bulletin*.

Adult special students who wish to transfer to candidacy for the M.S. or Ph.D. degree may obtain information on current regulations governing transfer of credits by contacting the Graduate School, 322 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

UNDERGRADUATE EDUCATION

The School of Public Health does not offer bachelor's degree programs. However, students may take courses in the school and apply credits earned to a number of bachelor's degree programs offered by other units of the University. Those interested in a bachelor's degree in biometry may register for that program through the College of Liberal Arts (see the *College of Liberal Arts Bulletin*, available from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455). Information about the bachelor's degree program for chemical dependency professionals is presented in section II of this bulletin under the heading Interdisciplinary Studies and Associated Programs. In addition, the school participates in the Inter-College Program of the University College, which enables students to design an individual program of study for the bachelor's degree involving two or more areas of concentration. Public health and

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related course work can be used to fulfill one of those areas of concentration for students whose course work is approved by a School of Public Health adviser. Further information is available from University College, 105 Walter Library, 117 Pleasant Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

The School of Public Health offers courses at the undergraduate level to meet requirements of other departments and colleges. Some graduate-level courses of the school are also available to upper division undergraduate students to satisfy distribution or elective requirements. Many of the school's courses are open to graduate students from other departments or colleges of the University. Some nondegree, special summer, independent study, and continuing education offerings may also be taken for credit and applied to degree programs. For more information on the applicability of credit, consult both the specific college and the director of the program to which credits are to be transferred.

Nondegree and Continuing Education Programs

The School of Public Health, in cooperation with other units in the Health Sciences and various departments of the University, offers a number of credit and noncredit continuing education programs. In addition to the regularly offered programs described below, the school offers a variety of in-service courses on campus and elsewhere in the state. These courses, which vary in length from 1- or 2-day workshops to 2- or 3-week institutes, are offered for selected professional and paraprofessional groups in the health field. School and University faculty members as well as special lecturers are utilized. For more information, consult the publication *Continuing Education for the Health Professions*, available from the Health Sciences Coordinator for Continuing Education, 7208 Powell Hall, 500 Essex Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Nondegree programs are regularly offered through the programs in Public Health Nursing (Pediatric Nurse Associate and Adult/Geriatric Nurse Practitioner programs), Interdisciplinary Studies and Associated Programs (Chemical Dependency Counseling Certificate Program), and Hospital and Health Care Administration (for Hospital and Health Care Facility Administrators, Long-Term Care Administrators, Patient Care Administrators, Mental Health Administration, and Health Care Trustees independent study programs). Further information on these programs can be found in section II of this bulletin.

Evening Classes—Through the University's Continuing Education and Extension division, the school offers a number of courses in the evening for the convenience of health professionals working toward degree programs part-time or supplementing their education. Degree credits earned through extension courses can be transferred to apply toward degrees offered by the school or by other units of the University when approved by the degree-granting department. A complete list of extension class offerings can be found in the *Extension Classes Bulletin*, available from Continuing Education and Extension, 101 Westbrook Hall, 77 Pleasant Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Summer Session—The summer session consists of 2 terms, each 5 weeks in length. In each of these terms, courses taught during the regular year are offered in a concentrated period of time. Special workshops or intensive programs of study are also offered during the summer. It should be noted that it is not possible for a student to complete the requirements for an advanced degree through summer session attendance only. Further information can be obtained from the *Summer Session Bulletin*, available through the Summer Session Office, 135 Johnston Hall, 101 Pleasant Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

International Students

All prospective students from countries other than the United States and Canada must observe the following procedures to ensure consideration of their application. Foreign nationals already studying or working in the United States, unless they have been admitted for the purpose of establishing residency or have acquired such status under appropriate immigration regulations, are required to observe the same procedures as those still residing in their home country.

All international students must have earned a bachelor's degree or its equivalent, or a higher degree, from an acceptable institution. All applications must be for study in a specific program (see section II). International students are usually admitted as adult special students.

When applying for admission, students must observe the following procedures:

Government Endorsement—International students must secure a written endorsement of their training from the Ministry of Health or similar governmental unit of their home country. This endorsement must be submitted to the school as a part of the application and should include both a statement of the governmental unit's desire to have the student obtain training *in a specific field of public health* and the willingness of the government to employ or assist the student in securing employment upon return to his or her country. International students must obtain this endorsement even if they are already in the United States for other study.

Assurance of Financial Support—The School of Public Health does not have funds to assist international students, either on a planned or an emergency basis. Since such funds are extremely difficult to obtain in the United States, all international students are required to provide the school with written assurance of their ability to provide full financial support for their entire period of study. This assurance must be given by an official governmental agency from the student's home country or an international agency such as the World Health Organization, the Agency for International Development of the U.S. State Department, the AFGRAD program (through the African-American Institute), or some other acceptable national or international agency or organization. Students planning to finance their education out of their own, family, or other private resources must also provide written assurance from an official agency that their financial resources are adequate for the entire period of study and that the agency giving such assurance is prepared to provide or otherwise secure appropriate assistance for the student in the event that an unforeseen emergency arises while studying in the United States.

Proficiency in English—Since course work in the school is offered only in English, the value of the educational experience is dependent upon the student's ability to read, write, and think in English. Therefore, the school requires that every international applicant whose native language is not English provide evidence of proficiency in English at the time of application. Such evidence usually is provided routinely when application is made through the World Health Organization, Agency for International Development, or other long-established international program. Students may also take the Michigan Test in English Proficiency and arrange to have the certified examination results forwarded to the school. Final action on an application for admission cannot be taken until written evidence of proficiency in English is received.

Application Procedure—International students should initiate their application procedures early due to delays in obtaining necessary clearances and assurances prior to formal application. Students are advised to contact their Ministry of Health or similar governmental agency by the first week in January of the calendar year in which they plan to enroll. Students are also encouraged to apply through their

General Information

Ministry of Health, the World Health Organization, or other official agency because these agencies are usually able to expedite the necessary clearances. Direct application, while possible, is not encouraged. Students are encouraged, however, to correspond with the director of the program of study they wish to enter as early as possible and prior to initiating formal application procedures. Early correspondence that clearly articulates the student's educational and career needs and goals is essential.

Expenses and Financial Assistance

Information about tuition and related expenses can be obtained from program directors. Opportunities for traineeships, loans, and other financial assistance may be available in the various fields of study. Applicants who need financial assistance or who would like specific information about qualifying and applying for traineeship support may write to the *director of the program in which they plan to enroll*. Since funds are limited and allocations usually must be determined in spring quarter for the following fall, early application, preferably by March 1, is urged.

Human Subjects in Research

All research projects involving the use of human subjects must be approved by the University Committee on the Use of Human Subjects in Research.

Access to Student Records

Students wishing to review their academic files should make a request to the record custodian in the dean's office, 1360 Mayo. The file is forwarded together with a Request to Inspect Record form to the program director or faculty adviser; the form is subsequently returned to the dean's office.

Grievance Procedures and Policies

A copy of the *School of Public Health Grievance Procedures and Policies* may be obtained from the Dean's Office, School of Public Health, 1360 Mayo (Box 197), 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Student Organizations

The Public Health Student Senate represents the professional and graduate student body of the School of Public Health. It deals with issues that affect the student body. Primary concerns of the organization are the interdisciplinary approach to professional and graduate education and social activities of the school. Membership is composed of two representatives elected from each program. Senate members also participate in major faculty committees of the school.

The Council for Health Interdisciplinary Participation (CHIP) is an organization for health sciences students that is dedicated to promoting the team approach to health care delivery through student services and community programs. CHIP offers educational and social functions.

Housing

Most out-of-town students live in either University residence halls or in private, off-campus apartments. Information concerning either on-campus or off-campus housing may be obtained from the University Housing Office, Comstock Hall, 210 Delaware Street S.E., Minneapolis, Minnesota 55455. Information on University-owned family housing is available from the Commonwealth Cooperative, Inc., 1250 Fifield Avenue, St. Paul, Minnesota 55108.

Center for Health Services Research

The Center for Health Services Research is an academic unit of the School of Public Health that is designed to function as an interschool unit, bridging the Health Science schools and linking them with other relevant disciplines, such as public affairs, economics, business administration, sociology, and law, to stimulate and develop interdisciplinary research efforts focusing on issues concerning the organization and delivery of health services.

The center is primarily concerned with research efforts in the area of integrated health care delivery systems. Hospital systems, group practices (especially multispecialty groups and those with satellite groups), integrated long-term care programs, health maintenance organizations, and similar organized systems are, therefore, high priority research areas. Within these general areas, the center concentrates on health care workers, consumer/provider interaction, cost/utilization relationships, quality, and access issues.

Applied research, especially policy-relevant research, is emphasized by the center. Organizational relationships have been developed with the field of practice, the state legislature, and state administrative agencies involved in providing and regulating health services to assure the relevance of the research agenda and to expedite the transfer of research findings into practice.

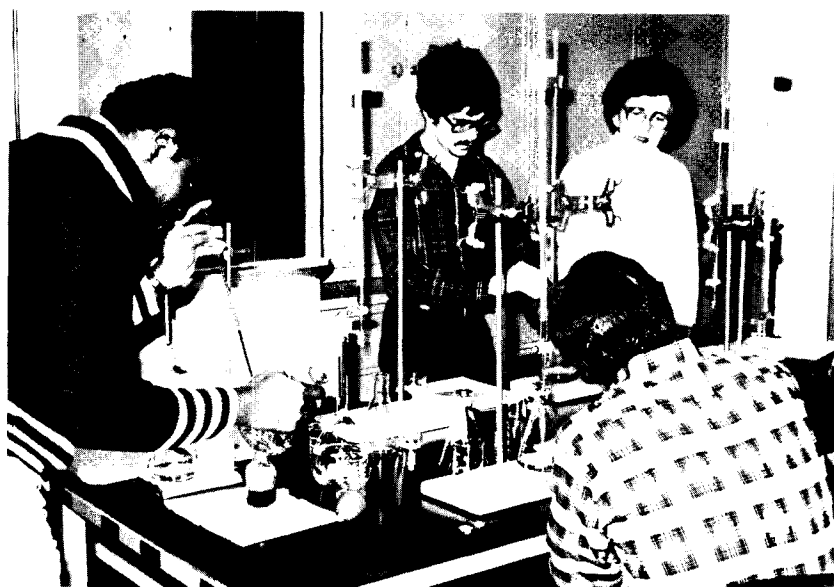
Center faculty members participate in the teaching programs of the School of Public Health and the Hubert H. Humphrey Institute of Public Affairs. The center also offers research opportunities for graduate students and research tutorials on an arranged basis. The center is headed by Dr. John E. Kralewski.

CENTER FACULTY

John E. Kralewski, Ph.D., Professor and Director, Center for Health Services Research; Assistant to the Vice President for Health Sciences
Douglas A. Fenderson, Ph.D., Professor; Director, Continuing Medical Education, Medical School
William R. Fifer, M.D., Professor; Department of Medicine, Medical School
Nancy Anderson, Ph.D., Associate Professor; Humphrey Institute of Public Affairs
Eric N. Berkowitz, Ph.D., Assistant Professor; Department of Marketing and Business Law, College of Business Administration
Thomas Choi, Ph.D., Assistant Professor
Donald P. Connelly, M.D., Ph.D., Assistant Professor; Director, Laboratory Data Division, Medical School
Gestur B. Davidson, Ph.D., Assistant Professor
Roger D. Feldman, Ph.D., Assistant Professor
Jay N. Greenberg, Sc.D., Assistant Professor; Humphrey Institute of Public Affairs
Barry R. Greene, Ph.D., Assistant Professor
Peter B. Levine, Ph.D., Clinical Assistant Professor; Director, House Research, Minnesota Legislature
William A. Flexner, Dr.P.H., Visiting Assistant Professor

Additional Information

For further information regarding admission, tuition, expenses, housing, health services, and campus facilities and services, consult the *General Information Bulletin*, available from the Office of Admissions and Records, 240 Williamson Hall, 231 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455.



II. PROGRAMS OF STUDY

Biometry

Program Director: Marcus O. Kjelsberg, Ph.D.

PROGRAM DESCRIPTION

Master of Public Health—Biometry is the study of the analytical and quantitative aspects of biology, medicine, public health, and health care systems. The M.P.H. program includes basic courses in public health and biometry including studies in areas such as biomedical statistics, health computer sciences, demography, and health statistics. Students with at least 2 years of relevant professional experience should plan to be in attendance for at least 12 months, beginning in the fall quarter. Students with little or no professional experience should plan to attend for a period of 21 months, beginning in the fall.

A detailed description of the course of study may be obtained by writing to the Director, Program in Biometry, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Master of Science and Doctor of Philosophy—The M.S. and Ph.D. degrees with a major in biometry and health information systems are offered through the Graduate School. The course of study is similar to that described for the M.P.H. program but includes a greater emphasis on the major field. The M.S. program normally requires 21 months to complete, and the Ph.D. program usually requires 4 years after completion of the bachelor's degree. Further information about these programs is available in the *Graduate School Bulletin* under Biometry and Health Information Systems.

Bachelor of Arts—The B.A. degree with a major in biometry is offered through the College of Liberal Arts. Information about this program is available in the *CLA Bulletin*.

Biometry and other School of Public Health courses are described in section III of this bulletin. In addition to these courses, students may select courses from a wide range of areas such as management sciences, computer science, epidemiology, mathematics, sociology, and statistics.

ADMISSION REQUIREMENTS

1. Bachelor's degree from an accredited college or university, with a major in one of the social, biological, mathematical, or physical sciences. Degree work must include 2 years of college mathematics.
2. Two certified transcripts of all previous academic work.
3. Three letters of recommendation from individuals in a position to comment on the applicant's academic and professional potential.
4. A letter of intent indicating the applicant's occupational objectives.

PROGRAM FACULTY

Marcus O. Kjelsberg, Ph.D., Professor and Director, Program in Biometry
Eugene Ackerman, Ph.D., Professor; Director, Health Computer Sciences, Medical School
Jacob E. Bearman, Ph.D., Professor Emeritus
James R. Boen, Ph.D., Professor

Programs of Study

Eugene A. Johnson, Ph.D., Professor

Richard B. McHugh, Ph.D., Professor

Glenn E. Bartsch, Sc.D., Associate Professor

Stanley Finkelstein, Ph.D., Associate Professor; Health Computer Sciences, Medical School

La'el C. Gatewood, Ph.D., Associate Professor; Senior Associate Director, Health Computer Sciences, Medical School

Kathleen M. Keenan, Ph.D., Associate Professor; School of Dentistry

Ruth B. Loewenson, Ph.D., Associate Professor; Neurology, Medical School

Myra Chern, Ph.D., Assistant Professor; Health Computer Sciences, Medical School

Lynda B. Ellis, Ph.D., Assistant Professor; Health Computer Sciences, Medical School

Anne I. Goldman, Ph.D., Assistant Professor

Dorothy A. Jeffries, M.S., Assistant Professor

Paul Gunderson, Ph.D., Lecturer; Director, Minnesota Center for Health Statistics, Minnesota Department of Health

Robert W. Hiller, M.S., Lecturer; Special Assistant Commissioner, Minnesota Department of Health

Frederick L. King, B.A., Lecturer; Chief, Administrative Services, Minnesota Department of Health

Dental Public Health

Program Director: Lester E. Block, D.D.S., M.P.H.

PROGRAM DESCRIPTION

This master of public health program is designed to prepare qualified dentists and dental hygienists for responsible involvement and leadership roles in the dental health services system—in health centers, health agencies, educational institutions, and research centers. Emphasis is placed on the system's relationship to total community health. Public health and dental public health courses form the basic foundation of the program. Students may select from several program alternatives area of concentration that vary in scope, content, and length; these areas are listed below. A variety of elective courses as well as independent study opportunities assure each student the latitude to pursue personal and professional interests and goals.

Dental public health and other School of Public Health courses are described in section III of this bulletin. In addition to these courses, students may select courses from a wide range of areas such as education, finance, insurance, management, management information systems, and public administration. Information on courses offered by other schools can be found in the *Graduate School Bulletin*. Further information about the course of study may be obtained by writing to the Director, Program in Dental Public Health, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Program for Dentists—After completing the dental public health core courses and satisfying the School of Public Health educational objectives (see section I of this bulletin), students may concentrate on a special area of interest under the supervision of a faculty member with expertise in that area. Areas of concentration include community dentistry, dental care systems, dental epidemiology, dental health administration, dental health education, dental insurance, dental care workers, dental program planning, dental public health research, dentistry for the handicapped, preventive dentistry, and TEAM (Training in Expanded Auxiliary Management) dentistry. Students interested in teaching dental public health at a dental school may participate in the School of Dentistry's health ecology teaching program and take courses in dental curricula teaching and evaluation. For students interested in the delivery of dental services through health maintenance organizations, a course concentration in that area and a field placement under the supervision of the dental director of Group Health of Minnesota are available.

The course of study leading to the M.P.H. degree consists of a minimum of 11 months of full-time attendance in the School of Public Health. Dentists may also be

admitted on a part-time basis, completing the program over an extended period of time.

A 2-year program that combines academic course work, as described above, and a related field placement is available for students interested in a more in-depth program. This program provides the 2 years of post-D.D.S./D.M.D. public health specialty training required of dentists by the Council on Dental Education.

Program for Dental Hygienists—The program for dental hygienists is similar to the one previously described for dentists. It is approximately 21 months in length and includes a supervised field placement. Hygienists with an academic background or previous work experience in public health may complete the program in less time. Upon receipt of the completed application, an individual assessment of the time needed to complete the program will be made. Hygienists may also be admitted as part-time students, completing the program over an extended period of time.

The opportunity to develop concentrations in the same areas of special interest described for dentists is available for dental hygienists. Students interested in teaching dental public health at a dental hygiene school may participate in the teaching program of the School of Dentistry's Program in Dental Hygiene. Course work and related field experience are also available for students interested in a dental health education concentration.

ADMISSION REQUIREMENTS

1. D.D.S. or D.M.D. degree for applicants who are dentists, or B.A. or B.S. degree for applicants who are dental hygienists. The degree must be from an accredited dental school or dental hygiene program.
2. Two certified transcripts of all previous academic work.
3. Three letters of reference from individuals in a position to comment on the applicant's personal and professional qualifications. A personal interview with faculty members or a designated representative may also be requested.
4. A letter of intent indicating the applicant's background, experience, reasons for seeking the M.P.H. degree, and future professional plans.
5. An acceptable score on the Miller Analogies Test. Applicants can usually obtain information about when and where this test may be taken by inquiring at a student testing office at a nearby college or university, or by writing to the Student Counseling Bureau, 101 Eddy Hall, 192 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455.

PROGRAM FACULTY

Lester E. Block, D.D.S., M.P.H., Associate Professor and Director, Dental Public Health Program
Lawrence H. Meskin, D.D.S., M.P.H., Ph.D., Professor, Chairman, Division of Health Ecology, School of Dentistry
Michael J. Till, D.D.S., Ph.D., Professor, Chairman, Division of Pediatric Dentistry, School of Dentistry
Richard Stallard, D.D.S., Ph.D., Adjunct Professor; Dental Director, Group Health Plan, Inc., St. Paul.
David O. Born, Ph.D., Associate Professor; School of Dentistry
Ralph Katz, D.M.D., M.P.H., Ph.D., Associate Professor; Division of Health Ecology, School of Dentistry
Leslie V. Martens, D.D.S., M.P.H., Associate Professor; School of Dentistry
P. Jean Frazier, M.P.H., Assistant Professor; School of Dentistry
Anthony DiAngeles, D.D.S., M.P.H., Assistant Professor; School of Dentistry
Brenda G. Johnson, R.D.H., B.S., Instructor

Environmental Health

Program Director: Conrad P. Straub, Ph.D.

PROGRAM DESCRIPTION

Master of Public Health—The course of instruction in environmental health leading to the M.P.H. degree requires a minimum of 11 months of study. Students should plan to begin their studies in the fall quarter and remain in attendance through the following summer session.

Candidates must satisfy the degree requirements and educational objectives of the school (see section I of this bulletin) as well as complete the required core courses for the program. Other courses in the candidate's area of interest are selected in consultation with an adviser.

Master of Science and Doctor of Philosophy—The M.S. and Ph.D. degrees with a major in environmental health are offered through the Graduate School. Information about these programs is available in the *Graduate School Bulletin*.

The M.S. program is designed for individuals preparing to enter a career in environmental health. Those planning to complete a Ph.D. program in this field should also apply initially for the M.S. degree. Applicants should seek additional information from the program director before applying for admission through the Graduate School. The program requires a minimum of 11 months of study, beginning with the fall quarter. Students must complete the core courses required for the major field.

The Ph.D. program is designed to prepare a select group of individuals for research, teaching, and high-level administrative positions in the environmental health field. The work is adapted to individual needs and recognizes several fields of specialization within environmental health. In addition to Graduate School requirements, candidates for the Ph.D. degree must have completed a master's degree or its equivalent in environmental health.

Environmental health and other public health courses are described in section III of this bulletin. In addition to these courses, students may select courses from a wide range of areas such as agricultural engineering, architecture, chemical engineering, civil engineering, ecology and behavioral biology, entomology, fish and wildlife, food sciences, geology, law, and public affairs. A detailed description of the course of study and a more comprehensive list of elective courses may be obtained by writing to the program director. Descriptions of course offerings in other departments may be found in the *Graduate School Bulletin*.

Specializations Within Environmental Health

The environmental health program covers many aspects of environmental control. Students may select a general program that includes courses in air pollution, institutional environmental health, occupational health and safety, public health biology, radiological health, or water hygiene. They may also select courses in environmental microbiology, milk and food sanitation, general sanitation, and solid wastes. Students interested in developing competency in a specific area of environmental health may take advantage of the specialized training available in the areas identified below. It is expected that students will also complete courses in administration, biometry, epidemiology, and toxicology.

Air Pollution—Specialized training in air pollution and its control is available for students with a bachelor's degree in civil, chemical, or mechanical engineering, chemistry, physics, or certain biological sciences as well as a strong background in

mathematics and chemistry. Individual programs are planned according to the student's academic background. All students complete course work in the management of air pollution control programs, design and operation of air sampling networks, theory and operation of air sampling equipment, and control methods and equipment. Students participate in group solutions to assigned problems involving air pollution control, and give class lectures when feasible. Elective course work is available in meteorology, particle technology, physics of the atmosphere, and toxicology, and graduate courses in chemical engineering, chemistry, and physics.

Institutional Environmental Health—This program is designed to train students with physical or biological science, engineering, or paramedical backgrounds in a wide range of environmental health topics geared to the institutional rather than community setting. A 10-credit sequence emphasizes environmental health problems in health care facilities. Field visits and field problem solving, lectures, laboratory techniques, and individual library research are stressed. Other institutionally oriented courses include hospital safety, institutional food protection, and radiation protection criteria for hospitals. Individually tailored programs allow the student to emphasize administrative, engineering, or microbiological aspects of the institutional environment in addition to completing conventional preparation in biometry, community environmental health, and epidemiology.

Occupational Health and Safety—This program provides broad training for students interested in careers in occupational health, including industrial hygiene, safety, and biohazard control. A bachelor's degree in engineering or the physical or biological sciences provides a good background. Instruction is offered in the economic, legal, and social aspects of occupational health and safety as well as in technical aspects of evaluation and control of the industrial environment. Hazards to the general public from commercial products and programs for reducing product liability are considered. Laboratory and field exercises include air sampling, ventilation, and use of specialized instruments and equipment for evaluating chemical and biological hazards and physical stresses such as noise. The program also allows considerable flexibility in the choice of electives from other departments of the University.

Public Health Biology—The program emphasizes the biological aspects of environmental health. A specialized curriculum is developed to help each individual prepare for one or more of the professional fields: air pollution, biological phenomena related to epidemiology, food control, housing, vector control, waste disposal, and water supply biology. The training is supplemented by course work in other departments of the University, such as biochemistry, botany, entomology, food science, microbiology, or zoology.

Radiological Health—This program is designed to train professionals in the area of radiation protection. Its primary mission is to prepare graduates for responsible positions in public health agencies, federal civil and military service, hospitals, nuclear industries, and universities. Programs in radiological health are designed primarily for, but not limited to, students who anticipate applied rather than research careers. The program is interdisciplinary in nature and involves course work in a number of departments and schools.

Water Hygiene—The major objective of this program is to train engineers, chemists, and other scientists capable of filling a variety of positions in water hygiene and quality control programs. Emphasis is on the significance of chronic exposure to diverse organic and inorganic chemical contaminants and on the survival of specific disease producing bacteria and viruses found in water. Specialty courses suited to the academic background of the student may be taken in various departments of the University.

Programs of Study

For information about this program and its specializations write to the Director, Program in Environmental Health, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Research Areas

Areas of faculty and student research interest within the environmental health program include the impact of air quality and toxic materials on specific industries and the environment; water quality indices of public and rural (individual) water supplies; identification and movement of trace substances in the water and wastewater environments and their role in disease incidence; biological aspects of water quality; environmental concerns related to energy conservation in hospitals; biohazards control; environmental health problems of correctional and other institutions; removal of microorganisms in food processing and in patient humidification devices; application of thin layer chromatography to analysis of environmental samples; microbial drug resistance and transfer of such resistance; leachates from solid waste baffle operations; impact of radioactive and other contaminants in fossil fuels on environmental and occupational health; and radiation dosimetry associated with consumer goods.

Occupational Safety and Health Educational Resource Center

Administration of the interregional Occupational Safety and Health Educational Resource Center, funded by the National Institute for Occupational Safety and Health, is vested with the environmental health program. The center is a consortium of training programs offered through the School of Public Health; the Department of Industrial Education, University of Minnesota, Duluth; the Department of Internal Medicine, St. Paul-Ramsey Hospital, St. Paul; the Mayo Graduate School of Medicine, Rochester; and the Institute of Agricultural Medicine and Environmental Health, University of Iowa, Iowa City.

The center offers training at the master's and doctoral levels to professionals, paraprofessionals, and others in the areas of occupational health, industrial safety, occupational health nursing, and occupational medicine.

Traineeships are available to support students in the areas identified. For information about this program, write to the Director, Occupational Safety and Health Educational Resource Center, School of Public Health, 1158 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

1. A Bachelor's degree from an accredited institution, preferably with a major in engineering or in one of the biological or physical sciences. If preparation appears to be inadequate, certain additional courses may be required.
2. For the M.P.H. program appropriate professional experience (2 years minimum) or an advanced degree in a related discipline.
3. Two certified transcripts of all previous academic work.
4. Names and addresses of at least three persons capable of assessing the candidate's professional or academic qualifications from whom letters of recommendation can be requested.

PROGRAM FACULTY

Conrad P. Straub, M.C.E., Ph.D., Professor and Director, Program in Environmental Health; Director, Environmental Health Research and Training Center
Rexford D. Singer, M.S., Associate Professor and Assistant Director, Program in Environmental Health
Lee D. Stauffer, M.P.H., Associate Professor and Dean, School of Public Health
George S. Michaelsen, M.S., Professor Emeritus, Institutional Environmental Health
Theodore A. Olson, Ph.D., Professor Emeritus, Public Health Biology
Donald E. Barber, Ph.D., Professor, Radiological Health
Richard G. Bond, M.P.H., M.S., Professor, Environmental Health Administration
Velvi W. Greene, Ph.D., Professor, Environmental Microbiology
Harold J. Paulus, Ph.D., Professor, Air Pollution
Irving J. Pflug, Ph.D., Professor; Department of Food Science and Nutrition, College of Home Economics
W. Dixon Ward, Ph.D., Professor; Department of Otolaryngology, Medical School
Donald Vesley, Ph.D., Associate Professor, Institutional Environmental Health
James E. Long, D.Sc., Adjunct Associate Professor, Manager of Toxicology, 3M Company, St. Paul
Roger L. DeRoos, M.P.H., Ph.D., Assistant Professor, Associate Director, Boynton Health Service
Walter H. Jopke, M.P.H., Assistant Professor; Senior Environmental Health Specialist, Boynton Health Service
Charles G. McJilton, Ph.D., Assistant Professor, Occupational Health
Orlando R. Ruschmeyer, Ph.D., Assistant Professor, Public Health Biology
Gustave L. Scheffler, B.S.C.E., Assistant Professor, Safety Engineer, Boynton Health Service
Ralph O. Wollan, M.P.H., Assistant Professor; Health Physicist, Boynton Health Service
Donald F. Herron, B.A., Instructor; Safety Engineer, Boynton Health Service
Fay M. Thompson, Ph.D., Instructor, Occupational Health
Warren R. Lawson, M.D., Lecturer; Commissioner of Health, Minnesota Department of Health, Minneapolis
Leonard J. Michienzi, M.D., M.P.H., Lecturer, Industrial and Occupational Medicine; Airport Medical Clinic, Minneapolis-St. Paul International Airport

Epidemiology

Program Director: Leonard M. Schuman, M.D.

PROGRAM DESCRIPTION

The Program in Epidemiology provides basic and advanced instruction for students planning administrative, research, and teaching careers in this field, for other public health students, and for those in health-related programs at the University.

Master of Public Health—The M.P.H. program with concentration in epidemiology is open to qualified physicians, dentists, veterinarians, and others with professional experience who are planning careers in public health programming, administration, evaluation, and consultation in governmental, public, and private agencies. The program is planned to meet the degree requirements and educational objectives of the School of Public Health, as outlined in section I of this bulletin. It also offers elective work in the candidate's area of interest.

Candidates other than physicians, veterinarians, dentists, or those with professional experience may qualify for the M.P.H. degree upon completing a 2-year program of study that includes advanced course work in basic medical sciences and fieldwork with an approved health agency. Such candidates should contact the program director for further information.

Master of Science—The M.S. degree with a major in epidemiology is offered through the Graduate School. Qualified candidates wishing to pursue an academic career in teaching or research should consider enrolling in this program. The degree is available through either Plan A or Plan B. For details of requirements, see the *Graduate School Bulletin*. Students should contact the program director for additional information before applying for admission to the Graduate School.

Doctor of Philosophy—Specialized training in epidemiology leading to the Ph.D. degree is offered to qualified graduates with degrees in medicine, dentistry,

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and veterinary medicine. Other students with adequate background in the biological or physical sciences, or with demonstrated competence in investigative work, may be admitted. Since enrollment in the program is relatively limited, selection of candidates is competitive with respect to academic background and experience. For details about requirements, consult the *Graduate School Bulletin*.

The doctoral program is designed to help students develop proficiency in epidemiologic investigation to prepare for careers in service, research, or teaching in health agencies and institutions. It includes instruction in basic courses, with latitude in choice of electives suitable to each student's background, interests, and needs. Students participate in ongoing field research designed to provide increasingly complex experiences commensurate with their development. For successful completion of the thesis requirement, candidates will design and execute an original field investigation of acceptable complexity and sophistication.

Epidemiology and other public health courses are described in section III of this bulletin. In addition to these courses, students may select courses from a wide range of areas such as anthropology, biochemistry, computer science, genetics, microbiology, pathology, physiology, political science, and sociology. A detailed description of the course of study and a more comprehensive list of elective courses may be obtained by writing to the program director.

Graduate Summer Session—An intensive program in epidemiology is offered by the School of Public Health and the Department of Conferences each summer for 3 weeks during the first term. This program, which carries graduate credit, is designed for teachers in medical schools, but postdoctoral fellows, graduate students, and residents in departments of preventive medicine and other medical areas may qualify. Teachers, postdoctoral fellows, and graduate students in schools of public health, dentistry, and veterinary medicine as well as qualified personnel of federal, state, and local health agencies are also eligible. Registration is limited and cannot be made through regular Summer Session channels. Inquiries should be addressed to the Director, Program in Epidemiology, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

M.P.H. AND M.S.:

1. Minimum of a baccalaureate degree from an acceptable institution. Degree work should preferably demonstrate a strong background in biological and physical sciences and high scholastic achievement (i.e., a grade point average of 3.00 on a 4.00 scale).
2. Two official transcripts of all previous academic work.
3. Minimum of three letters of recommendation from faculty or work supervisors with knowledge of the candidate's scholastic and professional capabilities and potential.
4. Two-page statement of goals and objectives for undertaking a career in epidemiology.
5. Personal interview may be requested in some instances.

PH.D.:

1. Master's degree in epidemiology or related health science. In the latter instance, an acceptable number of approved courses in epidemiology and biostatistics must have been completed. Applicants who have not yet completed a master's

degree are usually initially admitted to the master's degree program in epidemiology in order to demonstrate their research capability.

2. Two official transcripts of all previous undergraduate and graduate course work.
3. Minimum of three letters of recommendation from faculty or work supervisors with knowledge of the candidate's scholastic, research, and professional capabilities and potential.
4. Demonstration of capability or potential for original research.
5. Statement of goals and objectives for undertaking a research career in epidemiology.
6. Personal interview may be required.

PROGRAM FACULTY

Leonard M. Schuman, M.D., Professor and Director, Program in Epidemiology

Henry Bauer, Ph.D., Adjunct Professor Emeritus

Robert K. Anderson, D.V.M., Professor and Director, Program in Veterinary Public Health

Stanley L. Diesch, D.V.M., M.P.H., Professor; Department of Large Animal Clinical Sciences, College of Veterinary Medicine

Lawrence H. Meskin, D.D.S., Ph.D., Professor; Chairman, Division of Health Ecology, School of Dentistry

Erik Bjelke, M.D., Ph.D., Associate Professor

Robert W. Gibson, Ph.D., Associate Professor; Department of Behavioral Sciences/Sociology, School of Medicine, University of Minnesota, Duluth

Victor A. Gilbertsen, M.D., M.S., Associate Professor; Department of Surgery, Medical School

David Stickle, Dr. P.H., Adjunct Assistant Professor; Acting Director, Division of Medical Labs, Minnesota Department of Health

Jack S. Mandel, M.P.H., Instructor

Health Education

Program Director: Norman A. Craig, M.P.H.

PROGRAM DESCRIPTION

The Program in Health Education is designed to prepare individuals who can work both with professionals in health and allied fields and with the community in planning, carrying out, and evaluating educational programs for community health services. The health education specialist works with staff and the community in developing educational resources for health consumers that will help them to learn about, understand, accept, and make effective use of health services offered by various agencies and institutions. At the same time, the staff of such agencies and institutions must know about the health-related needs and interests of the population it serves and how and why these needs and interests may necessitate changes in existing services or the development of new ones. When reassessment of services is required, the health education specialist will work with the community in organizing educational efforts directed toward encouraging consumer participation in the planning operations of health agencies and institutions involved.

Health education specialists are employed by official and voluntary agencies, community health centers, hospitals and health maintenance organizations, and a wide variety of social action services directly or indirectly concerned with the health of the community.

The program offers a single course of instruction in a 7-quarter sequence leading to the M.P.H. degree, with a major in health education and a minor in an elected field. While prior health-related experience is preferred, it is not a requirement for admission.

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The program of instruction includes required courses that focus on basic knowledge and skills in public health practice and the roles and functions of persons in other public health disciplines. The required core courses deal with educational theory, principles, and methods of identifying and solving individual and community health problems; communication theory and process; as well as social, cultural, psychological, and economic factors affecting health behavior, health education planning, and evaluation.

In addition to basic public health and health education courses, students are required to elect a minor field concentration of at least 15 credits. The minor field will be chosen by mutual agreement between student and faculty adviser, to meet the student's personal and professional needs and interests. The minor may be in an area of health practice such as dental health, family planning, maternal and child health, mental health, or a similar field of specialized interest; or it may be a concentration in a field of personal interest such as the social and behavioral sciences, political science, public administration, or sociology.

Community laboratory experiences and field practice are an integral part of the course of instruction. The laboratory experiences enable the student to spend progressively more time in community settings to complement the academic course work and lay the foundation for a full quarter of health education practice in community health care delivery systems. The community laboratory experiences and quarter of field practice must be successfully completed to qualify for the M.P.H. degree.

The 7-quarter health education sequence of study begins every fall quarter. Students who qualify for admission may register in any quarter for required public health courses and electives in their minor field, but the 7-quarter sequence of health education core courses may be initiated only in fall quarter. Prospective students must plan their program so that they begin and complete the core courses in a continuous 7-quarter sequence.

Health education and required public health courses are described in section III of this bulletin. Further information about the program of instruction and possible courses for the minor field may be obtained by writing to the Director, Program in Health Education, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

1. Bachelor's degree from an accredited institution of higher learning. Degree work must include satisfactory completion of a minimum of 15 quarter or semester credits in health and biological sciences and 30 quarter or semester credits in social and behavioral sciences.
2. Two certified transcripts of all previous academic work including baccalaureate, graduate, and extension and correspondence studies.
3. An acceptable score on the Miller Analogies Test. The test must have been taken within 5 years of date of application.
4. A detailed résumé of the applicant's work history with special reference to experience in health-related activities or participation in other community-centered social action programs.
5. A statement of the applicant's concept of the roles and functions of a health education specialist and a projection of where and how the applicant would apply knowledge and skills acquired from his or her study in health education.
6. Two letters of reference from persons who are capable of assessing the applicant's academic and professional ability and potential.

PROGRAM FACULTY

Norman A. Craig, M.P.H., Associate Professor and Director, Program in Health Education
Ruth Grout, Ph.D., Professor Emeritus
Robert L. Veninga, Ph.D., Associate Professor; Associate Dean, School of Public Health
Edward J. Dvorak, Ph.D., Assistant Professor; Health Educator, Boynton Health Service
H. Geoffrey Fisher, B.A., Assistant Professor; Coordinator, Health Sciences Minority Programs
David B. Mills, M.P.H., Adjunct Assistant Professor; Director, Health Education Section, Minnesota Department of Health
Kay DeRoos, M.P.H., Instructor; Health Educator, Community-University Health Care Center
Nancy Goldstein, M.P.H., Clinical Instructor; Patient Education Specialist, Nursing Services, University Hospitals

Hospital and Health Care Administration

Program Director: Bright M. Dornblaser, M.H.A.

PROGRAM DESCRIPTION

The Program in Hospital and Health Care Administration offers courses of instruction at the master's and doctoral levels as well as a variety of alternative studies programs.

Master of Hospital Administration—The objective of the M.H.A. program is to prepare individuals for high-level administrative positions after the requisite years of practical experience in responsible managerial positions. Qualified graduates of the program may become senior administrators in governmental health services organizations or chief executives in hospitals, long-term care institutions, mental health programs or institutions, prepaid health insurance agencies, health maintenance organizations, clinics, health planning agencies, or multiunit health care delivery organizations.

The M.H.A. degree may be earned through one of the following options:

1. Full-time academic study for 10 months followed by an administrative residency of 11 months, with successful completion of 70 quarter credits and an acceptable thesis. This option is intended for persons planning to begin their careers in generalist administrative positions.

Within this option, a 2-year M.H.A. program in Mental Health Administration is also offered. This program prepares individuals for leadership positions in mental health services. Students enrolled in the program participate in a mental health seminar in addition to the regular curriculum. The residency year is spent at an approved mental health facility.

2. Full-time study for 2 academic years followed by a fellowship of 1 year, with successful completion of 90 quarter credits and acceptable thesis. The degree is awarded during the fellowship year. This option is intended for individuals planning to begin their careers in corporate administrative positions. Dual degrees in public affairs and hospital administration are available under this option upon successful completion of joint programs of study totaling approximately 106 quarter credits. A minor in business administration is also available.
3. Part-time academic study in the Independent Study Program for Hospital and Health Care Facility Administrators (see description under Alternative Studies Programs below) followed by 18 additional quarter credits of full-time study, with successful completion of 73 quarter credits and an acceptable thesis. This option is available only for employed administrators.

Option 3 students may apply 55 credits earned in the independent study program toward the M.H.A. degree, provided that none of these credits have

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been applied to another degree and the student has met entrance requirements for and has been admitted to the M.H.A. program. Students may apply for admission to the M.H.A. program at the beginning of their second year of independent study or thereafter. A minimum of nine credits must be completed in full-time study at the University of Minnesota.

Options 1 and 2 are also available for a limited number of part-time students who begin their program of study with 1 quarter of full-time study.

The residency or fellowship requirement may be waived at the discretion of the program director for any student who has had 3 years of experience as a chief executive officer or as a second-level generalist administrator in health services organizations with third-level generalist administrators, and who completes the required 2-year academic program.

The program of study for the M.H.A. degree, normally 21 months in length, consists of:

Academic Year—Courses concentrate on management in health care environments. General management course work includes problem solving and decision making; financial management; quantitative and research methods used in management; human relations; the health system and environment including social, political, and economic aspects of health care; and acculturation to health care environments in which the student plans to practice. Each of the 3 quarters and summer term is designed to provide continuity in these major core subjects as well as the opportunity to complete a variety of elective courses that allow students to explore subjects of personal interest.

Residency or Fellowship Year—The program faculty guides and assists students in obtaining administrative residencies and fellowships in approved hospitals and other health system organizations. The administrators of these organizations hold continuing University faculty appointments as clinical preceptors.

During this period the student participates in the organization's activities and completes curricular activities that have been developed by the faculty to meet practical objectives and afford opportunity for tutorial methods of teaching. After gaining insight into the various component parts of the organization, independent study assignments are usually made by the preceptor and the organization's management staff. These assignments include work on specific management problems supervised by the preceptor. Learning opportunities may be outside the organization as well as within.

Further information may be obtained from the *Programs in Hospital and Health Care Administration Bulletin*, available from the Program in Hospital and Health Care Administration, School of Public Health, 1260 Mayo (Box 97), 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Doctor of Philosophy—In contrast to the master's program, which is a professional degree program offered through the School of Public Health, the doctoral program is organized within the Graduate School and is designed for those pursuing a career in teaching, research, or planning in the health care field. It is oriented more toward depth and breadth of learning than the acquisition of technical and managerial skills. Upon successful completion of all requirements, graduates are awarded the Ph.D. degree from the Graduate School.

The curriculum normally takes 3 years to complete, depending upon the student's prior training. It is multidisciplinary in nature and focuses on three major core areas: the organization and administration of health care services; the social, political, and economic aspects of health care; and research and statistics in health and health care. Where appropriate, related areas of interest—i.e., comprehensive health planning, long-term care, public health nursing, etc.—may be included.

The objectives of the course of study are to help students (1) gain a better understanding of the relationship between health and social behavior; (2) expand their knowledge of the organization, development, and planning of health services; (3) obtain an appreciation of the interrelationship of major social institutions and the health care system through analysis of changing needs and alternative patterns of care both in the United States and abroad; (4) acquire knowledge of and training in the application of research theory and methods to the problems of health and health care; and (5) gain teaching experience under faculty guidance in both the master's and alternative studies programs.

In addition to a reading knowledge of one foreign language (including that of the computer) and at least 9 credits of advanced statistics, students must demonstrate originality and independent thought by preparing a research thesis on a significant health care problem.

For further information contact the Coordinator, Doctoral Program in Hospital and Health Care Administration, School of Public Health, 1260 Mayo (Box 97), 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455, or consult the *Graduate School Bulletin*.

Alternative Studies Programs—The Office of Continuing Hospital and Health Care Education provides a variety of educational programs as well as fee-for-service consultation to help meet the needs of managers and supervisors of the many health care organizations in the Midwest. Credits earned in some of these programs may be applied toward selected degrees. A credential of advanced study is earned upon successful completion of the independent study programs for health administration, trusteeship, and patient care administration. Further details are available in the *Programs in Hospital and Health Care Administration Bulletin* and program brochures. To obtain these publications or information about admission requirements, contact the Coordinator, Alternative Studies, Hospital and Health Care Education, School of Public Health, 1260 Mayo (Box 97), 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Independent Study Program for Hospital and Health Care Facility Administrators—This 3-year independent study program, which utilizes a multimethod approach, includes centralized residential sessions, regional seminars, home study, monthly clinical preceptor-student dialogues, and centralized review sessions. Three courses make up the program: (I) Management and Organization Within the Hospital and Health Care Facility, (II) Administrative and Professional Relationships Within the Hospital, and (III) External Forces Affecting Health Care Delivery. Admission is open to administrators presently employed by hospitals and health care delivery organizations in the Upper Midwest and Northwest regions of the United States and adjoining parts of Canada. Upon successful completion of the 3-year program, students with a baccalaureate degree who have been accepted into the master's program may apply the 55 credits earned toward an M.H.A. Course III is also open to those with an M.H.A. who are employed and want to update or expand their education.

Independent Study Program for Health Care Trustees—This is an experimental continuing education program designed for members of governing boards of health institutions located chiefly in the Upper Midwest and Northwest regions of the United States and adjoining parts of Canada. The objectives of the program are to enable participants to gain competency in and understanding of their roles and responsibilities as trustees, and to improve the quality of health care governance. Up-to-date concepts and methods in the practice of trusteeship are the topics of the two independent study courses, each approximately 7 months in length. Course I deals with the general role and process of trusteeship. Course II is concerned with becoming a specialized trustee and involves an extended course project benefiting each participating institution.

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Independent Study Program in Patient Care Administration—This program is designed to help participants improve the practice of patient care administration through the development and updating of management skills, knowledge, and attitudes. The program uses a multimethod approach that includes on-campus sessions, regional seminars, independent study, and monthly meetings with clinical faculty. Students participate with hospital administration independent study students in an effort to develop a more viable, efficient use of the management team. Participants in Course I (Patient Care Management and Organization Within the Hospital and Health Care Organization) must be employed as directors of nursing or the equivalent. Course II, which helps students develop skills in applying change theory to the administrative process, is open to those with a master's degree in nursing as well as directors of nursing. Twenty-five credits can be earned in each course.

Independent Study Program in Long-Term Care Administration—Courses in Administration of Long-Term Care Facilities, Services for Long-Term Care Patients, and Critical Issues in Aging are offered. Each begins with a 3-day residential seminar and is followed by 4 months of correspondence study and a final 2-day residential seminar. A practicum in long-term care administration, in which the student spends 300 hours with a practicing administrator, is also offered. Each course carries 6 credits, which can be applied toward a baccalaureate or associate degree. Four additional courses—Financial Management, Personnel Management, Management of Organizational Behavior, and Managing the Effects of Institutional Living—are offered. Each covers a 3-month period of time, including 5 days on campus, and carries 3 credits. Further information may be obtained from the program coordinator.

Independent Study Program in Mental Health Administration—This 3-year program for practicing mental health administrators utilizes a multimodal approach to facilitate the administrator's management skills. Each of the 3 years includes a 2-week, on-campus residential session; home study; monthly student/preceptor dialogues; and regional seminars. Course I (15 credits) concentrates on the internal operations of a mental health facility, including, but not limited to, financial management, organization, and the role of the professional. Course II (15 credits) centers on relationships among people, including groups that influence the role and function of a mental health facility, its governance, planning, legislation, and public relations. Course III (25 credits) focuses on the external social, political, economic, and organizational forces that affect the role and services of the mental health facility.

Supervisory Training Program—This program was developed to meet the need for supervisory training of health personnel in the Upper Midwest region. Five alternative syllabi are available to enable supervisory training programs to be developed locally through vocational-technical institutes, community colleges, and public or private universities or colleges throughout this region. Administrators of local health care facilities serve on advisory and working committees to help set up the programs. Continuing Hospital and Health Care Education serves as consultant for initial development as well as for ongoing assistance in the maintenance of the programs.

ADMISSION REQUIREMENTS

M.H.A.:

Students who apply for admission to the master's studies program represent varying backgrounds. Students have been physicians, registered nurses, business administration graduates, members of the clergy, graduates of specialized professional programs within the health and welfare field, and others with a special interest

in and aptitude for administration of health care organizations. It is felt that this diversity adds greatly to the overall educational experience.

All applicants must possess a bachelor's degree from an accredited institution prior to entrance into the program. Individuals with a broad liberal arts education are considered as well as persons with a more specialized undergraduate degree. Work experience in health care institutions is desirable, but not essential. An increasing number of applicants seek practical experience in health care administration prior to entering the program to become familiar with management activities and attitudes and the health system and environment.

Although few specific courses are required, applicants must have completed at least 3 credits of college-level courses in basic principles of accounting. The following courses provide a desirable background, but are not required: human physiology, general microbiology, principles of economics, principles of sociology, English composition, business law, mathematics, biology, business policy, cost accounting, government regulation of business, labor problems and trade unionism, public administration, recent social legislation, psychology, public speaking, statistics, social research methodology, principles of management theory, and fundamentals of financial management.

Applications for admission will be supplied upon request. All applications must be received by January 1 of the year in which the candidate intends to enter the program and must include the following items:

1. Two copies of the Professional School Application Supplement.
2. One copy of the Academic Record and General Information form.
3. A letter indicating previous work experience, regardless of how it relates to the field, and specific reasons for selecting a career in health care administration. This letter should also include an in-depth description of personal goals and objectives.
4. A \$10 nonrefundable credentials examination fee. Checks should be made payable to the University of Minnesota. This is not required of students who have previously attended the University, with the exception of those who attended summer or continuing education classes only.
5. Two certified transcripts of the applicant's academic record sent directly from each college or university attended.
6. Results of the Miller Analogies Test sent directly from the school where it was taken or from the Psychological Corporation, 304 East 45th Street, New York 10017. This is the only test required by this program. Scores over 5 years old are invalid, and the test must be retaken.
7. Three letters of reference, preferably from individuals connected with hospitals or health fields or familiar with the applicant's work experience or academic studies. Letters should be sent directly to the program office.

Applicants are also expected to have two personal interviews with persons designated by the master's studies program.

As a general guideline, applicants are expected to have earned an undergraduate grade point average of 3.00 and have scored 50 or better on the Miller Analogies Test.

Applicants are notified of their acceptance or rejection in late April.

All communications and requests for application materials should be addressed to the Coordinator, Master's Studies Program, Programs in Hospital and Health Care Administration, 1260 Mayo Memorial Building, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

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PH.D.:

Although no single background of undergraduate studies is recognized as the best preparation for the doctoral program, students who have attained a breadth of training in the social sciences, statistics, and administration will find this to be an advantage. In addition to a bachelor's degree from an accredited school, a master's degree in hospital and/or health care administration or advanced training in such allied fields as business administration, medical sociology, public administration, comprehensive health planning, public health, nursing, or medicine is desired. Graduate work satisfactorily completed prior to admission may be applied to the degree where appropriate and in accordance with Graduate School requirements. Requirements also include:

1. Two certified transcripts showing a grade point average of 3.00 or better in undergraduate and graduate level courses. Where transcripts contain pass-fail or other nonletter grades, a written evaluation or letter grade from the course instructor must be submitted indicating the student's demonstrated competence in that course.
2. A Miller Analogies Test score of 60 or higher. The GRE is optional. International students must also demonstrate their command of the English language.
3. A statement indicating the applicant's reasons for seeking doctoral training in the field of health care.
4. Three letters of reference attesting to the applicant's scholarship, personality, and fitness for a career in teaching, research, or planning.
5. When possible, a personal interview with members of the admissions committee is desirable.

Final determination on acceptance or rejection of applicants for the doctoral program rests with the Graduate School.

PROGRAM FACULTY

Bright M. Dornblaser, M.H.A., Professor and Director, Program in Hospital and Health Care Administration
Theodor J. Litman, Ph.D., Professor and Coordinator of Doctoral Studies
Vernon E. Weckwerth, Ph.D., Professor, Coordinator of Alternative Studies, and Associate Coordinator of Doctoral Studies; Project Director, Independent Study Program for Hospital and Health Care Facility Administrators
Sharon Danielsen, M.S., M.A., Assistant Professor and Project Director, Independent Study Program in Patient Care Administration
G. Kenneth Gordon, Ed.D., Assistant Professor, Coordinator of the Midwest Center for Long-Term Care Administration Education
John R. Malban, M.S.H.A., Assistant Professor and Project Director, Mental Health Administration Training
William W. Metcalfe, Ph.D., Assistant Professor and Project Director, Independent Study Program for Health Care Trustees
Ruth P. Stryker-Gordon, M.A., Assistant Professor and Associate Coordinator, Midwest Center for Long-Term Care Administration
Richard A. Culbertson, M.H.A., Instructor and Coordinator of Master's Studies

Interdisciplinary Studies and Associated Programs

Program Director: Robert W. Schwanke, M.P.H.

PROGRAM DESCRIPTION

This program is designed to meet the individualized needs of public health and other human services personnel whose professional duties or career goals do not readily conform to a single program of study. Applicants will be carefully screened to

insure that their professional needs are uniquely interdepartmental or interdisciplinary in nature. The program is also intended to help meet the needs of students in new public health careers or clinical fields with new or expanding community health service potential for whom other appropriate study is not available. Therefore, criteria for admission include high academic ability, appropriate and relevant experience, demonstrated leadership qualities, and a strong potential for marketing and successfully pursuing a unique career in public health. *Since it is presumed that most students can meet their career training objectives through options offered within traditional programs of study, admission is limited to applicants who can clearly demonstrate that their needs can be met adequately only through an interdisciplinary studies program.*

Each program is individualized and designed as flexibly as possible. Each is structured to provide the student with a broad perspective on public health as well as to aid in acquiring specific knowledge and skills relevant to the student's unique professional goals. Each program of study also provides opportunity for a student to learn about career-relevant nonhealth, health-related, and human services areas. To successfully complete this program and earn the M.P.H. degree, the degree requirements and educational objectives as outlined in section I of this bulletin must be met.

The length of an individual program of study will vary according to a student's specific career needs and emphases as well as program and adviser's requirements, but a minimum of 15 months, preferably beginning with the fall quarter, is required. Since students in this program generally elect a much broader range of courses than is expected for most single discipline programs, most need to remain in residence for 2 full academic years. A minimum of 55 credits are required to earn the M.P.H. degree in interdisciplinary studies.

Further information on interdisciplinary studies is available from the program director. Initial correspondence should clearly set forth career and educational goals and needs as well as previous professional experience and training.

Public Health Social Work Program

The School of Public Health, in cooperation with the School of Social Work on the Minneapolis campus and the School of Social Development on the Duluth campus offers a joint, integrated program of study for both the M.P.H. and M.S.W. degrees. This interdisciplinary program is designed especially for experienced social workers currently employed in or desiring employment in public health or related health systems or agencies. Students may concentrate their studies in such areas as mental health, chemical dependency, maternal and child health, public health administration and planning, chronic disease and aging, human services, or other areas of individual interest.

The combined program is 3 years (9 academic quarters) in length. A minimum of 55 credits are applicable to the M.P.H. degree. Of the 55 credits, up to 18 credits may be applied also to the M.S.W. degree (these credits are applied to both degrees). Some fieldwork experiences as well as selected courses from any of the three participating schools may also be applied to both degrees.

Applicants must have a minimum of a bachelor's degree in social work, social welfare, sociology, or other relevant major. Since enrollment is limited and controlled, admission is granted to those applicants who best meet the joint public health/social work admissions criteria.

Social workers already possessing an M.S.W. degree may also apply for admission to an M.P.H. degree program either through interdisciplinary studies or through another of the school's programs of study. In such cases, credits may not be applied to both degrees, but adjustments may be made to allow the student to complete the minimum program and number of credits required for a typical interdisciplinary studies program. These adjustments will be made based upon the previously com-

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pleted course work for the M.S.W. degree and only when they are compatible with the student's career goals and program emphasis.

Students who already have a master's degree in social work and are pursuing a Ph.D. degree in social work may apply selected credits earned in public health toward an M.P.H. degree as well as toward the doctorate. Students with a master's degree in public health who are pursuing a Ph.D. degree in public health may also apply selected credits earned in social work toward an M.S.W. degree as well as toward the doctorate.

For more information about programs, admission criteria, and application procedures and deadlines for the public health/social work program, write to the Director, Interdisciplinary Studies and Associated Programs, 1305 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Physical and Occupational Therapy Program

This course of study, leading to either an M.P.H. or M.S. degree (course content is similar), is designed for experienced, professionally qualified physical and occupational therapy graduates who are interested in careers in public health or other community agencies. Other rehabilitation specialists, such as speech therapists, rehabilitation counselors, psychologists, and social workers, may be considered for admission.

The program normally covers 5 academic quarters, beginning in the fall and extending through the following summer session and fall quarter. Required courses are supplemented by electives that meet the professional needs, interests, and goals of the individual student. Elective course work may include concentrations in administration, education, geriatrics, physical medicine and rehabilitation, psychology, public affairs, social work, sociology, speech-communication, or speech education.

A detailed description of the complete course of study and a more comprehensive list of electives may be obtained by writing to the director of the Program in Interdisciplinary Studies and Associated Programs.

Interdisciplinary Concentration in Services Related to Alcohol and Drug Problems

Master's degree students in interdisciplinary studies from a variety of disciplines and backgrounds may elect to concentrate their course work, research activities, and field experiences in the area of human services related to alcohol and drug problems and chemical dependency. They may direct this concentration toward the administration of services, facilities, or programs; planning and evaluation of community or treatment programs; or school- or industry-based prevention/intervention programs. Other combinations, including tracks for graduate students in other departments, also may be developed. Inquiries regarding this concentration should be directed to James C. Kincannon, Interdisciplinary Studies and Associated Programs, 1305 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Bachelor's Degree Program for Chemical Dependency Professionals

This program is jointly sponsored by the Program in Chemical Dependency Counseling of the School of Public Health and the University Without Walls (UWW) program of University College. It recognizes that much valuable learning occurs outside of formal schooling and therefore may provide an alternative route to a baccalaureate degree for those whose main area of study is chemical dependency. Demonstration of competency in chemical dependency treatment (knowledge, skills, and attitudes) and fulfillment of the UWW graduation criteria constitute the requirements for this degree.

The philosophy of the Degree Program for Chemical Dependency Professionals (DPCDP) is that, as adult learners, students must share the responsibility for designing and implementing their own programs. The faculty of the program appraises and evaluates learning outcomes and provides counseling to assist students in becoming independent learners.

This program is designed for students who are highly self-motivated. Prospective students need to be realistic about their own learning styles and objectives. Independent studies, internships, formal classroom education, and other learning experiences are all utilized to meet educational objectives. Advisers assist in all phases of the program.

DPCDP degrees are awarded on the basis of specific competencies in chemical dependency treatment that must be acquired and validated, not on the basis of the number of academic credits earned. Evidence of competency must be presented in the areas of self-directed study skills, communication skills, academic achievement, a variety of learning activities, scientific inquiry, and artistic expression. Also, a major project must be completed.

For further information, write to the Degree Program for Chemical Dependency Professionals, 2829 University Avenue S.E., Suite 226, University of Minnesota, Minneapolis, Minnesota 55414.

Chemical Dependency Counseling Certificate Program

This certificate program is designed to train chemical dependency professionals whose work brings them in direct counseling contact with alcoholics and other drug abusers in the basics of alcoholism, drug abuse, and counseling. The program is also intended to meet the growing demand for continuing education in this field by clergy, educators, law enforcement personnel, pharmacists, physicians, psychologists, public health nurses, social workers, and other helping professionals. The program is offered in the evening through the University's Continuing Education and Extension division.

Two separate classes are started each year in the fall and spring quarters. The program consists of three sequential core courses (PubH 3030, 3031, 3032) dealing with the basic psychopharmacology of alcohol and other drugs, psychosocial aspects of alcoholism and drug abuse as a disease, and counseling of dependent persons. These three courses must be taken consecutively, and students will not be permitted to register without having completed the prerequisite course or courses. The basic course work is supplemented with more specialized course work dealing with one-to-one, group, and family relationships in the treatment of chemical dependency.

The basic sequence should not be considered in lieu of professional degree preparation in counseling, nor does the sequence by itself constitute a major concentration for a degree program. Students wishing a 2-year degree may apply to the Human Services Generalist program offered by the General College and the Department of Psychiatry of the Medical School. The chemical dependency counseling courses may be taken as a part of or may be applied to the human services generalist degree. These credits may be applied to a 4-year program through the University College's Inter-College Program as well as through special arrangement with other major programs at the University.

Certificate students also complete a 12-credit (6-month or 125-working day) rotating internship under professional supervision in approved and affiliated institutions. Only those qualified applicants who have been screened and approved to pursue the certificate will be provided this internship experience. The number selected will be based on available placement opportunities in primary inpatient treatment facilities, residential aftercare facilities, and prevention/intervention and other com-

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munity agencies. Students may elect to specialize in one of three tracks for the internship: inpatient, prevention/intervention, or residential aftercare. Individual internship placement is made on the basis of criteria established by an advisory committee and an evaluation of the student's previous experience.

For further information, write to the Director, Chemical Dependency Counseling Certificate Program, School of Public Health, 2829 University Avenue S.E., Suite 226, University of Minnesota, Minneapolis, Minnesota 55414.

ADMISSION REQUIREMENTS

MASTER'S PROGRAMS:

The following procedures are generally applicable to all interdisciplinary studies programs except the joint M.P.H./M.S.W. degree program. Students applying for this program should write for and follow the special public health/social work procedures.

1. Two certified transcripts of all previous academic work, including undergraduate courses and any extension courses taken for credit. Academic background should demonstrate satisfactory educational preparation relevant to the proposed interdisciplinary program. Candidates who have not completed essential undergraduate course work will be required to make up the deficiencies prior to or during the course of study.
2. Three letters of reference from persons qualified to comment on the applicant's personal and professional capabilities.
3. Some experience relevant to the proposed program of study. Two years of practice in the professional area is preferred. Individual consideration may be given to exceptionally well-qualified candidates who have just completed the baccalaureate degree.
4. Results of the Miller Analogies Test (graduate level), Strong-Campbell Vocational Interest Test, and any other tests requested by the faculty. Information about when and where to take these tests may be obtained by writing the Student Counseling Bureau, 101 Eddy Hall, 192 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455, or by contacting the testing department of any nearby college.
5. A letter of intent including a clearly articulated and detailed statement of (a) present or previous duties and experience, (b) future career goals and needs, including the professional role and setting in which the applicant expects to work and an assessment of the marketability of the chosen career; (c) functions the applicant expects to be performing and not performing; (d) the areas of study the applicant needs to prepare for his or her professional role; and (e) justification and rationale for requiring an interdisciplinary program rather than a single-discipline program.
6. Admission usually involves several interview/planning sessions with the program director and/or two or more advisers in order to clearly establish the direction of the proposed program prior to admission, as well as to assess the appropriateness of the career combination, the school's ability to provide the needed course work and other educational experiences, and the candidate's background and qualifications to undertake such study. Continued close association with these advisers is provided after admission in order to maximize the quality and value of the educational experience.

Interdisciplinary Studies and Associated Programs

The following application deadlines must be observed for each quarter. All material must be in and complete by the deadline. Public health social work applicants must also be aware of the Graduate School and School of Social Work or School of Social Development deadlines.

Fall quarter — preceding March 1

Winter quarter — preceding September 1

Spring quarter — preceding December 1

First and second summer terms — preceding March 1

DEGREE PROGRAM FOR CHEMICAL DEPENDENCY PROFESSIONALS

To be considered for admission to the program, applicants should present evidence of or submit the following:

1. Prior training and education in chemical dependency.
2. A minimum of 1 year of full-time employment, or equivalent, in the field of chemical dependency.
3. A minimum of 2 years sobriety if the applicant is chemically dependent.
4. An official application form (obtained by writing to the DPCDP).
5. Three letters of reference.
6. Transcripts of all previous college work.
7. High school diploma or general educational development (G.E.D.) certificate. Applicants without a high school diploma or G.E.D. certificate should submit a letter explaining how their previous experience has prepared them to pursue a college-level degree program.

In addition, applicants must describe what barriers they would face in attending other degree programs.

CHEMICAL DEPENDENCY COUNSELING CERTIFICATE PROGRAM:

Resources limit the number of students that can be admitted. Priority is given to candidates with experience in working with or counseling alcoholics and other drug abusers. Preference is also given to those desiring full-time careers in chemical dependency counseling or to those planning relevant usage of the training. Requirements include:

1. High school diploma or general educational development equivalent.
2. Completion of application including a statement of previous work experience, reasons for entering the field, length of time sober or free of drugs if appropriate, and present relationship to chemical dependency counseling.
3. Two letters of reference from persons capable of assessing the candidate's personal qualifications, preferably from work or educational experiences.
4. A personal interview may be requested.

PROGRAM FACULTY

Robert W. Schwanke, M.P.H., Associate Professor and Director, Interdisciplinary Studies and Associated Programs, School of Social Development, University of Minnesota, Duluth

James R. Boen, Ph.D., Professor and Evaluation Coordinator, Program in Biometry

Velvi W. Greene, Ph.D., Professor, Program in Environmental Health; Department of Microbiology, Medical School

Robert M. Spano, M.S.W., Professor; School of Social Work; Director, Social Services Department, University of Minnesota Hospitals

Programs of Study

- C. David Hollister, M.S.W., Ph.D., Associate Professor; Acting Dean, School of Social Development, University of Minnesota, Duluth
- James C. Kincannon, Ph.D., Associate Professor; Department of Psychiatry, Medical School; Department of Psychology, College of Liberal Arts; Rehabilitation Coordinator, Hennepin County Chemical Dependency Program
- William A. O'Brien, M.D., Associate Professor, Medical School
- Richard O. Heilman, M.D., Assistant Professor; Clinical Assistant Professor, Department of Psychiatry, Medical School; Director, Drug Dependency Treatment Center, Veterans Administration Hospital, Minneapolis
- Gene Hooyma, M.S.W., M.P.H., Ph.D., Assistant Professor; School of Social Development, University of Minnesota, Duluth
- Edith D. Leyasmeyer, Ph.D., Assistant Professor; Director, Area Health Education Center
- Daniel T. Anderson, Ph.D., Adjunct Assistant Professor; President, Hazelden Foundation, Center City, Minnesota
- Margaret Sandberg, M.S.W., A.C.S.W., M.P.H., Adjunct Assistant Professor; Health Planner, Minnesota Department of Health
- Dennis A. Armstrong, M.S., Instructor and Director, Chemical Dependency Counseling Certificate Program and Degree Program for Chemical Dependency Professionals
- Constance Fabunmi, M.S., Instructor and Internship Coordinator, Chemical Dependency Counseling Certificate Program
- Bruce E. Fischer, M.S., Instructor, Chemical Dependency Counseling Certificate Program
- Robert S. Nevin, M.S.W., M.P.H., Instructor
- Howard M. Ottenheimer, M.A., Instructor and Major Adviser, Degree Program for Chemical Dependency Professionals
- James H. Rothenberger, M.P.H., Instructor
- David A. Snowdon, M.S., M.P.H., Instructor; Research Fellow, Epidemiology
- Nancy Kay Spannaus, M.S., Instructor; Community-University Health Care Center, Minneapolis
- Vincent C. Pletcher, M.S.W., Adjunct Instructor; Program Coordinator, Drug Dependency Treatment Center, Veterans Administration Hospital, Minneapolis
- Teresa A. Kurzman-Seppala, M.A., Adjunct Instructor; Supervisor, Planning, Research and Evaluation Section, Chemical Dependency Division, Department of Public Welfare
- Marlene J. Deschler, R.P.T., M.P.H., Lecturer; Chief of Technical Consultation and Training Section, Minnesota Department of Health
- Joyce Jensen, R.P.T., B.S., Lecturer; Minneapolis Combined Nursing Service, Minneapolis Department of Health
- Deanna Moore, R.N., M.P.H., Lecturer; Associate Director, Ramsey County Nursing Service, St. Paul
- Dianne Worrall, R.N., M.S., Lecturer; Minneapolis Combined Nursing Service, Minneapolis Department of Health
- Lenore Burgard, B.A., Research Specialist; Program Adviser, Degree Program for Chemical Dependency Professionals
- Paul S. Kurtz, S.T.B., Clinical Preceptor, Degree Program for Chemical Dependency Professionals; Program Director, Chemical Dependency Center, St. Cloud Hospital, St. Cloud

Maternal and Child Health

Program Director: Robert W. ten Bensel, M.D., M.P.H.

PROGRAM DESCRIPTION

The School of Public Health offers an educational program for persons who wish to specialize in maternal and child health. The M.P.H. degree is granted upon completion of the program of study.

The Program in Maternal and Child Health is designed to train health professionals to improve and protect the health of mothers and children and their families. Its objective is to prepare professionals for leadership positions at federal, state, or local levels working with maternal and child health projects or with health programs that deliver services to families and children. The program is aimed at physicians, nurses, social workers, occupational and physical therapists, and other health professionals.

Each student's program is planned individually in conjunction with an adviser to take into account his or her previous experiences, special needs, and professional goals, as well as the school's degree requirements. A program may emphasize teaching, research, or administration in maternal and child health. Within these broad areas of interest, specialized skills such as planning, program development, and evaluation may be developed. Through interdepartmental course work, students may pursue a variety of emphases in such areas as administration, adolescent and youth health, environmental health, epidemiology, biostatistics, family planning and

population control, genetics, mental health, nursing, school health, and social work. Students may elect courses from any relevant area within the University.

Although some students complete the program in less time, the normal period of study is 11 months, consisting of 3 quarters (fall, winter, spring) and a summer session (two terms). A minimum of 45 credits of course work and a field experience of 3 to 12 credits are required. Students in maternal and child health must take a minimum of 16 credits in that area and must complete a field experience. The field experience is designed to be appropriate to the student's career goals and can be completed at a variety of locations both within the University and the community. Student/faculty seminars in maternal and child health are conducted to supplement the academic work.

For more information, including a sample course outline, write to the Director, Program in Maternal and Child Health, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Family Planning Administration and Population Studies

This program draws upon the resources of the Department of Obstetrics and Gynecology and the Program in Human Sexuality of the Medical School, the School of Public Health, the Department of Sociology, and other divisions of the University. Emphasis is placed upon the organizational, social, cultural, biological aspects of population studies, family planning, and maternal and child health in the United States and abroad.

The objective of the program is to prepare students for population-related work at all areas of the profession — planning, implementation, evaluation, teaching, and research — in private or governmental agencies. The curriculum is designed to train personnel who can set up, administer, and operate family planning programs. The curriculum is flexible, and students may determine their own priorities of study to prepare for either domestic or foreign work. Depending on the student's qualifications and objectives, the M.S. or M.P.H. degree may be pursued.

Because the current growth of family planning programs calls for a variety of skilled professionals, individuals in the fields of obstetrics and gynecology, nursing, health administration, health education, social service, data processing and evaluation, and similar areas are considered for admission. Individuals with other backgrounds may be considered for specialized training to improve their capabilities for working and doing research in family planning and population control. Hence, students are selected on the basis of their potential for performance in the field rather than on the nature of their baccalaureate or professional degree. An admission committee composed of program faculty members selects candidates for the program. Special consideration is given to individuals who will be directing programs for their own ethnic or cultural populations.

Interested students may obtain further information by writing to the Director, Program in Family Planning Administration, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

MATERNAL AND CHILD HEALTH:

1. M.D., D.D.S., M.S.W., or master's degree in an appropriate field. Occupational or physical therapists and nutritionists are not required to hold a master's degree.
2. A minimum of 1 year of clinical experience, and preferably 1 year of public health experience (waived for joint emphasis programs in nutrition, dental public health, and public health administration).

Programs of Study

3. A minimum of two letters of recommendation assessing the applicant's academic work, clinical or public health experience, and leadership potential in public health.
4. Two certified transcripts of all previous academic work. Preference is given to applicants with a grade point average of 2.80 or above in graduate work.
5. A letter of intent addressed to the program director stating the applicant's career goals. These goals must be consistent with the goals of the program.
6. Results of the Miller Analogies Test (graduate level).

FAMILY PLANNING ADMINISTRATION AND POPULATION STUDIES:

1. Undergraduate degree in either the social or biological sciences.
2. A minimum of two letters of recommendation assessing the applicant's academic work, clinical or public health experience, and leadership potential in public health.
3. Two certified transcripts of all previous academic work.
4. A letter of intent stating the applicant's career goals.
5. Results of the Miller Analogies Test (graduate level).

PROGRAM FACULTY

Robert ten Benschel, M.D., M.P.H., Professor and Director, Program in Maternal and Child Health; Department of Pediatrics, Medical School; Center for Youth Development and Research, College of Home Economics

Harry Foreman, M.D., Ph.D., Professor; Department of Obstetrics and Gynecology, Medical School; Director, Center for Population Studies

Homer D. Venters, M.D., Professor; Chief, Department of Pediatrics, St. Paul-Ramsey Hospital

Vernon E. Weckwerth, Ph.D., Professor; Coordinator, Alternative Studies, and Associate Coordinator, Doctoral Studies, Program in Hospital and Health Care Administration

Michael L. Baizerman, Ph.D., Associate Professor; Social Researcher, Center for Youth Development and Research, College of Home Economics

Lester E. Block, D.D.S., M.P.H., Associate Professor; Director, Programs in Dental Public Health and Acting Director, Public Health Administration

Amos Deinard, M.D., Associate Professor; Department of Pediatrics, Medical School; Director, Pediatric Outpatient Program, University of Minnesota Hospitals

Delphie Fredlund, R.N., M.P.H., Associate Professor; Program in Public Health Nursing

George Williams, M.D., Associate Professor; Assistant Dean, Medical School

Lee Schacht, Ph.D., Adjunct Associate Professor; Supervisor, Human Genetics Unit, Minnesota Department of Health

Paul Batalden, M.D., Assistant Professor; School of Public Health

Judith Brown, M.P.H., Ph.D., Assistant Professor; Acting Director, Program in Public Health Nutrition

Eunice Davis, M.D., M.P.H., Assistant Professor; Department of Pediatrics, Medical School; Director of Child Development Section, Department of Pediatrics, St. Paul-Ramsey Hospital

Carolyn McKay, M.D., M.P.H., Assistant Professor; Department of Pediatrics, Medical School; Staff Pediatrician, Department of Pediatrics, St. Paul-Ramsey Hospital

Jean Smelker, M.D., Assistant Professor; Department of Pediatrics, Medical School; Director, Community University Health Care Center

Ted Thompson, M.D., Assistant Professor; Department of Pediatrics, Medical School; Director, Newborn Intensive Care Unit, University of Minnesota Hospitals

John Tobin, Jr., M.D., M.P.H., Assistant Professor; Department of Pediatrics, Medical School; Director, Ambulatory Pediatrics, Department of Pediatrics, Hennepin County Medical Center

Rachel Trockman, M.D., Assistant Professor; Department of Pediatrics, Medical School; Director, Child Behavior Learning Clinic, Department of Pediatrics, Hennepin County Medical Center

Ellen Alkon, M.D., M.P.H., Adjunct Assistant Professor; Commissioner of Health, Minneapolis Department of Health

James Kenney, Ph.D., Adjunct Assistant Professor; Assistant Director for Health Services, Minneapolis Public Schools

Robert Blum, M.D., M.P.H., Instructor

Barbara Leonard, R.N., M.S., Instructor; Program in Public Health Nursing; Coordinator, Pediatric Nurse Practitioner Program

Linda Thompson, M.D., Instructor; Department of Pediatrics, Medical School; Department of Pediatrics, Hennepin County Medical Center

Trude Turnquist, O.T.R., M.P.H., Instructor
Maurine Venters, R.N., M.P.H., Instructor
Donna Anderson, M.P.H., Lecturer; Health Program Specialist, Office of Planning and Management, Hennepin County
Pauline Bamford, M.S.W., Lecturer; Consultant Medical Social Worker, Maternal and Child Health, Minneapolis Department of Health
Ronald Campbell, M.D., Lecturer; Chief, Maternal and Child Health Section, Minnesota Department of Health
John Dyer, M.D., M.P.H., Lecturer; Regional Medical Director, Maternal and Child Health Service, Region V, Public Health Service, Department of Health, Education, and Welfare, Chicago
Ann Ellwood, Lecturer; Executive Director, Minnesota Early Learning Design, Minneapolis
Lou Erickson, R.N., P.N.A., Lecturer; Administrator, Special Education Preschool Program, Division of Special Education, Minneapolis Public Schools
Gary Fifield, M.D., M.P.H., Lecturer; Director, Emergency Room, Hennepin County Medical Center
Betty Flanigan, O.T.R., M.P.H., Lecturer; Child Development Section, St. Paul-Ramsey Hospital
Mark Nammacher, M.D., M.P.H., Lecturer; Pediatrician, Pilot City Health Center, Minneapolis
Mildred Norval, M.D., Lecturer; Director, Crippled Children's Services, Minnesota Department of Health
Linda Stein, O.T.R., M.P.H., Lecturer
Donald Stemmler, M.D., M.P.H., Lecturer; Director, Maternal and Child Health, Minneapolis Department of Health
Laura Stemmler, M.D., M.P.H., Lecturer; Pediatrician, Community University Health Care Center

Physiological Hygiene

Program Director: Henry Blackburn, M.D.

PROGRAM DESCRIPTION

A limited number of students are accepted into either the M.P.H. or Ph.D. program in physiological hygiene. Students who are accepted may complete their major course work in physiology, physiological hygiene, or epidemiology. Candidates plan their programs in consultation with an adviser. A detailed description of the course of study and a comprehensive list of electives may be obtained by writing to the Director, Program in Physiological Hygiene, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

1. Bachelor's degree from an acceptable institution.
2. Evidence of satisfactory background in at least three of the following fields: biochemistry, medicine, physical anthropology, physical education, physiology, psychology, public health.
3. Acceptance of advisory responsibility by one of the graduate faculty members.

PROGRAM FACULTY

Henry Blackburn, M.D., Professor and Director, Program in Physiological Hygiene; Director, Laboratory of Physiological Hygiene
Joseph Anderson, Ph.D., Professor Emeritus
Ancel Keys, Ph.D., Professor Emeritus
Henry L. Taylor, Ph.D., Professor
Arthur S. Leon, M.D., Associate Professor
Ronald Prineas, M.B.B.S., Ph.D., Associate Professor
Richard S. Crow, M.D., Assistant Professor
Richard Gillum, M.D., Assistant Professor
David R. Jacobs, Jr., Ph.D., Assistant Professor
Russell Luepker, M.D., Assistant Professor
Maurice Mittelmark, Ph.D., Research Associate
Mari Palta, Ph.D., Research Associate

Public Health Administration

Program Director: Lester E. Block, D.D.S., M.P.H.

PROGRAM DESCRIPTION

The public health administration program is designed to prepare individuals for administrative positions in public and community health programs and agencies. The M.P.H. degree is awarded upon successful completion of the program of studies.

Public health administrators must have a knowledge and understanding of modern management concepts and skills. The program of study concentrates on knowledge and skills in the basic public health disciplines, management, and health policy. Students, in consultation with their program adviser, decide upon a balanced curriculum based upon their background, experience, and career objectives.

The program ranges from a minimum of 11 months to a maximum of 21 months of full-time study, depending upon the applicant's prior public health-related education and work experience. Physicians and others with relevant graduate degrees or significant administrative experience in health agencies are eligible for the 11-month program. Students presently employed in health agencies may be admitted on a part-time basis and can complete the program over an extended period of time. Upon receipt of the completed application, each student's background will be assessed to determine the length of study required.

Students entering the program with limited work experience are required to complete a supervised field placement at an approved health agency. The length of the field placement varies from a minimum of 1 quarter of full-time experience or equivalent to a maximum of 11 months in an administrative residency, depending upon the student's individual needs. The field placements are completed at the Minnesota Department of Health and other health agencies.

Public health administration and other School of Public Health courses are described in section III of this bulletin. In addition to these courses, students may select courses from a wide range of areas such as economics, financial management, management, management information, public affairs, public relations, and sociology. Information on courses offered by other schools can be found in the *Graduate School Bulletin*. A detailed description of the course of study and a more comprehensive list of elective courses may be obtained by writing to the Director, Program in Public Health Administration, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455.

Concentration in Epidemiology—Suitable epidemiology electives are available during the regular academic year for students interested in a minor course concentration in this area. The special graduate summer session in epidemiology provides additional elective opportunities. Information on this special program can be obtained by writing to the director of the Program in Epidemiology.

Concentration in Maternal and Child Health—A wide selection of courses is available for physicians and others interested in a joint public health administration/maternal and child health emphasis. An individualized course of study in maternal and child health and correlated clinical experience can be arranged for qualified advanced students through the use of independent study electives (see Maternal and Child Health).

ADMISSION REQUIREMENTS

1. Two certified transcripts of all previous college work. Academic preparation should be relevant to the proposed area of concentration and should include a

basic course (3 quarter hours or equivalent) in the principles of accounting. Candidates lacking essential course work will be required to make up the deficiencies prior to or during the course of study. Basic courses in biology, economics, microbiology, political science, psychology, sociology, and statistics are also recommended.

2. Some experience relevant to the area of concentration. Candidates without experience but well-qualified in other respects will be given individual consideration.
3. Letter of intent indicating the applicant's background, experience, reasons for seeking the M.P.H. degree, and future professional plans.
4. Three letters of reference from individuals in a position to comment on the applicant's qualifications and personal and professional capabilities.
5. Personal interview with faculty members or a designated representative, when requested by the program director.
6. An acceptable score on the graduate-level Miller Analogies Test. Applicants may secure information about when and where this test can be taken by writing to the Student Counseling Bureau, 101 Eddy Hall, 192 Pillsbury Drive S.E., University of Minnesota, Minneapolis, Minnesota 55455, or by inquiring at the student testing office of a nearby college or university.

PROGRAM FACULTY

Lester E. Block, D.D.S., M.P.H., Associate Professor and Director, Program in Public Health Administration
Lee D. Stauffer, M.P.H., Associate Professor; Dean, School of Public Health
Robert L. Veninga, Ph.D., Associate Professor; Associate Dean, School of Public Health
Gaylord W. Anderson, M.D., Dr.P.H., Professor and Dean Emeritus
Donald W. Cowan, M.D., Professor Emeritus
J. Arthur Myers, M.D., Professor Emeritus
Bright M. Dornblaser, M.H.A., Professor; Director, Program in Hospital and Health Care Administration
Paul Rupprecht, Ph.D., Assistant Professor; Director, Boynton Health Service
Margaret Sandberg, M.S.W., A.C.S.E., M.P.H., Adjunct Assistant Professor; Program Planner, Minnesota Department of Health
Ellen Z. Fifer, M.D., Lecturer; Assistant Commissioner for Programs, Minnesota Department of Health
Warren Lawson, M.D., Lecturer; Commissioner of Health, Minnesota Department of Health

Public Health Nursing

Program Director: Alma Sparrow, M.P.H., M.S.

PROGRAM DESCRIPTION

The School of Public Health offers a 2-year master's degree program in public health nursing accredited by the National League for Nursing. Nurses who wish graduate preparation in public health nursing and who meet entrance requirements may pursue programs of study leading to either the M.P.H. or the M.S. degree. In both of these programs the major is public health.

The purpose of the public health nursing program is to prepare students for leadership in multidisciplinary health care systems. The program focuses on theoretical knowledge and skills in the areas of teaching, administration, and clinical practice. The study of advanced theory and practice in public health is shared with students in other disciplines in the School of Public Health.

The program is designed to prepare the graduate to apply public health principles as an educator, a manager, a practitioner, a consultant, or in a combination of these roles; apply concepts basic to the relationship between the political and economic systems and the health care delivery system; design investigative studies

Programs of Study

based on knowledge of research methodology and its contribution to quality health care; solve public health problems through interdisciplinary collaboration; initiate and participate in community action based on an understanding of community organization and health needs; and demonstrate self-directed behavior in lifelong professional and personal development.

The programs consist of a core of courses in public health, public health nursing, and research methodology. Students are expected to meet the degree requirements and educational objectives of the School of Public Health (see section I of this bulletin) and those of the public health nursing program. In addition, M.S. candidates must meet the requirements of the Graduate School.

The public health nursing courses emphasize the promotion of physical and psychosocial health and the prevention of illness at the community level. Theoretical content is coordinated with clinical experience and nursing seminars that support the expanded role of the nurse and leadership.

Public health nursing and other public health courses are described in section III of this bulletin. In addition to these courses, students may select courses from a wide range of areas such as anthropology, education, psychology, social work, sociology, and speech-communication. Additional information may be obtained by writing to the Director, Program in Public Health Nursing, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Master of Public Health—The M.P.H. degree is offered through the School of Public Health. Students who plan to pursue leadership positions in community health should consider applying for this advanced professional degree program.

Master of Science—The M.S. degree, with emphasis on public health nursing, is offered through the Graduate School as a Plan B program with a major in *public health*. Students who plan to pursue an academic career should consider applying for the M.S. degree. For further information, see the *Graduate School Bulletin* under Public Health.

Fields of Concentration

Adult Nurse Practitioner—Students wishing additional preparation in adult and geriatric primary health care may choose courses and selected clinical experience in these areas. The emphasis is on developing competencies and skills of the nurse practitioner and preparing for leadership roles in adult/geriatric health care.

Maternal and Child Health/Public Health Nursing—A joint master's degree program for nurses is offered by the programs in Maternal and Child Health and Public Health Nursing. Students must meet the major requirements of both programs. The program includes clinical nursing experiences and field experiences in selected areas in maternal and child health that have a preventive focus. Students are expected to have clearly defined professional goals. Application is made through the Program in Public Health Nursing.

Nursing Administration—Students interested in the program may contact the director of public health nursing for further information.

Occupational Health Nursing—A program in occupational health nursing is being developed for the 1978-79 school year. Further information about the program can be obtained from the director of the public health nursing program.

Pediatric Nurse Practitioner/Associate—Selected students interested in preparing for leadership roles in ambulatory child health care may enter either the M.S.

or M.P.H. program. This advanced clinical program is designed to prepare nurses to function as pediatric nurse associates in a variety of community settings and as child health advocates. The clinical practice is based upon theoretical knowledge of physical and psychosocial growth and development from birth through adolescence.

Specialties in Public Health Nursing—Students may, with faculty guidance, plan their programs to prepare for careers in new areas of nursing involvement. Examples of such areas are health planning, chemical dependency, school nursing, political process, or community assessment.

Certificate Programs

Adult/Geriatric Nurse Practitioner—This 9-month program, offered at various locations throughout Minnesota, prepares registered nurses to provide primary care to adults in collaboration with the physicians in their local community. The program has ANA accreditation. For information about the program, contact Sharon Ostwald, Public Health Nursing, School of Public Health, 1325 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

Pediatric Nurse Associate—This postbaccalaureate program for nurses is offered on campus and at outstate locations as a 3-quarter sequence. It prepares students to provide primary care in ambulatory child health services and to function interdependently with other health professionals. For information about the program, contact Barbara Leonard, Public Health Nursing, School of Public Health, 1325 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

External Degree Program

Planning is underway for the development of an external degree program in public health nursing. Course work for the program will be completed partially at the University of Minnesota and partially at outstate locations. For more information contact Elaine Richard, Public Health Nursing, School of Public Health, 1325 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

MASTER'S PROGRAMS

1. A baccalaureate degree from a program accredited by the National League for Nursing that involves preparation for professional nursing in all clinical areas, including mental health and public health nursing. Individual consideration will be given to applicants whose basic nursing preparation varies from the above. Deficiencies must be removed prior to admission.
2. A grade point average of at least 2.80 for both the M.S. and M.P.H. program.
3. Scores from the following examinations: Miller Analogies Test, graduate level; California Psychological Inventory; Minnesota Multiphasic Personality Inventory; and the Strong-Campbell Interest Inventory. These tests will be administered through the University of Minnesota Student Counseling Bureau. A minimal fee is charged. Out-of-state applicants may request to take these tests in their local areas.

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4. Evidence of personal and professional qualifications and community involvement attested to in letters of reference from three persons qualified to assess the applicant's recent employment, academic background, and community service.
5. A written statement from the applicant outlining professional experience, sub-speciality or track interest, and goals and objectives for graduate study.
6. An interview. Applicants living at some distance may be requested to have an interview locally with a designated interviewer. Two types of interviews are conducted:
 - a. Information Interview (optional)
Available to any prospective candidate on request. Generally, information about the program can be mailed to the student. If further information is wanted, an interview can be arranged with the chairperson of Admissions Committee.
 - b. Admissions Interview (required)
When the dossier of a prospective student is complete in every detail, the student is requested to arrange for an interview with a faculty member from the Admissions Committee.
7. Community experience. Preference is given to applicants who have at least 1 year of experience, or its equivalent, in community nursing.
8. Current nursing licensure.
9. An upper division course in statistics. This course is currently recommended, but it will be required of all applicants seeking entry after January 1979.

Applicants not actively engaged in nursing are required to update their professional competence. This may be accomplished through one or more of the following means: an R.N. refresher program, work experience, or postbaccalaureate summer courses in public health nursing and in community health.

When the above requirements have been met, the Admissions Committee will review the application and notify the applicant of its decision. Official notification will be sent by the Graduate School to M.S. candidates and by the Office of Admissions and Records to M.P.H. candidates.

CERTIFICATE PROGRAMS

Adult/Geriatric Nurse Practitioner

1. Current Minnesota R.N. licensure.
2. Minimum of 2 years of recent nursing experience, preferably in a primary care setting.
3. Written description of anticipated role in delivering primary health care to Minnesota residents utilizing skills of adult/geriatric nurse practitioner.
4. Scores from California Psychological Inventory and Minnesota Multiphasic Personality Inventory.

Pediatric Nurse Associate

Admission requirements are listed under Master's Programs above.

PROGRAM FACULTY

Alma G. Sparrow, M.P.H., M.S., Associate Professor and Director, Program in Public Health Nursing
Robert W. ten Benset, M.D., M.P.H., Professor and Director, Program in Maternal and Child Health
Eleanor M. Anderson, M.P.H., Associate Professor
Delphie J. Fredlund, M.P.H., Associate Professor
Sharon Danielsen, M.S.N., M.S., Assistant Professor
Rita Dingman, M.P.H., Assistant Professor
Barbara Lyons, M.S., Assistant Professor
Lois Miedema, M.P.H., Assistant Professor
Marilee Miller, M.S., Assistant Professor
Sharon Ostwald, M.S., Assistant Professor
E. Charlotte Pflug, M.P.H., Assistant Professor
Barbara Reynolds, M.P.H., Assistant Professor
Elaine Richard, M.S., Assistant Professor
Ann Shepard, M.S., Assistant Professor
Patricia Woodbury, M.S., Assistant Professor
Mary L. Anderson, M.S.N., Clinical Assistant Professor; Chief, Nursing Services, Veterans Administration Hospital
Sharon Cross, M.S., Instructor
Janet Kempf, M.S., Instructor
Barbara J. Leonard, M.S., Instructor
Roberta Marquart, M.P.H., Instructor
Delores Robertson, M.P.H., Instructor
Dorothea Russell, M.S., Instructor
Patricia Lentsch Washick, M.P.H., Instructor
Nancy Hanson, B.S., P.N.A., Clinical Instructor; Hennepin County Medical Center
Dorothy Zatochill, M.S., P.N.A., Clinical Instructor; Hennepin County Medical Center
Eileen Crowley, M.A., Research Fellow
Hilda Boyle, M.P.H., Lecturer; Director, Suburban Public Health Nursing Service, Minneapolis
Raymond G. Cink, M.P.H., Lecturer; Director, Ramsey County Nursing Service, St. Paul
Frances Decker, M.P.H., Lecturer; Chief, Community Nursing Section, Minnesota Department of Health
Isabel McGarry, M.S., Lecturer; Director, Home Health Services, Minneapolis Combined Nursing Service
Janet Stenglein, M.S., Lecturer; Pediatric Nurse Associate, St. Paul-Ramsey Hospital
Rachel Trockman, M.D., Lecturer; Hennepin County Hospital

Public Health Nutrition

Acting Program Director: Judith Brown, R.D., M.P.H., Ph.D.

PROGRAM DESCRIPTION

The M.P.H. program in public health nutrition is designed to prepare students for professional nutrition positions in health programs. Approximately one-third of the course work is completed in public health areas, one-third in nutrition (including a strong maternal and child nutrition component), and one-third in related areas selected to give the student a well-balanced program and a broad knowledge of public health nutrition. Students with specific career goals may select courses and field experiences appropriate to their individual interests.

Supplementary to the general nutrition program, which includes a strong maternal and child health nutrition component, students have the option of concentrating their course and field work in one of three areas of emphasis—behavioral science, administration, or education.

In addition to completing a minimum of 55 credits of course and field work, students must prepare a Plan B project. The purpose of the project is to expose the student to methods of public health nutrition research. Students must also pass a written comprehensive examination covering various aspects of public health nutrition during spring quarter.

Field experiences are completed in health agencies, nutrition programs, school systems, or similar organizations in the Twin Cities area and in outstate locations. They are undertaken either concurrently with course work or in a 6- to 8-week block placement during late spring and early summer.

Programs of Study

The program in public health nutrition begins during the second summer term (late July) and ends the following July. The 12-month program includes the interim period between the end of summer term II and the beginning of fall quarter. This time is used to introduce students to the variety of public health nutrition programs and field experience opportunities.

ADMISSION REQUIREMENTS

The faculty reviews applications during January, March, April, and May. Applicants are encouraged to apply before March; however, later acceptance can be made if program space permits. Enrollment on a part-time basis is available for a limited number of students.

The following information should accompany the application:

1. Two certified transcripts of all previous academic work, officially noting the date of confirmation of the bachelor's degree. Applicants with bachelor's degrees in areas other than nutrition and dietetics must complete specific courses in nutrition and dietetics before entering the program. A list of required undergraduate level courses may be obtained from the program director.
2. Postgraduate professional experience and registration as a dietitian are highly desirable.
3. A letter of intent indicating the applicant's background, experience, reasons for seeking the M.P.H. degree, and future professional goals.
4. Results of the Graduate Record Examination aptitude test.
5. Two letters of recommendation from persons who have knowledge of the applicant's academic and professional capabilities.

PROGRAM FACULTY

Judith Brown, R.D., M.P.H., Ph.D., Assistant Professor and Acting Director, Program in Public Health Nutrition
Robert ten Bense, M.P.H., M.D., Professor, Program in Maternal and Child Health
Arthur S. Leon, M.D., Associate Professor, Laboratory of Physiological Hygiene
Phyllis L. Fleming, Ph.D., Assistant Professor
Marcy Strauss, R.D., M.S., Instructor
Irene Alton, R.D., M.S., Lecturer; Nutritionist, St. Paul Maternity and Infant Care Project
Susan Barker, R.D., M.P.H., Lecturer; Nutrition Education Consultant, St. Paul Public Schools
Debra Barone, R.D., M.P.H., Lecturer; Dietitian, St. Paul Division of Health
Shirley Brown, R.D., M.S., Lecturer; Nutrition Consultant, Minneapolis Public Schools
Katherine Cairns, R.D., M.P.H., Lecturer; Nutritionist, St. Paul Division of Health
Carolyn Doerhoff, R.D., M.P.H., Lecturer; Nutritionist, Governor's Council on Aging
Frances Doring, R.D., M.P.H., Lecturer, Nutrition Consultant, Minnesota Department of Health
Marcine Hemming, R.D., M.P.H., Lecturer; Principal Dietitian, Boynton Health Service, University of Minnesota
Elizabeth Holey, R.D., M.P.H., Lecturer; Senior Nutritionist, Maternity and Infant Care Project, Minneapolis
Eileen Reardon, R.D., M.P.H., Lecturer; Supervisor, Nutrition Unit, Minnesota Department of Health
Martha Slattery, R.D., M.P.H., Lecturer, Nutritionist, St. Paul Division of Health

Veterinary Public Health

Program Director: Robert K. Anderson, D.V.M., M.P.H.

PROGRAM DESCRIPTION

This program for veterinarians is designed to meet a broad range of individual student interests as well as the needs of a variety of sponsoring agencies. Students may choose special areas of emphasis in epidemiology, food hygiene, environmental

health, preventive medicine, or administration. Students who do not wish to pursue special areas of interest may elect a more general program of study to meet their individual needs.

Candidates for the M.P.H. degree are expected to satisfy the degree requirements and educational objectives of the School of Public Health (see section I of this bulletin) as well as the requirements of the elective program selected. The program of instruction normally requires a minimum of 12 months of study, but may require up to 2 years, depending on the student's background, career objectives, and program selected. In individual cases, a limited number of credits may be transferred from another institution.

Individualized programs of study are designed, in consultation between the adviser and student, to meet the special interests and objectives of the student and the sponsoring agency. With appropriate planning, these programs can meet the objectives of veterinarians interested in a variety of public health and animal health programs as well as the needs of local, state, national, and international agencies. Special programs for educators are also offered.

In planning their programs the student may select from courses offered by any program within the School of Public Health as well as in other schools and colleges of the University, including veterinary medicine, medicine, biological sciences, liberal arts, and public administration.

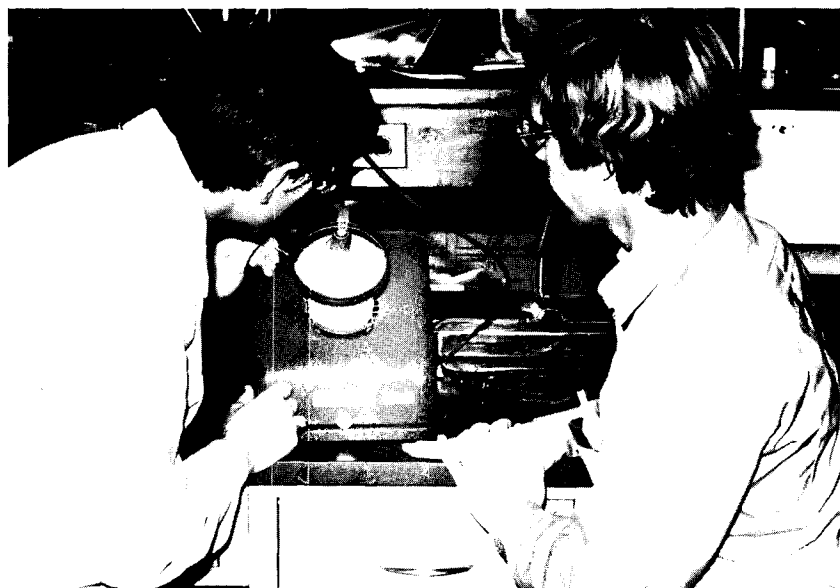
For further information, write to the Director, Program in Veterinary Public Health, School of Public Health, Box 197 Mayo, 420 Delaware Street S.E., University of Minnesota, Minneapolis, Minnesota 55455.

ADMISSION REQUIREMENTS

1. D.V.M. degree from an accredited institution (or receipt prior to matriculation).
2. Two certified transcripts of academic work for the D.V.M. degree and any graduate study.
3. Two letters of reference from persons capable of assessing the applicant's ability and motivation for graduate work and effectiveness in health-related fields.
4. International students whose primary language is not English must pass the Test of English as a Foreign Language (TOEFL) administered by the Educational Testing Service, Box 899, Princeton, New Jersey 08540. International students should see section I for additional requirements.

PROGRAM FACULTY

Robert K. Anderson, D.V.M., M.P.H., Professor and Director, Program in Veterinary Public Health
Stanley L. Diesch, D.V.M., M.P.H., Professor; Head, Division of Epidemiology, Food Hygiene and Veterinary Public Health, College of Veterinary Medicine
Michael M. Pullen, D.V.M., M.P.V.M., M.S., Associate Professor; Division of Epidemiology, Food Hygiene and Veterinary Public Health, College of Veterinary Medicine
R. Ashley Robinson, D.V.M., M.P.H., Ph.D., Associate Professor; Division of Epidemiology, Food Hygiene and Veterinary Public Health, College of Veterinary Medicine
James A. Libby, D.V.M., M.S., Adjunct Associate Professor
Pedro N. Acha, D.V.M., M.P.H., Lecturer; Chief, Department of Human and Animal Health, Pan-American Health Organization, Washington, D.C.
Paul J. Cox, D.V.M., M.P.H., Lecturer; Director of Environmental Health, Division of Public Health, Department of Community Services, St. Paul, Minnesota
Charles E. Fuller, D.V.M., M.P.H., Lecturer; Colonel, Veterinary Corps, Department of the Air Force
Mylo M. Hagberg, D.V.M., M.S., Lecturer; Lieutenant Colonel, Veterinary Corps, Department of the Army
E. Hunt McCauley, D.V.M., M.S., Lecturer; McCauley Farms, Big Timber, Montana
Edward L. Menning, D.V.M., M.P.H., Lecturer; Colonel, Veterinary Corps, Department of the Air Force
Thomas G. Murnane, D.V.M., Lecturer; Brigadier General and Chief, Veterinary Corps, Department of the Army



III. COURSE DESCRIPTIONS

Symbols—The following symbols are used throughout the course descriptions in lieu of page footnotes:

† All courses preceding the dagger must be completed before credit will be granted for any quarter of the sequence.

§ Credit will not be granted if the equivalent course listed after the section mark has been taken for credit.

¶ Concurrent registration is allowed (or required) in the course listed after the paragraph mark.

Consent of the instructor is required prior to registration.

A hyphen between course numbers (e.g., 3142-3143-3144) indicates a sequence of courses that must be taken in the order listed.

A comma between course numbers (e.g., 5121, 5122, 5123) indicates a series of courses that may be entered any quarter.

When courses that must be taken in sequence are prerequisites, only the last course of the sequence is listed.

PUBLIC HEALTH (PubH)

Biometry

3400. DIRECTED STUDIES IN BIOMETRY. (Cr ar; prereq #)

Individual study or research under the guidance of a staff member.

5400. INTRODUCTION TO QUANTITATIVE METHODS IN THE HEALTH AND LIFE SCIENCES. (4 cr; for students majoring in biological and health sciences; prereq Biol 1011, Chem 1004 and 1005, Math 1231 or equiv, #) McHugh

Basic quantitative methods for the design and analysis of clinical and laboratory studies in biology and the health sciences.

5401. QUANTITATIVE METHODS IN THE HEALTH SCIENCES. (3 cr; prereq medical or health science student, 5400 or #)

Reliability in diagnosis and clinical laboratory measurement; logic of design in prevalence surveys, retrospective and prospective studies; clinical trials; measure of morbidity and mortality; life tables and survival after treatment; assays.

5403. COMPUTER APPLICATIONS IN HEALTH SERVICES ADMINISTRATION. (4 cr; prereq nonbiometry major, health science registration or #) Gatewood

Survey of current applications of digital computers for health services, clinical algorithms, and health-related information systems. Costs, benefits, and interrelationships between data acquisition, reduction, storage, interpretation, and dissemination for health services. Stress on administrative needs for planning, personnel, backup, and evaluation. Applications illustrated through use of the BASIC computing language and package computer programs.

5404. INTRODUCTION TO BIostatISTICS AND STATISTICAL DECISION. (4 cr; prereq #) Weckwerth

Variation; frequency distribution; probability; significance tests; estimation; trends; data handling; simple operations research applications. Statistical approach to rational administrative decision making. Lectures and laboratory exercises.

5406. BIOMETRIC METHODS IN ENVIRONMENTAL HEALTH. (3 cr; prereq environmental health student and grade of B in 5414 or equiv or #) Johnson

Estimation; tests of significance; Poisson distribution applications; elements of bioassay; radiologic statistics; research design; topics in data analysis and interpretation.

5408. VITAL AND HEALTH STATISTICS II. (3 cr; prereq grade of B in 5414 or #) Goldman

Demographic techniques and statistical inference for public health majors.

5409-5410. BIOMETRY IN CLINICAL STUDIES I, II. (3 cr per qtr; prereq DDS, MD, DVM, PharmD, clinical nursing student or #) Staff

Introduction to numerical and graphical treatment of data from dental, medical, and veterinary research. Examples taken from recent literature. Design, conduct, and analysis of clinical studies. Prophylactic and therapeutic trials. Validity and reliability of measurements and calibration studies for clinical settings. Sensitivity and specificity of tests and their application in clinical research and diagnosis. Special problems of cooperative studies.

Course Descriptions

- 5412. SURVEY SAMPLING IN SOCIAL AND HEALTH SCIENCE RESEARCH.** (3 cr; prereq #) Jacobs
Introduction to the methodology of probability sampling in social and health science surveys. Analysis and application of simple, random, stratified, systematic, multistage and cluster sampling.
- 5413. VITAL AND HEALTH STATISTICS.** (1 cr) Staff
Morbidity, mortality, fertility, health personnel and facilities, data sources; demographic characteristics and projections; rates; adjustment of rates; federal-state-local statistical programs.
- 5414. BIOMETRIC METHODS I.** (3 cr; prereq public health regis or #) Staff
Basic quantitative methods for public health students including descriptive statistics; graphic methods; measures of variation; tests of significance; estimation concepts and procedures; introduction to correlation, regression, sampling techniques, and principles of study design.
- 5415-5416-5417. MATHEMATICAL BIOLOGY I, II, III.** (3 cr per qtr; prereq 5432, knowledge of differential equations and biological science, or #) Ackerman, staff
Mathematical models as tools for communication and concept analysis in health-related disciplines. Emphasis on design, selection, simulation, and interpretation of computer programmable models. Goals and guidelines; deterministic models of physiological systems; transforms and transfer functions; analysis and classification of EKGs and EEGs; information theory; population models; stochastic applications for genetics, ecology, and epidemiology.
- 5430. BIOMEDICAL COMPUTING I.** (4 cr; prereq Math 1111) Ellis
Introduction to digital computers and their use in biology and medicine through the BASIC programming language. Simple algorithms for data processing; using and modifying statistical and graphical library programs; elements of conversational programming.
- 5431. BIOMEDICAL COMPUTING II.** (4 cr; prereq 5430 or #) Ellis
Further health-related applications of digital computers using the FORTRAN programming language. Computer organization; use of input/output devices; statistical analysis package programs; sequential file management.
- 5432. BIOMEDICAL COMPUTING III.** (4 cr; prereq 5431 or #) Ellis
Survey of special purpose computer systems and languages that are useful in biology and medicine for computer-aided instruction, hospital information systems, patient monitoring, and simulation.
- 5433-5434-5435. COMPUTER METHODOLOGY IN THE DELIVERY OF HEALTH CARE I, II, III.** (3 cr per qtr; prereq 5432 or #) Gatewood, staff
Records and files, file maintenance, report generation, hospital administrative information, and accounting systems. Medical records; abstracting the medical record; information systems based on medical records for hospitals, surveys, physicians, outpatient clinics, and research. Monitoring of clinical laboratory equipment; physiological monitoring of acutely ill patients; total hospital information systems.
- 5436. ANALYTICAL TECHNIQUES FOR HEALTH DELIVERY SYSTEMS.** (3 cr; prereq calculus and 5450, 5451, FORTRAN or #) Johnson
Operations research and systems analysis techniques applied to medical service systems. Emphasis on applications of linear programming, theory of queues, and inventory models in health care systems.
- 5440, 5441. QUANTITATIVE PHYSIOLOGY I, II.** (3 cr per qtr, §Phsl 3052, 3053; prereq 1-yr sequence in mathematics, physics, chemistry, and biology or #)
Diffusion, surface tension, and mechanics of respiration, circulation, digestion, and locomotion. Chemical aspects of blood, respiration, renal function, nutrition, and metabolism. Endocrine, sensory, neuromuscular, and central neural functioning.
- 5446. BIOCOMPUTING CONSULTING SEMINAR.** (3 cr; prereq biometry major, 5432, 5452, or #) Gatewood
Overview of computer hardware, operating systems, languages, and packages for statistics, graphics, file maintenance, report generation, and health science applications. Case examples used to illustrate roles and responsibilities of the project manager in analyzing the requirements of the health science project, designing and specifying computer interfaces, and supervising the development, training, documentation, and evaluation for the implementation effort.
- 5450. BIOMETRY I.** (3 cr; prereq §5451 . . . familiarity with basic calculus desirable) Jeffries
Basic concepts in probability, binomial, Poisson, and normal probability models of random phenomena in the biological and health sciences.
- 5451. BIOMETRY LABORATORY I.** (2 cr; prereq §5450) Jeffries
Application of probability concepts to the development of probability models for random phenomena in the biological and health sciences.
- 5452. BIOMETRY II.** (3 cr; prereq 5450, §5453) Jeffries
Further consideration of testing statistical hypotheses and interval estimation; χ^2 applied to frequency data; regression analysis; correlation; analysis of variance; contrasts and multiple comparison techniques.
- 5453. BIOMETRY LABORATORY II.** (2 cr; prereq §5452) Jeffries
Application of concepts of testing and estimation of the parameters of the basic probability models; application of χ^2 to goodness of fit and heterogeneity tests; application of regression to bioassay; application of analysis of variance to bioassay.

- 5454. BIOMETRY III.** (3 cr; prereq 5452,†5455) Jeffries
Analysis of nested, randomized block, factorial, and split plot designs.
- 5455. BIOMETRY LABORATORY III.** (2 cr; prereq †5454) Jeffries
Basic designs illustrated with numerous examples from the biological sciences.
- 5456. BIOMETRY CONSULTING SEMINAR.** (Cr ar; prereq biometry major) Boen, staff
Consultant and client interaction; communication and formulation of the biometric problem. Role and responsibilities of the biometrician. Robustness and relevance of frequently used analytical techniques. Internship experiences.
- 5457. STOCHASTIC MODELS IN BIOLOGY AND MEDICINE.** (3 cr; prereq 5451, theoretical statistics, biometry major . . . others #) Boen
Applications of stochastic process to health care systems and to such varied biologic phenomena as epidemics, urinary tract infection, and carcinogenesis.
- 5459. INTRODUCTION TO MATHEMATICAL THEORY IN BIOMETRY.** (1 cr; prereq 2 qtrs calculus,†5450,†5451 or #) Jeffries
Generating functions, curve fitting, iterative estimation, tests, propagation of error, and related topics with illustrations from epidemics and population growth, bioassay, clinical trials, demography, and other bio-health science areas.
- 5460. DEMOGRAPHY AND HEALTH.** (3 cr, §Soc 5561; prereq biometry major . . . others #) Kjelsberg
Needs, sources, collection, and interpretation of data in the areas of population, mortality, morbidity, natality, and health services.
- 5461. BIOMETRIC TOPICS IN EPIDEMIOLOGY.** (3 cr; prereq biometry major . . . others #) McHugh
Relative risk; summarization of rates; misclassification; matching designs; incidence as a function of several variables; selection; clustering; familial aggregation.
- 5462. CLINICAL TRIALS AND LIFE TABLE TECHNIQUES.** (3 cr; prereq biometry major . . . others #) Bartsch
Introduction to the methodology of large-scale collaborative clinical trials; case examples; operational aspects of a data center. Elementary life table techniques and application to follow-up studies in medicine and public health.
- 5470. TOPICS IN BIOMETRY.** (Cr ar; prereq #)
Selected readings with discussion based on these readings.
- 8400. SEMINAR IN BIOMETRY.** (Cr ar)
- 8405-8406-8407. ADVANCED TOPICS IN HEALTH COMPUTER SCIENCE I, II, III.** (3 cr per qtr; prereq 5432, 5435, 5452, and #) Finkelstein, staff
Selected topics that may include computer systems design for the health sciences, small computer concepts and utilization, computers for clinical services, computer-aided medical decision making, biomedical image processing and pattern recognition, and others of current interest. All topic discussions treat techniques and incorporate actual examples of case studies from the health sciences.
- 8420. ADVANCED BIOMETRIC METHODS I.** (3 cr; prereq 5455, 5459 or equiv, FORTRAN) Johnson
Multivariate regression, linear and nonlinear; bioassay, quantitative and quantal.
- 8421. ADVANCED BIOMETRIC METHODS II.** (3 cr; prereq 8420 or #) Johnson
Classification techniques with discrete, continuous, or mixed variables with emphasis on quadratic discriminant function and nearest neighbor techniques; multivariate clustering algorithms.
- 8422. ADVANCED BIOMETRIC METHODS III.** (3 cr; prereq 5455, 5459 or equiv, FORTRAN) Johnson, staff
Basic optimization concepts of operations research such as linear programming, inventory policy, and queuing models. Brief introduction to examples of systems simulation. Evaluation concepts in health care delivery systems research. Bayesian a priori distributions in estimation with emphasis on consulting difficulties. Multifactor contingency table analysis.
- 8430-8431-8432. ADVANCED BIOMETRIC ANALYSIS I, II, III.** (3 cr per qtr; prereq 5467, advanced calculus, theoretical statistics) McHugh, staff
Randomization theory in clinical and laboratory trials. Biometric theory of epidemiologic case-control and cohort studies. Nonparametric and parametric survivorship analysis, including censoring and competing risks. Biometric models in demography, medical genetics, and screening and detection of disease. Radioimmunoassay and generalized bioassay models.
- 8449. TOPICS IN BIOMETRY.** (Cr ar; prereq 5450, #)
Studies in special topics for advanced students.
- 8450. RESEARCH IN BIOMETRY.** (Cr ar)
Opportunities for qualified students to pursue research.

Course Descriptions

Dental Public Health

- 5650. DENTAL HEALTH.** (1 cr; for non-dentists and non-dental hygienists; prereq #) Block
Conditions resulting in tooth decay and loss; preventive and corrective measures; oral hygiene; community programs for dental health.
- 5651. PHILOSOPHY AND CONCEPTS OF PREVENTIVE DENTISTRY.** (Cr ar; prereq #) Steward
Basic principles of preventive dentistry; relationship between oral and general disease processes; epidemiology of oral diseases; preventive procedures; organizing and evaluating community dental health programs.
- 5652. CURRENT ISSUES: DENTAL PUBLIC HEALTH.** (Cr ar; prereq #) Block, staff
Review and discussion of recent dental literature and current controversies involving dentistry and the public.
- 5653. DENTAL HEALTH PROGRAMS.** (Cr ar; prereq #) Block, staff
Activities, problems, issues, and administration of dental public health programs at the community, local, state, and federal levels.
- 5654. TOPICS: DENTAL PUBLIC HEALTH.** (Cr ar; prereq #)
Selected readings in dental public health with discussion based on these readings.
- 5655. SEMINAR: DENTAL LITERATURE.** (Cr ar; prereq #) Frazier, Block, staff
Review of current literature pertinent to dental public health; critical examination for design, content, and validity of conclusions.
- 5656. DENTAL HEALTH ADMINISTRATION.** (Cr ar; prereq #)
Management process in the delivery of dental services.
- 5657. INDEPENDENT STUDY: DENTAL PUBLIC HEALTH.** (Cr ar; prereq #) Block, staff
Independent study under tutorial guidance of selected problems and current issues in dental health and dental health services.
- 5658. ECOLOGY OF DENTAL HEALTH.** (Cr ar; prereq #) Block, Meskin, Katz
Role of dentistry in the health care system. Topics include dental epidemiology, dental health education, dental manpower problems, economic and political influences on dentistry, and sociocultural implications for dental health.
- 5659. ANALYSIS OF DENTAL HEALTH EDUCATION.** (Cr ar; prereq #) Block, Frazier
Analysis of dental health education programs from a public health perspective; examination of educational objectives, resources, barriers, methods, target populations and outcomes of current programs in terms of effectiveness and practicality; development of priorities in planning dental health educational programs.
- 5660. FIELD EXPERIENCE: DENTAL PUBLIC HEALTH.** (Cr ar; prereq #) Block, Johnson, staff
Supervised field experience in selected community or public health agencies and institutions.
- 5661. ORAL EPIDEMIOLOGY.** (Cr ar; prereq 5330, 5414, and #) Katz
Application of the concepts, principles, and practices of epidemiology to oral diseases. Topics include dental caries, periodontal disease, oral cancer, oral malformations, and fluoridation. Emphasis on how research designs and methods combine with statistical analysis and common sense to produce valid interpretation of data.
- 5662. COMMUNAL WATER FLUORIDATION: EFFICACY AND SAFETY.** (3 cr; prereq 5661, 5330, 5414 or equiv)
Use of historical as well as current issues to investigate the fluoridation issue from an epidemiological perspective. The biological efficacy and safety of fluoridation. Analysis of pro- and anti-fluoridation literature with emphasis on statistical interpretations and research methodologies employed. Ethical issues related to water fluoridation as a public health measure. Includes design of individual research projects.

Environmental Health

- 3151. INTRODUCTION TO ENVIRONMENTAL HEALTH.** (3 cr; prereq 3 cr in public health) Vesley
Principles of environmental health relating to water, food, wastes, housing, accidents, radiation, air, industrial hygiene.
- 5150. TOPICS IN ENVIRONMENTAL HEALTH.** (Cr ar; prereq #) Staff
Selected readings and discussions of problems in environmental health.
- 5152. ENVIRONMENTAL HEALTH.** (2 cr; prereq #) Straub, staff
General principles of environmental health relating to macro and micro environments and products consumed or used by people.

Environmental Health

- 5155. ENVIRONMENTAL HEALTH.** (4 cr; prereq environmental health students or #) Straub, staff
Methods of promoting human health by controlling environmental factors relating to air, water, food, wastes, accidents, housing, radiation, industrial hygiene.
- 5159. SEMINAR: ENVIRONMENTAL HEALTH.** (Cr ar; prereq #) Staff
- 5161. ADMINISTRATION OF ENVIRONMENTAL HEALTH PROGRAMS.** (3 cr; prereq #) Bond
Administrative organization of environmental health activities.
- 5169. SEMINAR: ENVIRONMENTAL HEALTH ADMINISTRATION.** (Cr ar; prereq #) Bond
- 5170. TOPICS IN ENVIRONMENTAL BIOLOGY.** (Cr ar; prereq #) Staff
Selected readings in environmental biology with discussion of control techniques.
- 5171. ENVIRONMENTAL MICROBIOLOGY.** (3 cr; prereq MicB 3103 or #) Greene
Survival, dissemination, transportation, and significance of microorganisms in the environment; application of principles to environmental health problems.
- 5172. ENVIRONMENTAL MICROBIOLOGY LABORATORY.** (2 cr; prereq 5171, #) Greene, Vesley
Laboratory and field exercises in microbiological sampling, detection, enumeration, and control.
- 5177. PUBLIC HEALTH BIOLOGY.** (3 cr; prereq #) Ruschmeyer
Introduction to plant and animal forms important in environmental health; biological aspects of water supply, waste treatment, stream pollution, and special phenomena related to human disease transmission.
- 5180. TOPICS IN AIR POLLUTION.** (Cr ar; prereq #) Staff
Selected readings in air pollution with discussion based on these readings.
- 5181. INTRODUCTION TO THE AIR POLLUTION PROBLEM.** (3 cr; prereq #) Paulus
History, sources, controls, effects, surveys, legal aspects, administration of programs.
- 5182. AIR POLLUTION CONTROLS AND SURVEYS.** (3 cr; prereq 5181, #) Paulus
Public health engineering approach to air pollution controls and surveys.
- 5183. PROBLEMS OF AIR POLLUTION CONTROL.** (Cr ar; prereq 5181, #) Paulus
Special supervised studies involving laboratory and field investigation procedures; review of pertinent literature.
- 5184. AIR ANALYSIS I.** (3 cr; prereq 5181, 5183 or 5211, #) Paulus
Laboratory and field exercises involving air flow calibration, dynamic calibration of field equipment for analysis of air contaminants, respirable mass sampling, dust counting and sizing, and instrumentation for measuring physical environmental stresses.
- 5185. AIR ANALYSIS II.** (3 cr; prereq 5184, #) Paulus
Laboratory and field exercises involving sampling and analysis techniques for stack sampling and for ambient air monitoring. Group surveys of air pollution problems and special projects.
- 5190. TOPICS IN INJURY CONTROL.** (Cr ar; prereq #) Staff
Directed readings and reports on selected problem areas in injury control.
- 5192. HOSPITAL SAFETY.** (3 cr; prereq #) Scheffler
Theories and practices in accident and fire prevention and control for hospitals and other medical care facilities.
- 5193. CHEMICAL LABORATORY SAFETY.** (1 cr; prereq #) Scheffler
Principles of accident and fire prevention in chemical laboratories.
- 5194. OCCUPATIONAL SAFETY.** (2 cr; prereq #) Scheffler
Occupational safety procedures, environmental controls to reduce injuries on and off the job, safety program development and administration.
- 5200. TOPICS IN RADIOLOGICAL HEALTH.** (Cr ar; prereq #) Staff
Selected readings in radiological health with discussion based on these readings.
- 5201. MEASUREMENT AND APPLICATION OF IONIZING RADIATION.** (3 cr lect and lab; 2 cr lect only; prereq #)
Barber
Introduction to principles of measurement and use of radiative sources; emphasis on health hazards.
- 5202. ENVIRONMENTAL RADIOACTIVITY.** (3 cr lect and lab, 2 cr lect only; prereq #) Barber, Straub
Sources, measurement, evaluation, and control of environmental radioactivity; hazards to general population. Lab assay of environmental samples.
- 5207. RADIATION PROTECTION CRITERIA FOR HOSPITALS.** (2 cr; prereq #) Barber, Wollan
Applied procedures and methods for control of ionizing radiation exposure; emphasis on design, surveys, and evaluation of X-ray facilities and radioisotope laboratories.
- 5209. SEMINAR: HEALTH PHYSICS.** (1 cr; prereq #) Barber
Review and discussion of current health physics problems.
- 5210. TOPICS IN OCCUPATIONAL HEALTH.** (Cr ar; prereq #) Staff
Selected readings in occupational health with discussions based on these readings.

Course Descriptions

- 5211. INDUSTRIAL HYGIENE ENGINEERING.** (3 cr; prereq #) McJilton
Concepts and techniques used in occupational health; emphasis on evaluation of potential hazards and preventive techniques.
- 5212. VENTILATION CONTROL OF ENVIRONMENTAL HAZARDS.** (3 cr; prereq 5211, #) McJilton
Theory and application of exhaust ventilation in control of airborne environmental hazards; principles of exhaust hoods, air moving devices, gas cleaning devices; demonstration of measurement techniques; relationship of hazards and process to ventilation design criteria.
- 5213. PUBLIC HEALTH ASPECTS OF TOXIC PRODUCTS.** (2 cr; prereq 5215) Long
Problems of protecting industrial workers and private consumers from useful but potentially harmful products; product testing programs and administration; labeling problems.
- 5215. APPLIED OCCUPATIONAL TOXICOLOGY.** (3 cr; prereq 5181 or 5211, #) Long
Basic toxicology and physiology with emphasis on environmental contaminants. Special consideration of inhalation toxicology of the work environment and air pollution.
- 5220. TOPICS IN FOOD SANITATION.** (Cr ar; prereq #) Staff
Review of literature and practice to identify association of food sanitation problems with public health.
- 5221. INSTITUTIONAL FOOD PROTECTION PROGRAMS.** (3 cr; prereq #) Jopke
Basic principles of food hygiene; development of an educational program for food service workers; health aspects of regulatory control for public health agencies.
- 5222. FOOD SANITATION.** (3 cr; prereq #) Jopke
Review of current literature on sanitary problems in production, processing, and distribution of milk, meat, shellfish, and other foods. methods of supervision.
- 5230. TOPICS IN INSTITUTIONAL ENVIRONMENTAL HEALTH.** (Cr ar; prereq #) Staff
Review of literature and practice to identify institutional environmental health problems.
- 5231. ENVIRONMENTAL HEALTH AND SAFETY IN HEALTH CARE FACILITIES I.** (4 cr; prereq #) Vesley
Environmental health concepts and problems related to isolation techniques; cleaning, disinfection, and sterilization; laundry processes; food service; physical plants; interdepartmental relationships.
- 5232. ENVIRONMENTAL HEALTH AND SAFETY IN HEALTH CARE FACILITIES II.** (4 cr; prereq #) DeRoos
Ventilation; water supply; plumbing; liquid waste systems; and other environmental engineering problems.
- 5233. BIOHAZARD CONTROL IN BIOMEDICAL LABORATORIES.** (2 cr; prereq 5171, 5231, #) Vesley
Topics include assessment of risk; primary barriers; laboratory design criteria; safety devices and equipment; personnel practices; sterilization and disinfection; laboratory animals; and shipping and disposal of biohazardous agents.
- 5240. TOPICS IN WATER HYGIENE.** (Cr ar; prereq #) Staff
Selected readings and discussions of problems relating to the health aspects of water supply and wastewater systems.
- 5241. ENVIRONMENTAL HEALTH ASPECTS OF WATER SUPPLY.** (3 cr; prereq #) Straub, Singer
Role of water in human health physical, chemical, and biological characteristics; evaluation of source, treatment, and distribution systems.
- 5242. ENVIRONMENTAL HEALTH ASPECTS OF GROUNDWATER SYSTEMS.** (2 cr; prereq #) Singer
Introduction to groundwater geology, quality, and treatment; well design, construction, and maintenance; special references to public and environmental health problems.
- 5244. ENVIRONMENTAL HEALTH ASPECTS OF WASTEWATER SYSTEMS.** (3 cr; prereq #) Straub, Singer
Role of liquid wastes in human health; physical, chemical, and biological characteristics; evaluation of source, treatment, and disposal facilities.
- 5261. ENVIRONMENTAL TOXICOLOGY.** (3 cr; prereq #) Long
Application of toxicology to environmental problems; interpretation and evaluation of data, assessment of potential health hazards, and approaches to solution of problems.
- 8150. RESEARCH: ENVIRONMENTAL HEALTH.** (Cr ar) Staff
Opportunities for qualified students to pursue research in the importance of environmental stresses on human health.
- 8201. RADIATION DOSIMETRY.** (3 cr; prereq #) Barber
Radiant energy absorption in liquids, gases, and solids; absorption in biological systems.
- 8202. RADIATION DOSIMETRY LABORATORY.** (1 cr; prereq 8201) Barber
Laboratory exercises involving principles discussed in 8201.
- 8208. FIELD PRACTICE IN RADIOLOGICAL HEALTH.** (Cr ar; prereq #) Barber
- 8218. FIELD PROBLEMS IN OCCUPATIONAL HEALTH.** (3 cr; prereq 5211, 5212 or 5213, #) McJilton
Guided evaluation of potential occupational health problems; recommendations and design criteria for correction if indicated.

Epidemiology

- 5330. EPIDEMIOLOGY I.** (5 cr; prereq course in microbiology, 5405-5406 or 5450-5451 or #) Schuman, staff
Introduction to basic concepts and mechanisms of infectious and noninfectious disease and maintenance of the healthy state; basic epidemiologic principles applicable to infectious and noninfectious disease; host-agent-environment complex; factors underlying spread of infectious disease; laboratory applications of statistical and epidemiologic methods.
- 5331. FUNDAMENTALS OF BIOSTATISTICS.** (3 cr) Visiting lecturers
Rates, probability methods, statistical inference, sampling distributions.
- 5332. FUNDAMENTALS OF EPIDEMIOLOGY.** (3 cr) Visiting lecturers
Basic epidemiologic concepts and methods of investigation of diseases.
- 5333. BIOLOGICAL BASES AND EPIDEMIOLOGY OF HEALTH AND DISEASE.** (4 cr; prereq course in microbiology and a 3-cr course in biostatistics or #) Schuman, staff
An introduction to basic concepts and mechanisms of infectious and noninfectious diseases, maintenance of the healthy state, and principles of epidemiology illustrative of the factors leading to the rise and fall of disease in populations. Laboratory application of statistical and epidemiologic methods.
- 5335. EPIDEMIOLOGY II.** (3 cr; prereq 5330) Schuman
Extension of epidemiologic principles to detailed study of selected infectious diseases.
- 5336. INFECTIOUS DISEASE EPIDEMIOLOGY.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Factors involved in epidemic occurrence, clinical response to infection, impact on humans of zoonoses, immunologic responses, vaccine evaluation.
- 5337. SEROLOGIC EPIDEMIOLOGY.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Applications of immunologic and biochemical methods to epidemiologic problems of disease.
- 5338. HOSPITAL EPIDEMIOLOGY AND INFECTION CONTROL.** (2 cr; prereq basic epidemiology) Visiting lecturers
Application of epidemiologic methods to investigation and control of hospital risks (infections, drug reactions, accidents, excess costs). Review of collection and use of hospital data for patient care evaluation in the context of current regulatory efforts.
- 5339. EPIDEMIOLOGY OF DISEASES DUE TO DRUGS AND OTHER THERAPIES.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Methods of monitoring, detecting, and investigating diseases and reactions due to medical therapies; specific examples of epidemiologic investigations. Use of intensive hospital monitoring, vital statistics, and drug utilization data in the detection and control of adverse drug reactions. Analyses and discussions of case-control and cohort investigations of adverse reactions due to oral contraceptives, hormones, other drugs, and surgical and diagnostic techniques.
- 5340. EPIDEMIOLOGY: STRATEGIES AND METHODS.** (3 cr; prereq 5330, 5413 and 5414 or equiv, #) Schuman, staff
Measures of disease occurrence and strategies and design principles for etiologic and evaluative studies. Measurement problems, interactions, sensitivity and precision, validity and the need for data specification and control of variables.
- 5341. HEALTH SURVEY METHODS.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Problems of sampling, sample size determination, interview and questionnaire development, and organization of community health research.
- 5342. PUBLIC HEALTH BACTERIOLOGY.** (Cr ar; prereq MicB 5232, 5234, 5216, #) Stickles
Bacteriologic and serologic diagnosis, public health laboratory administration and methods.
- 5345. EPIDEMIOLOGY OF CANCER.** (3 cr; prereq basic epidemiology and biostatistics, 5357 or #5357) Visiting lecturers
Epidemiology of selected cancer sites. Emphasis on existing gaps in knowledge.
- 5346. EPIDEMIOLOGY OF CARDIOVASCULAR DISEASES.** (3 cr; prereq basic epidemiology and biostatistics, 5357 or #5357) Visiting lecturers
Epidemiologic aspects of various types of cardiovascular disease with emphasis on multivariate setting of etiologies.
- 5347. EPIDEMIOLOGY OF MENTAL DISORDERS.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Application of epidemiologic concepts and methods to psychiatric problems. Specific mental disorders.
- 5348. EPIDEMIOLOGY OF NEUROLOGIC DISEASES.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Epidemiologic approach to selected diseases of the nervous system including multiple sclerosis, Parkinsonism, cerebrovascular disease, and malignant diseases and congenital deformities of the central nervous system.

Course Descriptions

- 5349. EPIDEMIOLOGY OF CHRONIC RESPIRATORY DISEASE.** (Cr ar; prereq #) Visiting lecturers
Critical review of the current status of chronic respiratory disease epidemiology and methods. Design and analysis of longitudinal studies.
- 5350. EPIDEMIOLOGIC BASIS FOR HEALTH SERVICES PLANNING AND EVALUATION.** (2 cr; prereq 5330, 5332 or equiv, 5407, 5331 or equiv) Visiting lecturers
Epidemiologic approaches to planning and criteria of evaluation.
- 5353. EPIDEMIOLOGY OF NUTRITIONAL DISEASES AND ABNORMALITIES.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Concepts of the influence of nutritional status on health and disease. Methodologies for assessment of nutrition and relationship of nutrition to major disease problems.
- 5355. GENETICS AND EPIDEMIOLOGY.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Genetic methods of evaluating families; topics in population genetics.
- 5356. POPULATION DYNAMICS.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Historical and current levels and changes in rates of population growth, mortality, natality, migration, etc.
- 5357. SELECTED STATISTICAL TOPICS IN EPIDEMIOLOGY.** (3 cr; prereq basic epidemiology and biostatistics) Kjelsberg, staff
Rate adjustment, relative risk, measures of association, matched pair analyses, force of mortality, estimation of survivorship.
- 5358. RADIATION EPIDEMIOLOGY.** (2 cr; prereq basic epidemiology and biostatistics, advanced statistics) Visiting lecturers
Critical review of the epidemiological studies of the biological effects of radiation exposure on human beings. Emphasis on methodological problems encountered.
- 5359. EPIDEMIOLOGY OF OCCUPATIONAL HAZARDS.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Epidemiologic approaches to occupational hazards. Selected disease examples.
- 5360. EPIDEMIOLOGY OF TRAUMA.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Characteristics of accidents, homicide, suicide, and disasters, and application of epidemiologic principles to their control.
- 5365. EXPERIMENTAL EPIDEMIOLOGY.** (Cr ar; prereq 5335, 5407 or 5450 or equiv, #) Anderson, Diesch
Infectious and noninfectious diseases in laboratory animal populations and simulated environmental conditions. Effect of alterations in agent-host-environment on health and disease under varying controlled experimental conditions measured and evaluated. Results analyzed in terms of application to disease prevention and control programs.
- 5370. APPLIED EPIDEMIOLOGY.** (Cr ar; prereq 5330, 5407 or 5450 or equiv, #) Anderson, Diesch
Application of epidemiologic principles and methods in field studies of outbreaks of disease in cooperation with veterinary medical practitioners, State Livestock Sanitary Board, USDA, State Health Department, and HEW. Application of principles and methods to planning investigations; collecting and analyzing data for proposed prospective and retrospective studies of acute and chronic diseases of animals; analyzing and evaluating field investigations and factors influencing their outcome.
- 5375. BIOLOGICAL BASES OF HEALTH AND DISEASE.** (3 cr; prereq microbiology course or #) Schuman
Introduction to basic concepts and mechanisms of infectious and noninfectious disease and maintenance of the healthy state. Specific diseases utilized as examples or models.
- 5378. DEVELOPMENT OF AND PERSPECTIVES IN EPIDEMIOLOGY.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Historical development of epidemiological concepts and methods presented in seminar-lecture form. Potential for use of these concepts and methods in a broad variety of applications. Interrelationship of past and future developments with those in other disciplines such as statistics, genetics, and sociology.
- 5379. TOPICS IN EPIDEMIOLOGY.** (Cr ar; prereq #) Schuman
Selected readings with discussion based on these readings.
- 8330. RESEARCH IN EPIDEMIOLOGY.** (Cr ar) Schuman
Opportunities for qualified students to pursue research through the School of Public Health and various cooperating organizations.
- 8331. FIELD PRACTICE IN EPIDEMIOLOGIC INVESTIGATIONS.** (Cr ar; prereq epidemiology major, #) Levy, Schuman, staff
Supervised participation in epidemiologic investigations in the field under the auspices of official and voluntary health agencies.
- 8340. EPIDEMIOLOGIC ASPECTS OF CANCER.** (3 cr; prereq 5330) Schuman, staff
Magnitude of problem, epidemiologic background for current research, examples from cancers of selected sites. Emphasis on studies of those factors offering the best potential for cancer prevention.

- 8341. EPIDEMIOLOGY OF SELECTED CHRONIC DISEASES.** (2 cr; prereq basic epidemiology and biostatistics)
Visiting lecturers
Application of epidemiologic concepts and methods to the study of selected chronic diseases other than cardiovascular and cancer; e.g., diabetes, arthritis, chronic respiratory disease.
- 8342. PRINCIPLES AND METHODS OF EPIDEMIOLOGIC RESEARCH.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Advanced techniques in the epidemiologic approaches to disease studies in population.
- 8345. EPIDEMIOLOGIC BASIS FOR CANCER CONTROL.** (2 cr; prereq basic epidemiology and biostatistics, 5357 or 5357) Visiting lecturers
Epidemiologic background and rationale for the development and application of programs for the control of cancer.
- 8346. EPIDEMIOLOGY OF CARDIOVASCULAR DISEASE AND CANCER.** (3 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Epidemiologic aspects of various types of cardiovascular disease and cancer with emphasis on methodologic approaches to their study and the multivariate setting of their etiologies.
- 8356. EPIDEMIOLOGIC ASPECTS OF POPULATION CHANGE.** (2 cr; prereq basic epidemiology and biostatistics) Visiting lecturers
Epidemiologic aspects and health implications of changes in population size, composition, and stability.
- 8379. SEMINAR IN EPIDEMIOLOGY.** (Cr ar; prereq #) Schuman
Discussion of selected current epidemiologic problems.

Health Education

- 5010. INTERPERSONAL BEHAVIOR IN HEALTH ORGANIZATIONS.** (4 cr, §HSU 5010) Gordon, Veninga
Observing, analyzing, and interpreting behavior patterns in human services organizations. Communications skills (listening, feedback, empathy, nonverbal cues); group behavior (agenda setting, decision making, leadership roles); conflict resolution (causes of conflict, strategies for working through conflict).
- 5054. FOUNDATIONS IN COMMUNITY HEALTH EDUCATION PRACTICE.** (3 cr; prereq grad student in health education only, #) Craig, Veninga, Mills
History and development of current concepts of health education practice; representative work settings and related health education opportunities; factors affecting health behavior; learning theory and process, application in commonly used educational methods and materials.
- 5055. ADVANCED STUDIES IN HEALTH EDUCATION I.** (3 cr; prereq grad student in health education only, 5054, #) Craig, Mills
Health education skills; use of mass media, potential and limitations; procedures for organizing, conducting, and evaluating large educational meetings, workshops, working conferences, etc.; written communication; consultation; supervision.
- 5056. ADVANCED STUDIES IN HEALTH EDUCATION II.** (3 cr; prereq grad student in health education only, 5054, 5055, #) Craig, Mills
Elements of comprehensive health/health education planning; theory, process, models for educational planning; fact-finding procedures and models; setting behavioral, content, and methodological objectives; theories, principles, and procedures for evaluating health services and their educational components.
- 5058. SEMINAR: EVALUATION OF COMMUNITY HEALTH EDUCATION PRACTICE.** (1 cr; prereq grad student in health education only, 5068, #) Craig, Mills
Student, agency, staff, and faculty evaluation of experiences in community health education practice; review of student experiences; identification of alternative approaches.
- 5061-5062. COMMUNITY HEALTH EDUCATION LABORATORY.** (5 cr total; 20 hrs per wk; prereq 5054, 5055, 5056) Mills, Craig
Review of the procedures and techniques utilized in collecting health education data; visits to major health resources in the metropolitan area; discussion of goals and organization of each facility visited; representative health education programs and opportunities in the metropolitan area.
- 5063. COMMUNITY HEALTH EDUCATION LABORATORY.** (5 cr; 20 hrs per wk; prereq grad student in health education only, 5061, 5062, #)
Practical experience in community agencies and organizations; background studies in specific health service areas; supervised health education practice; action planning for health education.
- 5065. HEALTH EDUCATION PREPARATION OF HEALTH AND ALLIED PERSONNEL.** (2 cr; prereq grad student in health education only, 5068, #) Craig, Mills, Veninga
Methods, procedures, and techniques for planning, implementing, and evaluating in-service and short-course health education programs for health and allied personnel.

Course Descriptions

- 5068. COMMUNITY HEALTH EDUCATION PRACTICE.** (10 cr; prereq grad student in health education only; 5061-5062, 5063, #) Mills, Craig
One quarter of full-time supervised health education experience in a selected health agency, institution, service, or organized health-related community-based program.
- 5069. COMMUNITY HEALTH EDUCATION PRACTICE.** (6 cr; prereq school health education major only, 5080, #) Mills, Craig
One quarter of half-time experience in community health education activities in selected community health agencies and institutions.
- 5074. GROUP PROCESS IN HEALTH EDUCATION.** (3 cr; prereq grad student in health education only, 5054, #) Veninga
Leadership, role behavior, dependency behavior, and evaluation procedures for task-centered groups. Formulation and implementation of educational groups in the community setting.
- 5080. INTRODUCTION TO COMMUNITY HEALTH EDUCATION.** (2 cr; prereq grad student in health science only, #) Craig, Mills, DeRoos
The role and function of health education as an integral part of health programs and services; basic principles and procedures of health education planning and evaluation; methods, materials, and techniques for community health education.
- 5083. PATIENT EDUCATION IN REPRESENTATIVE HEALTH CARE SETTINGS.** (3 cr; prereq #) Craig, Mills, Veninga
Current theories, principles, methods, procedures, and techniques applicable to patient education in a variety of health care settings; i.e. hospitals, health maintenance organizations, clinics, and health agency services. Planning, implementation, and evaluation of patient education.
- 5098. TOPICS: COMMUNITY HEALTH EDUCATION.** (Cr ar; prereq grad student in health science only, #) Craig, Mills, Veninga, DeRoos
Selected readings in health education. Paper prepared on basis of readings.

Hospital and Health Care Administration

- 3790. INTRODUCTION TO HEALTH CARE DELIVERY.** (4 cr; prereq #)
Survey of the components of the health care delivery system. Emphasis on interdisciplinary examination of professional, organizational, social, and financial forces shaping health care. Lectures, interdisciplinary group discussions.
- 5750. PRINCIPLES OF HEALTH ADMINISTRATION.** (4 cr; prereq #) Westerman, Dornblaser, Sweetland, staff
Management problem solving with emphasis on problem definition. Lectures, seminars, selected health care organization placement.
- 5751. PRINCIPLES OF ORGANIZATION AND MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS.** (4 cr; prereq #) Culbertson
Lectures and discussion seminars on the role of administrators at all managerial levels of health care service organizations; principles of management and the administrative process.
- 5752. CLERKSHIP.** (4 cr; prereq 5750) Bieter, staff
Survey and solution of a management problem within an administrative residency organization and preparation of a formal report.
- 5753. MANAGEMENT PROBLEMS IN HOSPITAL AND HEALTH CARE ADMINISTRATION.** (4 cr; prereq 5750) Westerman, Dornblaser, Sweetland, staff
Assignment and solution of specific managerial problems.
- 5755. ADMINISTRATIVE RESIDENCY.** (Cr ar; prereq #) Dornblaser, staff
Eleven months of fieldwork in an approved health care planning or operating organization, weighted rotation through departments, solution of management problems, and special projects. Preparation of a thesis and formal report.
- 5756. PLANNING PRACTICUM.** (Cr ar; prereq #) Dornblaser, staff
Eight weeks of fieldwork in an approved planning agency, solution of special problems, preparation of a formal report.
- 5757. CRITICAL ISSUES IN AGING.** (6 cr)
Physical, psychosocial, and cultural dynamics of aging (gerontology) and public policy affecting adaptation.
- 5759. MANAGEMENT OF ORGANIZATIONAL BEHAVIOR IN LONG-TERM CARE FACILITIES.** (3 cr) Gordon
Experience-based learning focused on the interplay of power, authority, communication, small group development, leadership, individual and organizational goals, and motivation in the nursing home setting.
- 5762. MANAGING THE EFFECTS OF INSTITUTIONAL LIVING.** (3 cr) Gordon
Applied theory and research on the effects of institutionalization; identifying organizational factors affecting patient care.

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- 5763. HEALTH ORGANIZATIONS, STANDARDS, AND EVALUATION.** (3 cr; prereq #) Staff
Characteristics of health organizations and current standards in the health care field; implications for hospital and health care management; relationship of standards to health care evaluation.
- 5764. PRINCIPLES OF FINANCIAL MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS.** (4 cr; prereq #) Oszustowicz
Principles of financial management including basic accounting and statistical tools; analysis of hospital financial statements; sources and uses of operating and capital funds; long-term finances; audits and internal control; cost finding; budgeting; hospital rates, rate setting, and relationship with third-party payors.
- 5765. HEALTH CARE DEPARTMENTAL OPERATIONS.** (3 cr) Sweetland, staff
The operation, management, and function of most hospital departments. Designed to prepare students for residency.
- 5767. HOSPITAL FACILITIES PLANNING, ROLE AND PROGRAM PLANNING FOR HEALTH CARE ORGANIZATIONS.** (3 cr; prereq #) Sweetland, Bieter
Lectures, discussions, and projects on the planning of hospitals and health care facilities, roles, and programs. Principles, methodologies, and strategies of planning. The complete planning process, roles of various members of the planning team, and external and internal forces.
- 5768. LONG-TERM CARE.** (3 cr; prereq #) Stryker-Gordon
Management within long-term care organizations; emphasis of nursing home administration. Lectures, case studies.
- 5769. CORPORATE HEALTH PLANNING SEMINAR.** (3 cr; prereq #) Orr
Alternative health systems and their planning requirements; planning strategies and technologies; application to planning agency work programs. Lectures, case studies, seminars.
- 5770. TOPICS: HOSPITAL AND HEALTH CARE ADMINISTRATION.** (Cr ar; prereq #) Staff
Selected readings in hospital and health administration with discussion based on these readings.
- 5773. MENTAL ILLNESS AND MENTAL RETARDATION: LEGAL ASPECTS, IMPLICATIONS, AND TRENDS.** (3 cr) Staff
Issues and developments in the legal sphere that affect mental health and mental retardation workers. Prominent legal issues; ways in which these issues develop; resolutions and legal remedies.
- 5775. MANAGEMENT AND ORGANIZATION IN HOSPITAL AND HEALTH CARE FACILITIES.** (15 cr; prereq current employment as health care facility administrator, #) Weckwerth, DeGeyndt, staff
A 12-month program of on-campus residential (3 weeks) and independent study that includes periodic seminars and monthly sessions with clinical preceptors. Management, organizational behavior, problem solving, executive role, personnel management, financial management, and patient care and support services.
- 5776. ADMINISTRATIVE AND PROFESSIONAL RELATIONSHIPS WITHIN THE HEALTH CARE FACILITY.** (15 cr; prereq 5775 or #) Weckwerth, Gordon, Malban, Heinemann, staff
A 12-month program of on-campus residential (3 weeks) and independent study that includes periodic seminars and monthly sessions with clinical preceptors. Organizational behavior, change theory, governance, medical staff, legal aspects, medical records, planning, community health systems, continuing education.
- 5777. EXTERNAL FORCES AFFECTING HEALTH CARE DELIVERY.** (25 cr; prereq 5776 or #) Weckwerth, staff
A 10-month program of on-campus residential (3 weeks) and independent study that includes three regional seminars. Financing, personnel, organizing, social policy, and project planning and design. Requires a project, which can be either a management study or a research thesis. Course ends with a week-long symposium in which students present and defend their projects.
- 5778. PATIENT CARE MANAGEMENT AND ORGANIZATION WITHIN THE HOSPITAL AND HEALTH CARE ORGANIZATION.** (25 cr; prereq present employment as director of nursing or equiv, #) Weckwerth, Danielsen, staff
A 12-month program of on-campus residential sessions (3 weeks), independent study, monthly meetings with clinical preceptors, and one required seminar. Principles of management, organizational behavior, hospital development and organization, personnel management, administrative and professional relationships within the hospital, role of the patient care administrator, legal aspects, budget, policy development, continuing education.
- 5779. MANAGING MULTIPLE FORCES: INTERNAL AND EXTERNAL ASPECTS OF PATIENT CARE ADMINISTRATION.** (Cr ar; prereq present employment as director of nursing or equiv, 5778, #) Weckwerth, Danielsen, Gordon, staff
A 12-month program of on-campus (3 weeks) and independent study that begins with a 1-week introductory residential session each August. Seminars on planning, organizing, staffing, directing, and controlling are scheduled during initial phase of course. Students return to campus the following summer to share and demonstrate the research projects they have prepared with their peers.

Course Descriptions

- 5780. ADMINISTRATION OF LONG-TERM CARE FACILITIES.** (6 cr; prereq courses in principles of management, accounting, business law) Stryker-Gordon, staff
A 16-week program of on-campus residential seminars (5 days) and off-campus independent study that includes general principles of administration and aspects of administrative organization, personnel administration, and fiscal management in the area of long-term care.
- 5781. SERVICES FOR LONG-TERM CARE PATIENTS.** (6 cr; courses in medical terminology, basic health and gerontology recommended) Stryker-Gordon, staff
A 16-week program of on-campus residential seminars (5 days) and off-campus independent study that includes physical and psychosocial aspects of aging, paramedical services, nursing services, environmental standards, statutory and legal requirements.
- 5782. PRACTICUM IN LONG-TERM CARE ADMINISTRATION.** (6 cr; prereq 5780, 5781 or #) Stryker-Gordon, staff
A 300-hour practicum in a nursing home setting under the guidance of a preceptor. Includes a 4-day seminar on campus.
- 5783. BASIC ACCOUNTING AND FINANCIAL REPORTING IN LONG-TERM CARE FACILITIES.** (3 cr) Oszustowicz
Fundamental financial planning for long-term care administrators.
- 5784. FUNDAMENTAL ASPECTS OF PERSONNEL ADMINISTRATION IN LONG-TERM CARE FACILITIES.** (3 cr) Stryker-Gordon, staff
An overview of personnel administration in a long-term care setting. Job descriptions, personnel policies, salary administration, collective bargaining.
- 5785. QUANTITATIVE METHODS APPLIED TO HEALTH ADMINISTRATION PROBLEMS.** (4 cr; prereq hospital administration student or #) Weckwerth
Application of quantitative methods, including analysis of cyclicities, PERT, data handling systems, simple ANOVA, linear programming, cost benefit analysis, and inventory control in the solution of health problems at administrative levels.
- 5786. RESEARCH METHODOLOGY IN HOSPITAL AND HEALTH CARE ADMINISTRATION.** (2 cr; prereq 5404) Litman, Weckwerth
Research design.
- 5787. ADMINISTRATION OF THE LONG-TERM CARE ORGANIZATION.** (15 cr; prereq #) Gordon, Stryker-Gordon, others
Problem solving in management, personnel management, financial management, organizational behavior, and quality assurance areas.
- 5788. PROGRAM MANAGEMENT FOR LONG-TERM CARE.** (15 cr; prereq #) Gordon, Stryker-Gordon, others
Program management for long-term care patients: gerontology, interdisciplinary health care services, environmental control, planning community services, and special needs of the mentally ill, mentally retarded, and chemically dependent patient.
- 5790. SOCIAL, ECONOMIC, AND POLITICAL ASPECTS OF MEDICAL CARE.** (3 cr; prereq #) Dickler
Social, economic, and political forces shaping health care systems; possible future impact of these forces.
- 5791. FINANCIAL ASPECTS OF HEALTH CARE.** (4 cr; prereq #) Oszustowicz
Financial problems associated with current issues in health care delivery. Emphasis on recent legislation affecting sources of capital and control on expenditures for health programs and facilities.
- 5792. LEGAL ISSUES IN HEALTH CARE ADMINISTRATION.** (3 cr; prereq #) Holloway
The law associated with the administration of hospitals and other health care organizations including legislation, administrative law, corporate and business law, labor law, civil liability, and tax-related issues. Legal issues particularly relevant to the administrator and the decision-making and planning processes.
- 5793. HOSPITAL FINANCIAL STATEMENT ANALYSIS.** (3 cr; prereq #) Oszustowicz
Case studies and readings involving the review and analysis of actual hospital financial statements, third-party payer cost reports, and other basic financial documents. Application of key financial ratios to financial statement analysis, tests students' ability to apply concepts presented in winter and spring quarters.
- 5794. FINANCIAL MANAGEMENT SEMINARS.** (3 cr; prereq 5764, 5791) Oszustowicz
Major financial management topics presented by outside experts in the field of public accounting, investment banking, lease financing, insurance counseling, hospital-based physician financial negotiation, rate setting/rate review negotiation, etc. Presentation of papers for class analysis and practical application. Government and third-party payer representatives will discuss the impact of legislation and regulation on health care financial management.
- 5795. THE SOCIOLOGY OF MEDICINE AND HEALTH CARE: AN INTRODUCTION TO MEDICAL SOCIOLOGY.** (4 cr, §Soc 5855) Litman
Social and psychological components of health and medical care. Organization and delivery of health care services, their problems and perspectives; focus on the patient, the provider of care, and the environment within which health care services are dispensed.

Hospital and Health Care Administration

- 5796. INTERNAL OPERATIONS OF A MENTAL HEALTH FACILITY.** (15 cr; prereq 1 year's experience as mental health facility administrator and #) Malban, staff
A 12-month program of on-campus residential (2 weeks) and off-campus independent study that includes periodic seminars and monthly classes under program preceptors; principles of management, organizational behavior, personnel, problem solving and decision making, financial management, mental health professionals and paraprofessionals, and mental health programs and services.
- 5797. EXTERNAL RELATIONSHIPS AFFECTING THE ROLE AND FUNCTION OF THE MENTAL HEALTH FACILITY.** (15 cr; prereq 5796) Malban, staff
A 12-month program of on-campus residential (2 weeks) and off-campus independent study that includes periodic seminars and monthly classes under program preceptors; governance, legal aspects, public education and information, evaluation of mental health programs, prevention and primary treatment in mental health, current trends and concepts, biostatistics and quantitative methods.
- 5798. SOCIAL, POLITICAL, ECONOMIC, AND GOVERNMENTAL FORCES AFFECTING THE ROLE AND SERVICES OF THE MENTAL HEALTH FACILITY.** (25 cr; prereq 5797 or practicing administrator holding an advanced degree with 3 years' experience, and #) Malban, staff
A 12-month program of on-campus residential (2 weeks) and off-campus independent study that includes periodic seminars and monthly classes under program preceptors; completion of special projects, mental health, community, regional, state and national planning, legislation, affirmative action, consumerism and citizen participation, economics of mental health, political and social issues, demonstration and research project.
- 5799. MENTAL HEALTH ADMINISTRATION SEMINAR.** (2-3 cr; prereq mental health administration student) Malban
Readings, group discussion, debate, and presentation of current issues in the mental health field. Field trips. Follow-up to the A. K. Rice Institute experience.
- 8750-8751†. SEMINAR: ALTERNATIVE PATTERNS OF HEALTH CARE.** (3 cr per qtr; offered 1978-79 and alt yrs) Litman
Alternative approaches to health care problems of ambulatory care, the aging, chronic disease, physical rehabilitation, maternal and child care, mental health, and poverty.
- 8752. SEMINAR: COMPARATIVE HEALTH CARE SYSTEMS.** (3 cr; prereq #; offered fall 1979 and alt yrs) Litman
Examination and comparison of the origin and development of various national systems of health care and their relationship to the social, political, economic, and cultural characteristics of the countries involved.
- 8760. TOPICS: HOSPITAL AND HEALTH CARE ADMINISTRATION.** (3 cr; prereq #) Weckwerth, Dornblaser
Independent study under tutorial guidance of selected problems and current issues in health and health care.
- 8761. READINGS IN THEORY AND PRINCIPLES OF HOSPITAL AND HEALTH CARE ADMINISTRATION.** (3 cr; prereq #) Weckwerth, Dornblaser
- 8762. CONTEMPORARY PROBLEMS OF HOSPITAL AND RELATED HEALTH SERVICES.** (3 cr; prereq #) Weckwerth
Current concepts, problems, principles, and future developments in health and health care.
- 8770. HEALTH AND HUMAN BEHAVIOR.** (3 cr; prereq 5795; offered spring 1980 and alt yrs) Litman
The sociology of health and health care, social and personal components of behavior in sickness and in health; community health; relationship of social and cultural factors in the organization and delivery of health care services.
- 8780. ADVANCED STATISTICAL METHODS IN HEALTH CARE RESEARCH.** (3 cr; prereq 5450 or #) Weckwerth
Survey and analysis of the application of nonparametric statistics to health care research.
- 8781. SEMINAR: RESEARCH STUDIES IN HEALTH CARE.** (3 cr; prereq #; offered spring 1979 and alt yrs) Litman
Review and appraisal of design, measuring instruments, research methodology, and findings of contemporary studies in health care.
- 8782. RESEARCH PRACTICUM.** (6 cr; prereq #) Litman, Weckwerth, staff
Summer field experience in health care research. Supervised independent and team research on selected topics and problems in health care.
- 8790. SEMINAR: POLITICAL ASPECTS OF HEALTH SERVICES.** (3 cr; prereq #; offered winter 1979 and alt yrs) Litman
Interrelationships between government, politics, and health care; the political and social basis of health legislation and community decision making in provision and modification of health services.
- 8795. ECONOMIC ASPECTS OF HEALTH CARE.** (3 cr; prereq #) Bognanno
Economic analysis of America's health care sector, emphasizing problems of pricing, production, and distribution. Evaluating health care services as one factor contributing to the nation's health.

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- 8796. TOPICS IN HEALTH ECONOMICS.** (3 cr; prereq economics course, #) Dahl
General principles of health economics are applied to current issues in health such as insurance, licensure, family practice, malpractice, and hospital costs. Models of hospital functioning, area planning, and disease intervention are presented within the framework of economic analysis and used to explain and predict health behavior. Concepts of cost benefit and cost effectiveness analysis are discussed and applied to problems in health care delivery.

Interdisciplinary Studies

- 1034. TOPICS IN ALCOHOL AND DRUG ABUSE.** (Cr ar; prereq #)
Selected readings in alcohol and drug abuse with discussion based on these readings.
- 3001. PERSONAL AND COMMUNITY HEALTH.** (3 cr, §3004) Greene, O'Brien, Rothenberger
Fundamental principles of health conservation and disease prevention.
- 3004. BASIC CONCEPTS IN PERSONAL AND COMMUNITY HEALTH.** (5 cr, §3001, §3033) Greene, O'Brien, Rothenberger
Introduction to scientific, sociocultural, and attitudinal aspects of communicable and degenerative diseases, environmental and occupational health hazards, and alcohol and drug problems. Emphasis on role of education in health conservation, disease control, and drug abuse.
- 3005. INTRODUCTION TO ANATOMY AND MEDICAL TERMINOLOGY.** (3 cr) Heggstad
Method of medical terminology by body system; review of anatomy including the regions and systems of the body.
- 3008. WORKSHOP OR INSTITUTE IN PUBLIC HEALTH.** (Cr ar; prereq advance regis, #) Staff
Special topics, nonregular program, or course in public health for preservice or in-service helping professionals.
- 3030. FUNDAMENTAL ASPECTS OF DRUG ABUSE AND DEPENDENCY.** (3 cr; prereq #) Schwanke, Heilman, Anderson, Pickens, Abuzzahab
Lectures with emphasis on the historical and cultural perspectives of drug use and abuse, and the principles of pharmacology as applied to the various classifications of mood-altering chemicals.
- 3031. DISEASE PROCESS AND SOCIAL IMPLICATIONS OF DRUG DEPENDENCY.** (3 cr; prereq 3030) Heilman, Kincannon, D Anderson
Lectures and discussions with emphasis on theoretical views of the nature of dependency drug use problems and approaches to diagnosis and assessment. Legal and social implications of drug use.
- 3032. COUNSELING THE ALCOHOLIC AND OTHER DRUG DEPENDENT PERSONS.** (3 cr; prereq 3031) Heilman, Kincannon, D Anderson
Application of counseling theory to drug use problems. Various approaches to providing counseling and treatment services. Adolescent development, women and chemical dependency, self-help groups, and other special topics.
- 3033. FUNDAMENTALS OF ALCOHOL AND DRUG ABUSE.** (2 cr) Snowdon, Rothenberger, staff
Lectures, discussions, and readings on the scientific, sociocultural, and attitudinal aspects of alcohol and other drug abuse problems. Emphasis on incidence, prevalence, high risk populations, prevention, and intervention.
- 3034. TOPICS IN ALCOHOL AND DRUG PROBLEMS.** (Cr ar; prereq #)
Selected readings in alcohol and drug use and problems with discussion based on these readings.
- 3035. INTERNSHIP IN CHEMICAL DEPENDENCY COUNSELING.** (3-12 cr; prereq 3032, #) Fabunmi
A 6-month (1000-hour) rotating clinical internship experience designed to strengthen and assess student competencies and skills in selected areas of the chemical dependency continuum of care. Prior experience is considered in designing the student's internship experience and requirements.
- 3036. BASIC HELPING SKILLS.** (4 cr; prereq #) Armstrong, Fabunmi, Fischer
Lectures, small group discussions, role playing, and modeling to provide the background and skills required to establish effective helper/helpee relationships. Emphasis on learning and practicing basic interpersonal skills critical in helping others.
- 3037. HELPING THE CHEMICALLY DEPENDENT FAMILY.** (3 cr; prereq advance application, #) Hawkins, Fischer, staff
Lectures and small group discussions to increase understanding and awareness of family dynamics and develop strategies for including family members in the treatment and recovery process.
- 3038. ADVANCED HELPING SKILLS.** (4 cr; prereq 3036) Fischer, Fabunmi, Armstrong
Designed to train students to facilitate the client's exploration of self and understanding of problem, assist in setting appropriate therapeutic goals, and facilitate implementation of action programs. Views of the helping process approached from the frameworks of: 1) systematic skills training; 2) social-influence theory; and 3) learning theory. Extensive use of videotape assists students in obtaining feedback.

- 5004. FIELD INSTRUCTION IN PUBLIC HEALTH.** (Cr ar; prereq #)
Generalized, function-oriented, or discipline-oriented community experience under academic and professional supervision. Emphasis on application of acquired knowledge and skills to relevant health issues and problems.
- 5005. TOPICS IN PUBLIC HEALTH.** (Cr ar; prereq advance proposal, #) Staff
Individualized, directed instruction. Selected readings in public health with discussion based on these readings.
- 5006. INTRODUCTION TO COMMUNITY HEALTH.** (5 cr; prereq nursing student, public health student, other health professional or #) Greene
Lectures, discussions, seminars, and readings on critical and current issues in community health, emphasizing public health programs and controversies.
- 5007. HEALTH LEADERSHIP AND EFFECTING CHANGE.** (4 cr, §HSU 5007) Staff
Leadership qualities and their effect on organizational behavior. Theories of change and their practical application to the health field. The changing role of the health professional.
- 5008. WORKSHOP IN PUBLIC HEALTH**
Special topics, nonregular program, or course in public health for preservice or in-service helping professionals.
- 5009. HONORS COURSE: ISSUES AND CONTROVERSIES IN CONTEMPORARY COMMUNITY HEALTH.** (3 cr; prereq 3001, 3004, 5006 or equiv, advance application, #) Greene, staff
Current issues and controversies in health. The balance between personal and community needs, interests, rights, and responsibilities. Limited field assignment.
- 5010. INTERPERSONAL BEHAVIOR IN HEALTH ORGANIZATIONS.** (4 cr, §HSU 5010) Gordon, Veninga
Observing, analyzing, and interpreting behavior patterns in human services organizations. Communications skills (listening, feedback, empathy, nonverbal cues), group behavior (agenda setting, decision making, leadership roles); conflict resolution (causes of conflict, strategies for working through conflict).
- 5011. HUMAN RESOURCES MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS.** (4 cr) Pyle
Introduction to concepts in human resource management as they apply to health services organizations. Relationship between human resources management and general management, nature of work, nature of human resources, compensation and benefits, personnel planning, recruitment and selection, training and development, employee appraisal and discipline, and union-management relations.
- 5012. FINANCIAL MANAGEMENT IN HEALTH SERVICES ORGANIZATIONS.** (4 cr; prereq #) Oszustowicz
Financial requirements to meet legislative, employer, and community demand for health care services. Operational, capital, and cash flow budget management. Seminars reinforce lectures when appropriate.
- 5013. INTERDISCIPLINARY TEAM TRAINING IN HEALTH SERVICES DELIVERY.** (3 cr, §HSU 5001, 5300; prereq #) Schwanke
Basics of interpersonal, group communications with application to team health projects, organization, function, and membership. Lectures, readings, and discussions are heavily supplemented by experiential methods and activities to develop attitudes, skills essential to effective team goal setting, decision making, problem solving, and task accomplishment. Emphasis through student projects is on team leadership styles, professional roles and functions, active listening, giving and receiving feedback, and conflict resolution to enhance quality of project outcome.
- 5020. PUBLIC HEALTH SOCIAL WORK INTEGRATIVE SEMINAR.** (1 cr; prereq MSW/MPH major) Schwanke, Nevin, Stufflefield
Student-faculty-practitioner presentations and discussions aimed at building an integrated public health social work professional identity by synthesizing from both fields the historical developments, philosophies and concepts, roles and functions, trends, and professional values and ethics relevant to PHSW practice.
- 5024. HEALTH ASPECTS OF AGING.** (3 cr, §PE 5403; prereq upper division or grad student)
Social, cultural, psychological, and economic factors associated with health problems and care of the aging. Development of personal insight into the aging process as related to self, family members, and preparation for professional work with the aging.
- 5025. HEALTH AND THE CONSUMER.** (4 cr; prereq #) Greene
Facts, fads, fables, and frauds associated with the purchase of health products and services in the marketplace.
- 5031. MENTAL HEALTH.** (3 cr; prereq #)
Emotional factors underlying wholesome family relations or interfering with successful adjustment in family and community.
- 5032. EDUCATIONAL ASPECTS OF DRUG USE AND ABUSE.** (3 cr, §Hlth 5400; prereq education sr, certified tchr, school nurse or #) Kincannon, Borstad
Background information on alcohol and other drugs with emphasis on curriculum concepts, teaching methodology, materials, and referral procedures appropriate for elementary, junior high, and senior high schools.

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- 5033. FUNDAMENTALS OF ALCOHOL AND DRUG PROBLEMS.** (3 cr) Kincannon, Rothenberger
Lectures, discussions, and reactions on the scientific, sociocultural, and attitudinal aspects of alcohol and other drug problems. Emphasis on nature, prevalence, high risk populations, prevention, and intervention.
- 5034. TOPICS IN ALCOHOL AND DRUG PROBLEMS.** (Cr ar; prereq advance proposal, #)
Individualized, directed instruction. Selected readings in alcohol and drug problems with discussion based on these readings.
- 5035. CONTRIBUTORS TO ALCOHOL AND DRUG PROBLEMS.** (3 cr) Kincannon
Lectures and readings to help health professionals understand the various pharmacological, genetic, behavioral, psychological, sociological, and cultural contributors to alcohol and drug problems. Theories of drug problem causation.
- 5036. GROUP COUNSELING IN CHEMICAL DEPENDENCY.** (3 cr; prereq #) Pletcher
Lectures and group discussions and/or exercises aimed at enhancing communication skills that will enable students to facilitate and participate in group counseling activities.
- 5037. SEMINAR IN PREVENTION OF ALCOHOL AND DRUG PROBLEMS.** (3 cr; prereq 5035 or #) Kincannon
Discussions to help health professionals contribute to the prevention of various pharmacological, genetic, behavioral, psychological, sociological, and cultural contributors to drug problems.
- 5038. COMMUNICATION SKILLS DEVELOPMENT FOR HELPING PROFESSIONALS.** (Cr ar; prereq #)
Schwanke, Kurzman-Seppala
Combines theoretical and practical aspects of communications and group dynamics with emphasis on verbal, nonverbal, and group process skill development. Includes films, exercises, and small group discussions designed to explore how feelings, attitudes, values, conflict, and interpersonal dynamics relate to the development of trust, self-awareness, active listening, sharing, and understanding peer pressures.
- 5039. ALCOHOL AND DRUG PROBLEMS: ASSESSMENT AND RESPONSE.** (3 cr; prereq 5035 or #) Kincannon
Lectures and readings to help health professionals assess and appropriately respond to the most common alcohol and other drug-related problems. Screening, referral, description of ideal resources, areas of controversy.
- 5040. DEATH EDUCATION IN CONTEMPORARY SOCIETY.** (3 cr, §Hlth 5402, §Mort 5040; prereq education sr, certified tchr, school nurse, mortuary science major or #) Fredlund
Concepts and attitudes toward death, grief, and bereavement with emphasis on instructional aspects for elementary and secondary schools, and the school's role in suicide prevention.
- 5517. SEMINAR: PATIENT CARE AND REHABILITATION IN THE COMMUNITY.** (Cr ar; prereq grad student in health sciences)
Multidisciplinary approach in developing community programs for patient care.
- 5519. ADULT AND GERIATRICS: HEALTH MAINTENANCE, LONG-TERM CARE, AND REHABILITATION.** (Cr ar; prereq #)
Independent study. Comprehensive multidisciplinary approach in the maintenance of health and the continuity of long-term patient care.
- 5520. FIELD EXPERIENCE: PHYSICAL AND OCCUPATIONAL THERAPY IN COMMUNITY AGENCIES.** (Cr ar; prereq #)
Individualized, directed experiences in local, county, and state health departments and other health agencies.
- 8001. SEMINAR: PUBLIC HEALTH.** (Cr ar)
- 8002. FIELD OBSERVATION OF SELECTED PUBLIC HEALTH PRACTICES.** (Cr ar)
- 8003. RESEARCH.** (Cr ar)
Opportunities for qualified students to pursue research.
- 8519. DIRECTED RESEARCH.** (Cr ar; prereq 5510, 8510 or PMed 8192)
Guided research for occupational and physical therapists or other rehabilitation professionals in community health programs.

Maternal and Child Health

- 5610. PRINCIPLES, PROBLEMS, AND ISSUES IN MATERNAL AND CHILD HEALTH.** (3 cr; prereq grad student or #) ten Bensel
Introduction to current issues related to the health needs of families, mothers, and children with emphasis on principles of primary care, health maintenance, preventive care, organization, and evaluation.
- 5611. PROBLEMS AND PROGRAMS IN MATERNAL AND CHILD HEALTH.** (3 cr; prereq 5610 or #) ten Bensel, staff
Current programs and problems of MCH programs, including C&Y, MIC, family planning, nutrition, dental, EPSDT, neonatal intensive care, SIDS, and school health. Community program leaders participate in class discussion.

Maternal and Child Health

- 5612. HUMAN GENETICS AND PUBLIC HEALTH.** (3 cr; prereq #) Schacht
Evaluation of current studies in human genetics and applications to community health.
- 5613. CHRONIC AND HANDICAPPING CONDITIONS OF CHILDREN.** (3 cr; prereq 5610 or #) ten Bensel, staff
In-depth look at the epidemiology, identification, management, follow-up, and prevention of chronic and handicapping conditions of children. Community programs related to emotional, physical, and intellectual handicaps.
- 5614. FIELD EXPERIENCE IN MATERNAL AND CHILD HEALTH.** (Cr ar; prereq 5610, 5611 or #) ten Bensel, staff
Field experiences are selected by the student to meet his or her career goals.
- 5615. HEALTH OF THE SCHOOL-AGE CHILD.** (3 cr; prereq 5610; grad student, or #) Fredlund, staff
Review of major health problems among school-age children, methods of providing and evaluating school health services.
- 5616. THE RIGHTS OF CHILDREN: NEGLECT AND ABUSE.** (4 cr) ten Bensel
The rights of children and neglect and abuse of children. Interdisciplinary approach. Topics include historical and legal aspects of the problem, identification and reporting procedures, family assessment and treatment modalities, follow-up processes, research, prevention, and implications for societal action. Designed for health, social work, legal, and educational personnel. Lectures and discussions. Experts from the community will participate.
- 5617. SEMINAR IN MATERNAL AND CHILD HEALTH-MENTAL HEALTH.** (3 cr; prereq #) Williams
Seminar in mental health aspects of maternal and child health programs structured around the individual needs of participants. Selected readings assigned and a paper required.
- 5618. YOUTH AND HEALTH: AN INTRODUCTION.** (3 cr. §YoSt 5133) Baizerman
Age-specific morbidity and mortality data regarding youth used as basis for class discussion and individual work on health topics important to a youth population. Introduction of a youth development concept for use in problem analysis.
- 5619. SOCIAL WORK ASPECTS OF MATERNAL AND CHILD HEALTH PROGRAMS.** (2 cr; prereq 5611 or #) Bamford
Discussion of the programs presented in PubH 5611 with onsite presentations of the social work aspects of these programs.
- 5621. MCH STUDENT SEMINAR.** (1 cr; prereq MCH grad student) ten Bensel, staff
Biweekly discussion group allowing interaction between MCH students and faculty. Format decided by students; includes presentation of topics of student interest. MCH faculty members act as resource persons.
- 5622. WOMEN'S HEALTH: ISSUES AND CONTROVERSIES.** (4 cr; prereq #) Turnquist
Current issues and controversies affecting women's health care viewed from a historical perspective. Methods of delivery of services, professional and consumer education, current literature, underserved populations. Guest speakers from community participate.
- 5623. ETHICS IN HEALTH AND SOCIETY.** (3 cr; prereq #) Blum
Major moral problems confronting health personnel and the public related to prevention, medical treatment, research, and public health policy. Topics include the management of death, genetics engineering, confinement and mental illness, abortion, informed consent and truth-telling in physician-patient relationships, and distributive justice in the allocation of scarce medical resources. Emphasis on relationships between individual decision making and institutional policies.
- 5624. INTERNATIONAL HEALTH.** (Cr ar. §Ped 5525; prereq #) McKay, Olness, Venters
Major health care problems in developing countries, political and economic constraints involved, and realistic possibilities for solution. Nutritional disturbances, tropical diseases, socioeconomic factors of family health, the role of folk medicine as a health resource, the use of health auxiliaries and the role of the physician in training them, factors that play a crucial role in patient acceptance.
- 5625. SEMINAR ON CHILD ABUSE AND NEGLECT.** (2 cr; prereq 5616 or #)
Designed for individuals who wish greater depth of knowledge in child abuse and neglect. The student selects a topic area in child abuse and neglect for presentation to the class. Discussion format, decided on by the students and faculty.
- 5626 (formerly 5620). MATERNAL CHILD HEALTH NURSING SEMINAR I.** (2 cr. §5620; prereq MCH/PHN grad student or #) Fredlund
Selected maternal and child health nursing issues and problems. Students help select topics and lead discussions.
- 5627 (formerly 5620). MATERNAL CHILD HEALTH NURSING SEMINAR II.** (2 cr. §5620; prereq MCH/PHN grad student or #) Fredlund
Practical approaches to solving maternal and child health nursing problems, and to providing nursing leadership intervention.
- 5639. PREVENTION: THEORY, PRACTICE, AND APPLICATION IN PUBLIC HEALTH SERVICE.** (4 cr; prereq #)
Designed for students (undergraduate, graduate, or continuing education) and professionals in health and

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- related disciplines interested in current issues and controversies concerning prevention and how it relates to the health services. Emphasis on history, idea of prevention, terminology, lifestyle intervention, programs and legislative issues, education, roles, and implications for societal action.
- 5640. CHILD ABUSE AND NEGLECT SEMINAR FOR SCHOOL PERSONNEL.** (1 cr) ten Benschel
Designed for teachers, administrators, nurses, and other school personnel dealing with child abuse and neglect. Historical overview of terminology and dynamics of, the school's and community's role in, and prevention of child abuse and neglect. Intended to increase awareness of child abuse and neglect in the schools and to provide material for teachers to incorporate in their curricula.
- 5641. CHILD ABUSE AND NEGLECT IN THE JUVENILE JUSTICE SYSTEM.** (2 cr; offered during summer as part of the Juvenile Justice Institute)
Designed for juvenile justice personnel. Historical aspects of child abuse, terminology, identification, dynamics, outcomes, treatment programs, the role of the police and courts, and prevention programs. Includes a paper on some aspect of the juvenile justice system regarding child abuse and neglect or a critique of an actual case.
- 5649. TOPICS: MATERNAL AND CHILD HEALTH.** (Cr ar; prereq #) Staff
Selected readings and problems.

Physiological Hygiene

- 3385. PHYSIOLOGICAL HYGIENE.** (4 cr; prereq NSci 1004, 1005, 4 cr human anatomy, #) Alexander, Taylor, Serfass
Introduction to applied physiology; basic principles and facts.
- 3386. PHYSIOLOGICAL HYGIENE.** (4 cr; prereq 3385 or equiv) Alexander, Taylor, Serfass
Relationship of exercise, nutrition, environment, and age to performance and health.
- 5380. APPLIED HUMAN NUTRITION.** (3 cr; prereq Biol 3021 or equiv) Leon
Food composition and functions; energetics; assessment of nutritional adequacy in individuals and populations; protein-calorie insufficiency; food-drug interactions; food additives; management of obesity (behavior modification and exercise); importance of food fiber; nutrition and dental health; relationship of diet to blood lipids and coronary heart disease.
- 5385. PHYSIOLOGY OF EXERCISE.** (Cr ar; prereq Phst 5101 or equiv, #) Taylor, Leon
Effects of exercise conditioning and deconditioning on body composition, metabolism and function.
- 5386. THE PUBLIC HEALTH ASPECTS OF CARDIOVASCULAR DISEASES.** (3 cr; prereq basic epidemiology and biostatistics) Blackburn, Gillum, staff
Evaluation of population studies and trials on cardiovascular diseases; modifiable risk factors for coronary heart disease; prevention of other types of heart disease.
- 5387. DETECTION OF CORONARY HEART DISEASE.** (4 cr, §PE 5387; limited to 12 students; prereq introductory anatomy and physiology, #) Crow, Leon, Primeas
Coronary circulation; pathophysiology of atherosclerosis; clinical manifestations of coronary heart disease; relationship of exercise physiology to coronary heart disease; blood pressure determination; resting and exercise ECG interpretation.
- 5388. EXERCISE TESTING, CONDITIONING, AND REHABILITATION.** (4 cr, §PE 5388; prereq 5387) Crow, Leon, Serfass
Exercise testing, prescription, and programs for healthy adults and rehabilitation of cardiac myocardial patients, cardiopulmonary resuscitation.
- 5389. PRACTICAL EXPERIENCE: GRADED EXERCISE TESTING PRESCRIPTION AND DIRECTION.** (2-6 cr, §PE 5389; prereq 5388) Crow, Leon, Serfass
Participation in exercise testing, conditioning, rehabilitation, and/or coronary risk factor modification programs.
- 8385. SEMINAR: PHYSIOLOGICAL HYGIENE.** (1 cr) Staff
Nutrition, tests, measurements of human physical fitness; gerontology; adaptation in health and disease; body composition; circulatory dynamics; related topics.
- 8386. READINGS IN PROBLEMS OF PHYSIOLOGICAL HYGIENE.** (Cr ar; prereq #) Staff
- 8387. RESEARCH: PHYSIOLOGICAL HYGIENE AND RELATED AREAS.** (Cr ar) Staff

Public Health Administration

- 5700. PUBLIC HEALTH ADMINISTRATION.** (Cr ar; prereq #)
Structure, basic functions, and activities of public health agencies.

- 5701. PUBLIC HEALTH ADMINISTRATION ISSUES.** (Cr ar; prereq 5700 and #)
Issues and problems affecting public health agencies and the interrelationships of public health agencies in the community.
- 5702. PUBLIC HEALTH ADMINISTRATION CLERKSHIP.** (Cr ar; prereq 5701)
Assignment to the State Health Department or other health agency for supervised work on a project of limited scope and preparation of a formal report.
- 5704. FIELD EXPERIENCE: PUBLIC HEALTH ADMINISTRATION.** (Cr ar; prereq 5701)
Supervised field experience at a management level in selected community or public health agencies and institutions.
- 5705. BASIC SOCIAL SCIENCE RESEARCH SKILLS FOR PUBLIC HEALTH ADMINISTRATION.** (Cr ar; prereq #)
Role of the social research process in public health administration. Designed for students whose primary professional role is administrative and who desire an understanding of how to approach a health problem using social research methods.
- 5711. PUBLIC HEALTH LAW.** (4 cr; prereq #) McInerney
Introductory course for those with little or no formal legal background. Basic concepts of the law, legislative process, legal bases for the existence and administration of public health programs, legal aspects of current public health issues and controversies, the regulatory role of government in the health services system.
- 5749. TOPICS: PUBLIC HEALTH ADMINISTRATION.** (Cr ar; prereq #)
Selected readings in public health administration with discussion based on these readings.

Public Health Nursing

- 5500. PUBLIC HEALTH—NORMAL GROWTH AND DEVELOPMENT.** (4 cr; prereq #) Pflug, Leonard, staff
Critical analysis of selected theories of physical and psychosocial development; emphasis on developmental stages throughout the life span of an individual. Administration and interpretation of selected developmental and psychological screening tests. Application through laboratory exercises and experiences.
- 5501. PUBLIC HEALTH-MENTAL HEALTH NURSING.** (4 cr; prereq #) Pflug, Anderson, Reynolds
Clinically oriented course with emphasis on systems approach to viewing families. Students are expected to develop their own philosophy and theoretical framework for family intervention built on theories presented and to apply theories in clinical situation. Class presentations, seminar discussions, audiotaping, peer review, and student-faculty conferences.
- 5502. PUBLIC HEALTH: PREVENTIVE ASPECTS OF COMMUNITY HEALTH ASSESSMENT.** (4 cr; prereq #) E Anderson, Pflug, Reynolds
The community viewed as a system. Emphasis on the process of community or program assessment and development relative to preventive aspects.
- 5510. RESEARCH METHODOLOGY IN NURSING.** (3 cr) Staff
Selected research studies in nursing; development of models and theories in nursing research; steps in formulating a research design.
- 5525. NURSING IN FAMILY PLANNING.** (3 cr; limited to 20 students; prereq RN or #) Fredlund
Masculine-feminine adaptation to the psychosocial and physiological dimensions of family planning. Designed to help nurses contribute more effectively to the delivery of maternal and family health care in the community.
- 5526. MATERNITY NURSING: PUBLIC HEALTH PERSPECTIVE.** (3 cr; limited to 20 students; prereq BA in nursing) Fredlund
Focus on the expectant family in the community. Designed to help public health nurses increase their skills in working with pregnant women and their significant others. Emphasis on adaptation to the psychosocial and physical dimensions of pregnancy and the integration of the new infant into the family unit. Clinical experience is not included.
- 5535. CONTEMPORARY SCHOOL NURSING.** (3 cr; prereq #) Fredlund
Changes occurring in school health programs with emphasis on the changing role of the public health nurse. Review of related research.
- 5537. SCHOOL NURSING FOR HANDICAPPED CHILDREN.** (3 cr; prereq school nurse) Fredlund
Designed to meet the needs of school nurses in working with handicapped children, their families, and their teachers.
- 5538. CHILD-CENTERED SCHOOL NURSING.** (3 cr; prereq school nurse) Fredlund
Designed to help practicing school nurses better understand their role in providing health services and health education for school children. Recent trends in school nursing. The team approach in meeting children's health needs. Opportunities to focus on special problem areas as designated by the class. Lectures, discussions, student projects, films.

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- 5539. HEALTH ASSESSMENT OF CHILDREN FOR NURSES.** (5 cr; limited to 20 students; prereq #) Kempf, staff
Introduce on to nursing assessment of children's health status, birth through adolescence. Problem-oriented approach to health care through use of subjective and objective data (including physical inspection), and developmental, psychosocial, and physical assessment. Application through selected assignments and laboratory experience.
- 5560. FOUNDATIONS IN AMBULATORY CHILD HEALTH CARE I.** (8 cr; prereq admission to Pediatric Nurse Associate Program, #) Leonard, Woodbury, Kempf, Robertson
Focus on preparing the nurse to perform comprehensive health appraisals on children from birth through adolescence, review of anatomy and principles of examination; supervised clinical experience.
- 5561. FOUNDATIONS IN AMBULATORY CHILD HEALTH CARE II.** (8 cr; prereq RN in Pediatric Nurse Associate Program, #) Leonard
Second course in three-course series designed to provide basic knowledge and clinical experience necessary to assess children's health from birth through adolescence and to manage child health care within the family and community environments. Focus on knowledge, normative criteria, and clinical skills for assessing the health of school-age children and adolescents.
- 5562. FOUNDATIONS IN AMBULATORY CHILD HEALTH CARE III.** (8 cr; prereq RN in Pediatric Nurse Associate Program, #) Leonard, Woodbury, Kempf, Robertson
Final course in a three-course series designed to prepare the nurse for a primary role in ambulatory child health care. Focus on deepening knowledge and skills in treatment and management of common health care problems of children and their parents. Collaborative roles in health care delivery.
- 5575. TOPICS: PUBLIC HEALTH NURSING.** (Cr ar; prereq #) Staff
Selected readings in public health nursing with discussion based on these readings.
- 5576. ISSUES, TRENDS AND PUBLIC HEALTH NURSING LEADERSHIP.** (4 cr; prereq #) Staff
Designed to investigate and conceptualize master's level public health nursing leadership through analysis of public health issues and trends.
- 5580. ADULT/GERIATRIC NURSE PRACTITIONER CERTIFICATE PROGRAM I.** (8 cr; prereq #) Ostwald, Miedema, Lentsch, Shepard
Course I of a 3-quarter sequence leading to a certificate. Focus is on application of communications and preventive health care theories; principles and skills of complete health assessment of adults. Supervised clinical experience with physician preceptors in community primary care settings.
- 5581. ADULT/GERIATRIC NURSE PRACTITIONER CERTIFICATE PROGRAM II.** (9 cr; prereq #) Ostwald, Miedema, Shepard
Knowledge and clinical skills necessary to collaboratively manage adults with minor acute and chronic problems. Focus is on patient education, counseling, and continuity of care. Supervised clinical experience with physician preceptors in community primary care settings.
- 5582. ADULT/GERIATRIC NURSE PRACTITIONER CERTIFICATE PROGRAM III.** (10 cr; prereq #) Ostwald, Miedema, Shepard
Course III of 3-quarter sequence leading to a certificate. Focus is on role implementation with application of theories of nursing, role change, intra- and inter-professional collaboration, conflict resolution, and quality assurance. Emphasizes management of patients with selected complex physical and psychosocial problems, use of community resources, development of joint practice statements and protocols. Clinical experience includes options for independent study of role implementation.
- 8503. CLINICAL SEMINAR: ADVANCED COMMUNITY NURSING I.** (Cr ar; prereq #) Reynolds
Selected clinical experiences with mentally ill patients, including a multidisciplinary approach to their total care. Related theory.
- 8504. CLINICAL SEMINAR: ADVANCED COMMUNITY NURSING II.** (Cr ar; prereq #) Reynolds
Focus on families with health problems, maternal and child health, and chronic illness. Utilizes behavioral and mental health concepts.
- 8505. PUBLIC HEALTH NURSING IN THE GROUP SETTING.** (3 cr; prereq #) Veninga, Fredlund, staff
Opportunity for working with small groups in the community with emphasis on the group method of providing public health nursing services.
- 8510. DIRECTED RESEARCH.** (Cr ar; prereq 5510) Staff
Guided study in research designs.
- 8511. DIRECTED RESEARCH.** (3 cr; prereq 5510, 8510) Staff
Guided completion of a research study.
- 8530. EDUCATION, SUPERVISION AND CONSULTATION IN PUBLIC HEALTH NURSING.** (Cr ar; prereq #) Fredlund, staff
Analysis of theoretical concepts and frameworks of public health nursing, education, supervision, and consultation as they apply to the practice of public health nursing. Focus on conceptual skill development.
- 8531. PRACTICUM IN ADVANCED PUBLIC HEALTH NURSING PRACTICE.** (6 cr; prereq 8530, grad student nearing program completion) Fredlund, staff
Designed to promote integration of theory and experiential learning. Synthesis and application of the

concepts of advanced public health nursing practice. Field experience in an educational, supervisory, or consultative situation with an appropriate preceptor.

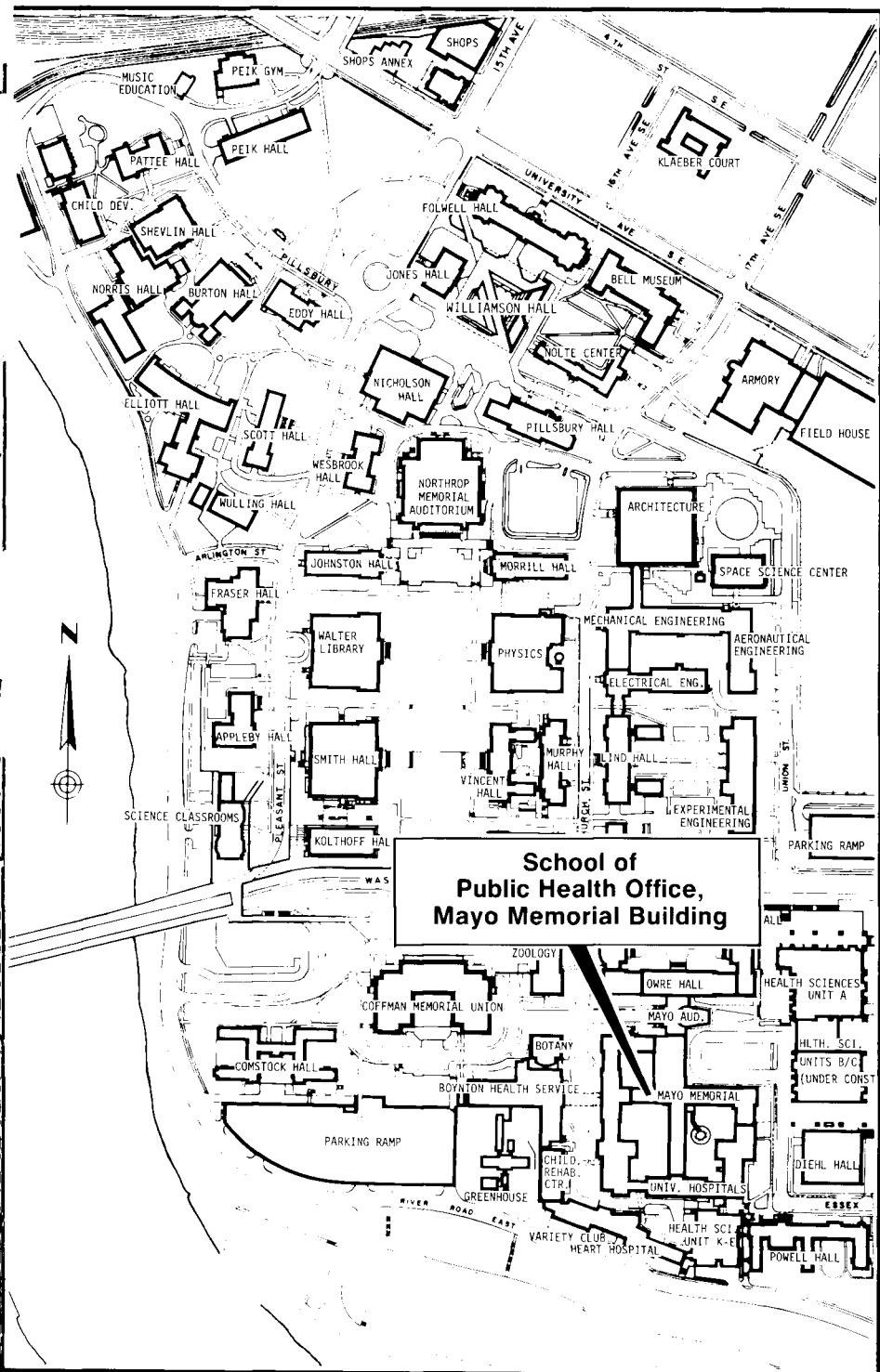
- 8535. SEMINAR: SCHOOL NURSING WITH RELATED FIELD EXPERIENCE.** (Cr ar; prereq #) Fredlund
Public health nursing in the school setting. Emphasis on the school nurse coordinator role and selectively on the practitioner role.
- 8570. FOUNDATION COURSE IN ADULT/GERIATRIC HEALTH CARE.** (Cr ar; prereq #) Miller, Russell
Focus on increasing the quality and quantity of health care available to the consumer by preparing the nurse to perform comprehensive health appraisals of adults based on knowledge of anatomy, physiology, psychology, and sociology. Supervised clinical experience.
- 8571. FOUNDATION COURSE IN ADULT/GERIATRIC HEALTH CARE II.** (Cr ar; prereq #) Miller, Russell
Second course in a three-course series designed to expand the nurse's understanding capabilities in history taking, physical assessment and management. Focus on recognition and interpretation of signs and symptoms revealed by the assessment and implementation of the plan of care. Supervised clinical experience.
- 8572. FOUNDATION COURSE IN ADULT/GERIATRIC HEALTH CARE III.** (Cr ar; prereq #) Miller, Russell
Final course in a three-course series designed to prepare the nurse to provide total adult health care. Focus on knowledge and clinical experience related to assessment and management of adult health care within the family and community environments, and on collaboration with other health care professionals. Supervised clinical experience.

Public Health Nutrition

- 3600. HUMAN NUTRITION.** (3 cr; prereq courses in chemistry and biology or #) Brown, Fleming
Principles of nutrition, application to individual and family eating patterns, nutritional aspects of selected community problems or programs.
- 5380. APPLIED HUMAN NUTRITION.** (3 cr; prereq Biol 3021 or equiv or #) Leon
Food composition, nutrient requirements, nutrition surveys, public health programs in nutrition, food-drug interactions, problems of malnutrition and overnutrition, physical activity and health.
- 5600. FIELD COURSE IN PUBLIC HEALTH NUTRITION.** (Cr ar; prereq #) Brown, Fleming, Strauss
Placement in an approved agency with opportunity for experience in nutritional aspects of public health programs.
- 5601. SEMINAR: PUBLIC HEALTH NUTRITION.** (Cr ar; prereq #) Staff
- 5602. MATERNAL AND CHILD NUTRITION.** (2 cr; prereq #) Brown
Nutrient functions and requirements throughout pregnancy, lactation, infancy, and childhood through adolescence.
- 5603. NUTRITIONAL ASSESSMENT.** (2 cr; prereq #) Brown
Methods used to assess nutritional status of populations and individuals throughout the various stages of the life cycle.
- 5604. FACTORS AFFECTING NUTRITIONAL BEHAVIOR.** (2 cr; prereq #) Fleming
Basic factors involved in the formation of food habits; method used to modify food habits and to promote and maintain nutritional health of individuals or groups.
- 5605. PRINCIPLES OF PUBLIC HEALTH RESEARCH.** (3 cr; prereq grad status, completion of or concurrent regis in course in statistics or vital statistics) Fleming
Designed to prepare students to critically evaluate public health research literature and to undertake independent research projects. Formulation of the research question, research design, sampling techniques, use of research concepts, and data analysis. Data collection techniques examined include questionnaires, interviews, structured and unstructured observation, data analysis, and secondary analysis of existing data.
- 5608. CURRENT NUTRITION ISSUES IN PUBLIC HEALTH.** (3 cr) Brown
Current issues in national and international nutrition and the prevention or resolution of problems through various public health disciplines.
- 5609. TOPICS IN PUBLIC HEALTH NUTRITION.** (Cr ar; prereq #) Staff
Independent study

Veterinary Public Health

- 5300. COMPARATIVE MEDICINE AND PUBLIC HEALTH.** (2 cr; prereq #) Anderson, Diesch
Survey of comparative medicine in human relationship to the biologic environment; interrelationship between animal and human health, sources of animal diseases; ecology of zoonoses; food production and hygiene; laboratory animal medicine.
- 5303. PERSPECTIVES: ANIMAL-HUMAN RELATIONS AND COMMUNITY HEALTH.** (3 cr)
The interrelationships of people and animals sharing a common environment and the effects these relationships have on individual, family, and community health. Problems that arise in animal-human-environmental relationships; students help develop solutions to these problems.
- 5306 ANIMAL MODELS OF HUMAN DISEASE.** (3 cr; prereq #) Staff
Selected animal models of human disease; principles in developing criteria for meaningful and appropriate use; methods for evaluating experimental design and users' objectives; criteria for identifying additional models for comparative medical research.
- 5310. DISEASES TRANSMITTED BETWEEN ANIMALS AND MAN.** (4 cr; prereq #) Anderson, Diesch
Selected diseases transmitted between animals and human beings with emphasis on diagnostic problems, epidemiology, prevention, control, and evaluation.
- 5315. PROBLEMS IN DISEASE CONTROL AND ERADICATION.** (Cr ar; prereq 5330 or #) Anderson, McCauley, Diesch
Evaluation of selected past and present disease control and eradication programs and factors influencing degree of success and failure. Students develop models for proposed disease control and eradication programs in the United States or a foreign country for group evaluation and analysis.
- 5317. PROBLEMS IN VETERINARY MEDICAL ADMINISTRATION AND SUPERVISION.** (3 cr; prereq #) Staff
Case studies of selected problems in administration and supervision with emphasis on problem solving, developing and using appropriate skills, evaluation, and decision making.
- 5320. MEAT HYGIENE AS RELATED TO THE CONSUMER.** (3 cr) Libby
Consumer's role in protecting the wholesomeness of meat from the time of purchase through transportation, storage, preparation, and consumption. What the consumer should expect when purchasing meat in terms of industry and government responsibility for wholesomeness and freedom from adulteration. Examples of problems encountered and suggestions to aid consumers.
- 5323. CHEMICAL DRUG ASPECTS OF MEAT HYGIENE.** (3 cr; prereq #) Pullen
Factors leading to drug residues in food producing animals; residue detection; criteria for determining tolerance and action levels by governmental agencies; harmful effects of drug residues on human health.
- 5326. RESEARCH IN ANIMAL/HUMAN HEALTH.** (Cr ar; prereq #) Anderson, Diesch, Pullen, Robinson
Research in the relationship of animal health to human health.



**School of
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East Bank**