

CATALOG FOR APPLICATION FROM
SPRING SEMESTER 2004 THROUGH SUMMER SESSION 2005

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UNIVERSITY OF MINNESOTA

SCHOOL of PUBLIC HEALTH



Thank You for your inquiry about the University of Minnesota School of Public Health. We are among the top schools of public health in the country, which reflects our firm commitment to academic excellence. Our School is located in the Twin Cities of Minneapolis and St. Paul, a large, cosmopolitan metro area with rich cultural and recreational offerings.

We are delighted you are considering attending the University of Minnesota School of Public Health and even more pleased that you are considering a career in public health. Public health is a field of and for people who seek to improve health, extend life, and make a lasting impact community by community, entire populations at a time. The field offers great opportunities for graduates and holds an even greater promise for society.

The University of Minnesota, a Big Ten university, offers opportunities for research and study under world renowned faculty that you simply won't find at smaller institutions. You will also find your place in the U's sprawling social network of groups and student organizations. For these and many other reasons, at the University of Minnesota, we say to our students, "Welcome to the Big Time."

WHAT YOU WILL FIND IN THIS CATALOG

Specifics

This catalog is the companion piece to the University of Minnesota School of Public Health viewbook. [If you haven't seen the viewbook, please call (800) 774-8636 or send us an e-mail at ssc-sph@umn.edu to request one. You may also download a PDF of the viewbook free of charge on our Web site: www.sph.umn.edu.] The viewbook gives people like you—interested potential students—a bird's eye view of public health and the reasons to choose the University of Minnesota as the place to pursue a degree.

This catalog is geared for people who have decided to pursue a graduate degree in public health and are seriously considering the University of Minnesota School of Public Health. You are ready to learn the specifics of our School and how to join the ranks of our students.

University of Minnesota Resources

One of the benefits of attending our School is the ability to tap into the deep, rich resources of a major university. Please see this section on page 41 for information about housing, special programs, accessibility, and more.

Tuition, Financial Aid, Admission, and Application Information

Finally, and perhaps most importantly, this catalog gives specifics about tuition rates, financial aid, requirements for admission, and instructions for finding our online application. We hope it will help guide you through the application and admission process.

WE ARE HERE FOR YOU

If at any point you have questions, our Student Services staff is eager to hear from you. We welcome your calls and e-mails: (800) 774-8636 or ssc-sph@umn.edu. We have numerous special visit events for prospective students (which you can find by looking on our Web site: www.sph.umn.edu) or we can schedule a time for you to come for an individual visit. We can make arrangements for you to speak with faculty, alumni, and students who are working and studying in the area that interests you.

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Choosing a Major

Are you trying to determine where in public health you fit? Graduates of the University of Minnesota School of Public Health have an array of skills, core wisdom, specific knowledge, and unique experiences that are applicable to a lifetime of career aspirations. You may enter the field by pursuing one of ten areas or study, or majors. The following tables arrange some of the questions you may ask yourself as you think about a path in public health. These suggestions are neither exhaustive nor absolute.

WHAT ISSUES DO YOU WANT TO STUDY?

Air pollution, water pollution, exposure to hazardous materials

Access to health care for underserved populations; social and class disparities in health; rural health care

Child, adolescent, and family health

Clinical outcomes

Development and implementation of policies to improve the health of populations

Efficacy and safety of new pharmaceuticals and new medical technology

CONSIDER THESE MAJORS

- Environmental Health
- Epidemiology

- Community Health Education
- Health Services Research, Policy & Administration
- Maternal & Child Health
- Public Health Administration & Policy
- Public Health Practice

- Community Health Education
- Health Services Research, Policy & Administration
- Maternal & Child Health
- Public Health Nutrition
- Public Health Practice

- Clinical Research
- Epidemiology
- Health Services Research, Policy & Administration

- Public Health Administration & Policy

- Biostatistics
- Clinical Research
- Epidemiology
- Health Services Research, Policy & Administration

WHAT ISSUES DO YOU WANT TO STUDY?	CONSIDER THESE MAJORS
Family and workplace violence	<ul style="list-style-type: none"> • Community Health Education • Environmental Health • Epidemiology • Maternal & Child Health
Genetics in public health	<ul style="list-style-type: none"> • Biostatistics • Environmental Health • Epidemiology
Global health	<ul style="list-style-type: none"> • Biostatistics • Community Health Education • Environmental Health • Epidemiology • Maternal & Child Health • Public Health Administration & Policy • Public Health Nutrition • Public Health Practice
Health and safety in workplaces	<ul style="list-style-type: none"> • Environmental Health • Public Health Practice
Health behaviors such as alcohol, tobacco, and drug use, physical activity, nutrition (including eating disorders and obesity)	<ul style="list-style-type: none"> • Community Health Education • Epidemiology • Public Health Nutrition
Infectious disease, bioterrorism, food safety	<ul style="list-style-type: none"> • Biostatistics • Environmental Health • Epidemiology • Public Health Practice
Innovative and ethical patient-oriented research	<ul style="list-style-type: none"> • Clinical Research
Managed care; employment-based health insurance; health care organizations; Medicare	<ul style="list-style-type: none"> • Health Services Research, Policy & Administration • Public Health Administration & Policy
Public policy analysis and implications	<ul style="list-style-type: none"> • Community Health Education • Health Services Research, Policy & Administration • Maternal & Child Health • Public Health Administration & Policy • Public Health Nutrition
Quality of health care for the elderly	<ul style="list-style-type: none"> • Health Services Research, Policy & Administration
Women's and reproductive health	<ul style="list-style-type: none"> • Maternal & Child Health

WHAT TASKS INTEREST YOU?	CONSIDER THESE MAJORS
Lobby and be active in a political setting	<ul style="list-style-type: none"> • Community Health Education • Health Services Research, Policy & Administration • Maternal & Child Health • Public Health Administration & Policy • Public Health Nutrition • Public Health Practice
Apply quantitative skills or programming to an area of public health	<ul style="list-style-type: none"> • Biostatistics • Epidemiology • Health Services Research, Policy & Administration
Build collaborations between organizations	<ul style="list-style-type: none"> • Community Health Education • Health Services Research, Policy & Administration • Maternal & Child Health • Public Health Administration & Policy • Public Health Practice
Conduct laboratory research on the biochemical mechanisms of toxicity and carcinogenesis	<ul style="list-style-type: none"> • Environmental Health
Develop, implement and evaluate community-based health interventions	<ul style="list-style-type: none"> • Community Health Education • Maternal & Child Health • Public Health Administration & Policy • Public Health Nutrition • Public Health Practice
Improve the ways health organizations finance and deliver their services	<ul style="list-style-type: none"> • Health Services Research, Policy & Administration • Maternal & Child Health • Public Health Administration & Policy

WHAT SKILLS DO YOU WANT TO ACQUIRE?	CONSIDER THESE MAJORS
Cost-benefit and cost-effectiveness analysis	<ul style="list-style-type: none"> • Health Services Research, Policy & Administration
Geographic information systems	<ul style="list-style-type: none"> • Biostatistics • Environmental Health • Epidemiology
Management of clinical trials	<ul style="list-style-type: none"> • Biostatistics • Clinical Research • Environmental Health • Epidemiology • Health Services Research, Policy & Administration
Mass communication strategies	<ul style="list-style-type: none"> • Community Health Education • Maternal & Child Health • Public Health Administration & Policy • Public Health Nutrition
Needs assessment	<ul style="list-style-type: none"> • Community Health Education • Maternal & Child Health • Public Health Administration & Policy • Public Health Nutrition • Public Health Practice
Outcomes analysis	<ul style="list-style-type: none"> • Biostatistics • Health Services Research, Policy & Administration • Maternal & Child Health • Public Health Administration & Policy • Public Health Practice
Strategic planning	<ul style="list-style-type: none"> • Health Services Research, Policy & Administration • Public Health Administration & Policy

Areas of Study

The School of Public Health offers three degree options (M.P.H., M.S., or Ph.D.) as well as four certificates. Following are the study options:

MAJOR		DEGREE OPTION	SEE DESCRIPTION ON PAGE
Biostatistics	BIO	M.P.H., M.S., or Ph.D.	8
Clinical Research	CR	M.S.	10
Community Health Education	CHE	M.P.H.	12
Environmental Health	EH	M.P.H., M.S., or Ph.D.	14
Epidemiology	EPI	M.P.H. or Ph.D.	18
Health Services Research, Policy & Administration	HSRP	M.S. or Ph.D.	20
Maternal & Child Health	MCH	M.P.H.	22
Public Health Administration & Policy	PHAP	M.P.H.	25
Public Health Nutrition	NUTR	M.P.H.	27
Public Health Practice:			29
Executive Program In Public Health Practice	EPHP	M.P.H.	29
Public Health Medicine	PHM	M.D./M.P.H.	30
Veterinary Public Health	VPH	D.V.M./M.P.H.	30
University of Minnesota Regents' Certificates:			31
• Core Concepts in Public Health	PHCert-CC	Certificate	31
• Food Safety & Biosecurity	PHCert-FSB	Certificate	31
• Occupational Health & Safety	PHCert-OHS	Certificate	31
• Public Health Preparedness, Response & Recovery	PHCert-PRR	Certificate	31

DUAL AND JOINT DEGREE PROGRAMS

The best of tomorrow's public health leaders will be those who can draw on an understanding of multiple fields. Dual and joint degrees offer the opportunity to gain an important foundation in public health to complement professional practice.

Area of Study	SPH Major(s) with Dual or Joint Degree	Degrees	Contact Info
Business Administration	Public Health Admin & Policy	M.P.H./M.B.A.	Carlson School of Management (612) 624-0006 www.csom.umn.edu
Journalism	Community Health Education	M.P.H./M.A.	School of Journalism
	Environmental Health	M.P.H./M.A.	(612) 624-8877
	Epidemiology	M.P.H./M.A.	E-mail: melinda@umn.edu
	Maternal & Child Health	M.P.H./M.A.	www.healthjournalism.umn.edu
	Public Health Admin & Policy	M.P.H./M.A.	
	Public Health Nutrition	M.P.H./M.A.	
Law	Public Health Practice	M.P.H./M.A.	
	Community Health Education	M.P.H./J.D.	Law School
	Environmental Health	M.P.H./J.D.	(612) 625-1000
		M.S./J.D.	www.law.umn.edu
		Ph.D./J.D.	
	Epidemiology	M.P.H./J.D.	
	Hlth Svcs Res, Policy & Admin	M.S./J.D.	
	Ph.D./J.D.		
	Maternal & Child Health	M.P.H./J.D.	
	Public Health Admin & Policy	M.P.H./J.D.	
Medicine	Hlth Svcs Res, Policy & Admin	Ph.D./M.D.	Medical School
	Public Health Practice	M.D./M.P.H.	www.med.umn.edu/
Nursing	Community Health Education	M.P.H./M.S.	School of Nursing
	Environmental Health	M.P.H./M.S.	(612) 624-4454
	Epidemiology	M.P.H./M.S.	E-mail: nurseoss@umn.edu
	Maternal & Child Health	M.P.H./M.S.	www.nursing.umn.edu
	Public Health Admin & Policy	M.P.H./M.S.	
	Public Health Nutrition	M.P.H./M.S.	
Public Policy	Hlth Svcs Res, Policy & Admin	M.S./M.P.P.	Humphrey Inst of Public Affairs (612) 624-3800 E-mail: admissions@hhh.umn.edu www.hhh.umn.edu/
Social Work	Community Health Education	M.P.H./M.S.W.	School of Social Work
	Maternal & Child Health	M.P.H./M.S.W.	(612) 624-4704, (800) 779-8636
	Public Health Nutrition	M.P.H./M.S.W.	http://ssw.che.umn.edu
Veterinary Medicine	Public Health Practice	D.V.M./M.P.H.	College of Veterinary Medicine (612) 624-4747 E-mail: dvminfo@umn.edu

www.biostat.umn.edu

BIOSTATISTICS

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THE FIELD OF BIOSTATISTICS

Biostatistics combines statistics, biomedical science, and computing in health research. Biostatisticians design, direct, and analyze clinical trials; develop new statistical methods; and analyze data from observational studies, laboratory experiments, and health surveys. This is an ideal field for students with a strong mathematical background who enjoy working with computers and collaborating with investigators, and who want to participate in health research.

BIOSTATISTICS AT THE UNIVERSITY OF MINNESOTA

The Division of Biostatistics has an international reputation for excellence in methodological and applied research and training. Biostatistics students enjoy small classes and individual faculty attention, state-of-the-art computing facilities, proximity to a large academic health center, a strong record in job placement, teaching and research assistantships, and opportunities for work experience in clinical trials and other areas of research.

RESEARCH ACTIVITIES

Faculty and students actively contribute to research in projects such as:

- Community-based clinical trials in AIDS
- Prevention of lung disease in smokers and ex-smokers
- Pathogenesis and treatment of otitis media (ear infection) in children
- Exposure of children to pesticides and volatile organic compounds
- Spatial distribution of cancer cases in Minnesota
- Effects of risk-factor intervention on death rates from coronary heart disease
- Statistical genomics/genetics

Biostatistics faculty do extensive work in developing new methods for data analysis. The most active areas of research in our division currently are Bayesian methods, high-speed computing and simulations, survival analysis, analysis of geographical patterns of disease, longitudinal data analysis, statistical genetics and bioinformatics, latent variables, and methods for analyzing data from epidemiologic studies and clinical trials.

QUALIFICATIONS FOR ADMISSION

Students may apply for the M.S., M.P.H., or Ph.D. degree.* The master's degree usually requires two years of study; the doctoral degree requires two years of coursework beyond the master's degree, plus the dissertation. Students are admitted to start in the fall semester only.

Applicants should submit materials by December 31, for admission in September of the following year, to allow sufficient time for processing.

Admission to the M.S. and M.P.H. programs requires:

- Mathematics through multivariable calculus (three semesters or four quarters)
- Linear algebra
- One course in applied statistics
- One course in computer programming using a standard procedural language such as FORTRAN or C
- Overall GPA of 3.10 or above (3.40 or above for quantitative courses)
- GRE scores of 550 (verbal), 650 (quantitative)

*Note: M.S. is the preferred degree. Please talk to the Biostatistics major coordinator if you are interested in the M.P.H. Admission to the Ph.D. program requires fulfillment of the master's degree requirements listed above, plus:

- An M.S. in statistics or biostatistics preferred
- Coursework in real analysis, mathematical statistics, and applied statistical methods
- GPA of 3.70 or above in math/statistics coursework
- GRE scores of 550 (verbal), 650 (quantitative)

ADMISSIONS DECISIONS

Applications are processed by the Graduate School and the School of Public Health, where they are held until complete before they are sent to Biostatistics. The Admissions Committee begins reviewing applications in the fall as soon as they arrive complete. All applications that arrive before December 31 compete for the first round offers of admission and financial aid, which are sent by email at the beginning of March.

FINANCIAL AID

All applicants are considered for financial support. Among the complete applications received by December 31, the highest ranked applicants are offered support early in March. Financial support is usually given as a research assistantship or teaching assistantship. Research assistants may work on NIH-sponsored projects or in the Boen Consulting Lab, a resource for design and analysis of health science studies. Teaching assistants are assigned to a particular course and provide tutoring, grading, and help in the computer lab.

CAREER PROSPECTS

Job prospects for biostatistics graduates are excellent, with career opportunities in university research facilities, and pharmaceutical and medical device companies. Typical starting salaries range from US\$45,000 to US\$70,000 for master's graduates, and from US\$75,000 to US\$125,000 for doctoral graduates.

FOR FURTHER READING

Books

- *Medical Uses of Statistics*, 2nd ed., Bailar and Mosteller
- *The Human Side of Statistical Consulting*, Boen and Zahn

Journals

- Biometrics
- Biometrika
- Controlled Clinical Trials
- Statistics in Medicine

Web Sites

- www.amstat.org
- www.enar.org
- www.stat.duke.edu/chance

SAMPLE FINAL PROJECTS

M.S.

- "Hierarchical Models for Mapping Ohio Lung Cancer Rates"
- "Options for Controlling Overdispersion in Poisson and Logistic Regression"
- "Piecewise Exponential Models With Smooth Transitions and Covariates for Kidney Transplant Survival Data"
- "Predicting Disease Status Using Correlated Data"

Ph.D.

- "Assessing the Accuracy of Normal Approximations From Proportional Hazards Regression"
- "Model-based Methods for Spatially Misaligned Data: A Bayesian Approach to the Modifiable Areal Unit Problem"
- "Optimal Designs for Nonlinear Regression Models with Applications to HIV Dynamic Studies"

SAMPLE PLACEMENTS OF RECENT GRADUATES

- Eli Lilly
- Harvard University
- Mayo Clinic
- Medtronic
- Merck Research Laboratories
- Minneapolis Research Foundation
- National Institutes of Health
- 3M Pharmaceutical
- University of Washington

www.epi.umn.edu

CLINICAL RESEARCH

Director of Graduate Studies:
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Major Coordinators:
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THE FIELD OF CLINICAL RESEARCH

Clinical research is defined by the National Institutes of Health Director's Panel on Clinical Research (CRP) as "the elucidation of human biology and disease, and its control." The field encompasses:

- Patient-oriented research. Research conducted with human subjects (or on material of human origin such as tissues, specimens, and cognitive phenomena) for which the investigator (or colleague) directly interacts with human subjects. This area includes:
 - a. Mechanisms of human disease
 - b. Therapeutic interventions
 - c. Clinical trials
 - d. Development of new techniques
- Epidemiologic and behavioral studies
- Outcomes research and health services research

Clinical research is fast becoming more complex, sophisticated, and regulated. This has created a recognition and demand for formalized training for those who intend to apply their clinical skills to patient-based health research. The M.S. in clinical research focuses mainly on patient-oriented research and less on outcomes research, health services research, or classic epidemiologic and behavioral studies.

CLINICAL RESEARCH AT THE UNIVERSITY OF MINNESOTA

The clinical research program at the University is on the frontier of this new academic discipline. To satisfy the demand for improved and formal training in clinical research, faculty representing all the Twin Cities Academic Health Center (AHC) schools developed and now make up the graduate faculty of this interdisciplinary degree program. Faculty in the schools of public health, medicine, dentistry, nursing, pharmacy, and veterinary medicine are national leaders in many areas of

research, including clinical research. An interdisciplinary approach offers a broad range of mentoring and clinical research involvement. Each academic unit offers excellent support services for student research and training activities. The clinical research M.S. is housed in the School of Public Health's Division of Epidemiology.

RESEARCH ACTIVITIES

A wide variety of clinical research is ongoing at AHC. Examples of research include studies in osteoporosis prevention, heart disease prevention, and the role of inflammatory dental disease in the genesis of atherosclerosis; interventional research into AIDS, cancer, congestive heart failure, arterial stiffness, and hypertension; genetic epidemiology; pharmacogenetics, and behavioral research.

QUALIFICATIONS FOR ADMISSION

This program is designed for individuals interested in a research career in academia, industry, research institutes, health agencies, or regulatory agencies. Applicants must have an advanced health professional degree such as M.D., D.D.S., D.V.M., Pharm.D., Ph.D. or any other advanced doctoral degree in a clinical biomedical field; or an advanced nursing degree (such as M.S. in Nursing). In addition, students must have completed or be at an advanced state of their clinical practice training, and be affiliated with someone at the University of Minnesota who can provide advising and access to a clinical project. The admissions committee will consider exceptions on an individual basis.

DEGREE PROGRAM

The 38-credit program includes 25 credits in required courses, 3 elective credits, and 10 thesis credits. Elective credits may be taken from any academic unit within AHC or from other related fields by permission of the adviser. The thesis requires an active role in a new or ongoing clinical research project, and from this work the student is required to submit a final written scientific report to the faculty committee and the Graduate School. In a final oral examination, the thesis project is presented and defended before a faculty committee. The committee consists of at least three members: two from the clinical research M.S. graduate faculty, one from another graduate faculty body at the University.

CAREER PROSPECTS

The degree is aimed at training principal investigators in clinical research at either academic or private institutions. Some graduates become clinical project directors in industry (e.g., a pharmaceutical company or medical device firm).

FOR FURTHER READING

- *Careers in Clinical Research: Obstacles and Opportunities*, Division of Health Sciences Policy, Institute of Medicine
- *Clinical Epidemiology: The Study of the Outcome of Illness*, 2nd ed., N.S. Weiss
- *Designing Clinical Research*, S.B. Hulley and S.R. Cummings, editors
- *Evidence-based Medicine: How to Practice & Teach EBM*, D.L. Sackett, et al.
- *Fundamentals of Clinical Trials*, Lawrence Friedman, Curt Furberg, and David DeMets

SAMPLE FINAL PROJECTS

- "Angiotensin II Receptor Blockade in the Prevention of Cortical Interstitial Expansion and Graft Loss from Chronic Allograft Nephropathy in Renal Transplant Recipients"
- "A Randomized Clinical Trial of Exercise and Spinal Manipulation for Chronic Neck Pain"
- "Epidural Analgesia Versus Intrathecal Narcotics for Labor Pain Management"
- "Late Outcomes after Bone Marrow Transplant for Aplastic Anemia"
- "Long Term Outcome of Endoscopic Therapy for Sphincter of Oddi Dysfunction"
- "Phase II Trial of Gemcitabine for Gastric Cancer"
- "Randomized Clinical Trial of Thalidomide, Cyclosporine, and Prednisone Versus Cyclosporine and Prednisone as Initial Therapy for Chronic Graft Versus Host Disease"
- "Treatment of Advanced Neoplasia and Quality of Life of Older Patients (TRANQOL) Study"

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COMMUNITY HEALTH EDUCATION

Major Chairperson:

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Major Coordinators:

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THE FIELD OF COMMUNITY HEALTH EDUCATION

The purpose of the community health education major is to prepare students to be public health leaders who can design, implement, advocate for, and evaluate efforts to promote healthy behaviors and social conditions and to change high-risk behaviors and social patterns in a variety of settings. The program prepares students to use social science theories and individual, community, and policy-based intervention strategies.

COMMUNITY HEALTH EDUCATION AT THE UNIVERSITY OF MINNESOTA

Through coursework and fieldwork taken at the School of Public Health, students in community health education develop basic competencies in theory, health behavior and policy interventions, assessment methods, cultural competency, and management.

Each graduate should have the ability to:

- Use theories of behavior and social change to inform the planning and evaluation of health interventions
- Identify individual, community, and policy level interventions that are effective in promoting healthy behaviors and social conditions
- Design and implement effective individual community, and policy-level, interventions for a variety of health behaviors
- Assess the health status of individuals and communities
- Utilize appropriate data collection strategies and qualitative and quantitative methods to evaluate health interventions
- Identify the role of cultural, social, and behavioral factors in influencing health behaviors and status
- Develop and adapt approaches to problems, taking into account cultural differences
- Communicate health information effectively both in writing and orally
- Advocate for public health programs and resources

- Collaborate with public health agencies and other constituency groups
- Coordinate and manage health programs/services
- Relate ethical considerations and values to one's professional practice

An oral defense of the project is required for both options. The M.P.H. in community health education is a good path for students planning to pursue a Ph.D. degree in social and behavioral epidemiology, which is available in the School of Public Health.

Students benefit from numerous aspects of the program:

- Faculty who are recognized nationally and internationally for innovative health education strategies
- A low student-to-faculty ratio
- Opportunities to collaborate with faculty on research and other projects
- Preparation for a career in public health practice or for continued education to a doctoral level
- Opportunities to acquire experience working for community-based projects
- Excellent support services for student research

RESEARCH ACTIVITIES

Research activities focus on behavioral epidemiology and community health education. Faculty are involved in assessing population behavior patterns and psychosocial risk factors; designing community-wide prevention and treatment programs for heart disease, cancer and AIDS; preventing alcohol and drug abuse; influencing health policies; and evaluating outcomes of behavior change efforts in schools, worksites, and physicians' offices.

QUALIFICATIONS FOR ADMISSION

Applicants are admitted from a wide variety of academic backgrounds, including social and behavioral sciences (e.g., psychology, sociology, anthropology), the humanities, basic sciences (e.g., biology, nursing), and mathematics. There is no single appropriate undergraduate major, but applicants should meet prerequisites by the time of admission.

College-level courses are highly recommended in the following areas: social and behavioral science (at least three courses) and quantitative methods (e.g., statistics). To enable graduates to step into leadership roles, the program seeks students with practical as well as academic strengths. Preference is for applicants who have at least one year of paid or significant volunteer experience in a public health, social service, or community setting.

ADMISSION DECISIONS

Each application is important to us and we understand the eagerness of applicants. We process hundreds of applications simultaneously and contact applicants

of admissions decision as soon as possible. Generally, we notify admissions decisions about six weeks after receiving a completed application. The admissions committee begins review of applications in mid-February.

Applicants who have not heard from us by approximately six weeks after the completion of their application may inquire about their status. We follow certain procedures to protect the privacy and confidentiality of all application materials. Applicants may e-mail the major coordinators (gradstudies@epi.umn.edu), identifying themselves by full name, indicating the major to which they applied. We are not able to provide status information by phone or in response to any e-mail address that does not correspond exactly to the e-mail address indicated on the application form.

Students are required to complete a supervised fieldwork experience. Students will complete one of the following:

- Program development project
- Needs assessment project
- Program evaluation project, or
- Data analysis project and optional internship

Length of the Program:

The basic two-year program requires 48 credits to complete. Students may pursue their M.P.H. on a full-time or part-time basis. The majority of the courses are offered during the day.

DUAL DEGREES

M.P.H./M.S.W. in social work

M.P.H./M.S. in nursing

CAREER PROSPECTS

The professional field of community health education once was practiced mainly in classrooms and health care facilities. Now, community health educators work in a variety of settings, including all levels of government, voluntary and social service agencies, medical care organizations, workplaces, and schools. Sample job titles of graduates include coordinator, tobacco research program; coordinator, high-risk youth project; program manager, school district; community health planner in an HMO; health program coordinator in a nonprofit agency.

FOR FURTHER READING

- The American Journal of Public Health (journal of the American Public Health Association)
- The Health Education and Behavior Journal (journal of the Society for Public Health Education)
- *Health Behavior and Health Education Theory, Research, and Practice*, K. Gantz, F.M. Lewis and B. Rimer, editors, Minnesota State Legislature

SAMPLE FINAL PROJECTS

- "An Evaluation of the Political Activity Among Neighborhood Associations in Minneapolis and St. Paul"
- "Knowledge and Attitudes of Hmong Health Care Workers About Hmong Traditional Healing Practices: A Needs Assessment"
- "Resiliency in Urban Native American Youth and Substance Abuse"
- "The Smoke You Don't See: Uncovering Tobacco Industry Strategies Against ETC and the EPA"
- "The Social Environment and Adolescent Nutritional Beliefs and Behaviors: Analysis of Focus Group Data"
- "The Association of Perinatal Violence and Gestational Weight Gain"
- "The Model of Basic HIV/AIDS Information for Health Care and Social Services Personnel"
- "Violence at a Family Planning Clinic"

SAMPLE FIELD EXPERIENCES

- Allina (HMO) clinic
- American Cancer Society
- Breaking Free
- Children, Youth, and Family Consortium
- Children's Hospitals and Clinics, Health Care Coalition on Violence
- Hennepin County Community Health Department

www.umn.edu/eoh/

ENVIRONMENTAL HEALTH

Major Chairperson for M.P.H.:

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Major Coordinator:

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THE FIELD OF ENVIRONMENTAL HEALTH

Environmental health is a broad-based, multidisciplinary field that emphasizes the scientific, technological, policy, and management skills needed to address contemporary environmental and occupational health concerns.

ENVIRONMENTAL HEALTH AT THE UNIVERSITY OF MINNESOTA

The program offers high-quality laboratory facilities, small classes, individual faculty attention, excellent financial assistance, proximity to a large academic health center, and opportunities to participate in faculty research. A multidisciplinary and highly collaborative faculty provides exciting educational and research opportunities for students. Curriculum stresses the application of basic scientific principles to environmental and occupational health issues, and provides an understanding of regulatory, legal, and policy aspects.

The environmental health graduate educational programs are organized into three teaching cores. Students take a required course in each area: environmental exposures, health effects, and environmental health policy.

RESEARCH ACTIVITIES

Faculty members have diverse research interests. Current projects include exposure assessment in industrial settings; small business interventions to improve worker health and safety; pesticide exposures

in children; concentrations, bioavailability, and fate of toxic chemicals in aquatic and wetland environments; chemical carcinogenesis; methods for evaluating bias in geographic information systems and epidemiological studies; evaluation of devices to minimize or eliminate microbial contamination; cancer prevention; initiatives to design and implement a community-based research initiative on violence prevention and control.

QUALIFICATIONS FOR ADMISSION

To insure admission priority and consideration for financial assistance, students should submit applications before April 15 for fall semester. Minimum requirements include a baccalaureate degree with coursework in the basic sciences. Each specialty track requires slightly different preparation. General requirements include a cumulative undergraduate GPA of at least 3.00, and a GRE score of at least 1000 combined verbal and quantitative, and 3.5 analytic writing assessment. TOEFL scores above 600/250 are required for international students. Occupational health nursing applicants are required to have a baccalaureate degree from an accredited school of nursing. Final admission is based on careful review of the applicant's file and availability of space within the specialty area. Doctoral applicants are expected to substantially exceed the minimum requirements.

ADMISSION DECISIONS

Applications are reviewed by the admissions committee throughout the year. If the committee recommends admission based on criteria of the specialty area and the associate dean approves, the applicant receives an official letter of the offer of admission. Applicants denied admission receive a letter from the major chair or director of graduate studies with suggestions to improve qualifications should they choose to reapply at a later time.

OPTIONS FOR STUDY

Master's level students may elect to pursue the general program in environmental and occupational health, which is designed to provide a broad perspective of the field, or may elect to concentrate in a specialty area. In addition to the following specialty areas, the division is developing new programs in biosafety, global environmental health, exposure assessment, and risk assessment. Please contact the division for updates if you are interested in these areas.

- **Environmental chemistry** examines the interactions of pollutants with air, water, soil, and their exposures to humans and wildlife. The curriculum emphasizes the

Three degree options are offered: M.P.H., M.S., and Ph.D.

M.P.H. vs. M.S.

Applicants interested in pursuing a master's level degree must choose between the M.P.H. and M.S. The primary distinction is career path. Some areas of the field hire candidates with the professional degree (M.P.H.), and other areas hire candidates with the traditional research degree (M.S.). There is some, though minimal, difference in curriculum. See the following table for a summary of the features of each degree. Please also consult with the coordinator, major chair, or director of graduate studies for advice about these options.

M.P.H.	M.S.
<ul style="list-style-type: none"> • Career: recognize and prevent human disease and injury and control environmental hazards • For practitioners 	<ul style="list-style-type: none"> • Career: recognize and prevent human disease and injury and control environmental hazards • For practitioners and those planning careers in research or academia
<ul style="list-style-type: none"> • Admitted into the SPH • Minimum of 30 credits 	<ul style="list-style-type: none"> • Admitted into Graduate School • Minimum of 30 credits
<ul style="list-style-type: none"> • EH required courses plus SPH core courses: epidemiology, biostatistics, health administration, behavioral science, ethics 	<ul style="list-style-type: none"> • EH required courses plus epidemiology, biostatistics
<ul style="list-style-type: none"> • Specialty courses and electives 	<ul style="list-style-type: none"> • Specialty courses and electives
<ul style="list-style-type: none"> • Master's project 	<ul style="list-style-type: none"> • Plan B final project or Plan A thesis
<ul style="list-style-type: none"> • Broad perspective of environmental and occupational health; and in-depth exposure in discipline of choice 	<ul style="list-style-type: none"> • Solid technical background; proficiency in applied or basic research
<ul style="list-style-type: none"> • Opportunities to synthesize and apply academic experiences to professional settings through research and required internship placements 	<ul style="list-style-type: none"> • Internship optional

Ph.D.

The Ph.D. brings students to a high level of academic competence through a combination of advanced coursework and research, and prepares students to assume leadership roles in the field. Substantial independent effort is required to produce a high-quality academic thesis that contributes to the body of knowledge in environmental and occupational health.

processes that control chemical behavior, transport, and fate as a function of environmental factors and chemical properties. Coursework is interdisciplinary and includes civil or mechanical engineering, chemistry, geology, soil science, ecology, and public policy.

- **Environmental and occupational epidemiology** studies the causal relationship between environmental and occupational exposures and human health. The curriculum comprises epidemiologic methods, biostatistics, basic sciences, toxicology and environmental health, and core public health. Students may focus in one of three components: exposures related to cancer, exposures related to injury, or environmental and occupational epidemiologic methods.
- **Environmental health policy** provides broad, multidisciplinary training in environmental health issues, including occupational health, risk assessment, risk management, decision making, and policy analysis. The curriculum includes core public health, environmental health, research methods, biostatistics, exposure and risk assessment, environmental and occupational health policy, and policy economics.
- **Environmental infectious disease** is concerned with the emergence of food-borne and infectious diseases in the United States and around the world. The environment and changing conditions in the environment can have a great impact on the distribution and occurrence of infectious diseases. Global climate change is a growing concern regarding the potential expansion of tropical vector-borne diseases. In evaluating the chain of infection, environment may play a key role in reservoir maintenance, as well as a route of transmission through food, water, and air. From basic principles of infection control to predicting the impact of emerging infections, this program will explore the environmental factors associated with infectious diseases.
- **Environmental toxicology** teaches students to protect human health through research and the development of environmental policy and regulations. In addition to the public health core, the curriculum emphasizes risk assessment and basic biological sciences including physiology, biochemistry, cellular and molecular biology, toxicology, and environmental health.
- **Industrial hygiene** concerns the health and safety of people at work. The curriculum emphasizes core public health as well as industrial hygiene applications, study of airborne contaminants, physical agents, safety, hazardous waste management, and materials management. Students may sub-specialize in hazardous substances, with an emphasis in hazardous wastes, hazardous materials health, and safety management.

The industrial hygiene master's programs (M.S. and M.P.H)

are accredited by the Applied Science Accreditation Commission of the Accreditation Board for Engineering and Technology (ABET), 111 Market Place, Suite 1050, Baltimore MD 21202-4012, (410) 347-7700.

- **Occupational health nursing** provides broad training in occupational health and safety for nurses interested in management. Students are trained to develop, manage, and evaluate health and safety programs. The master's level curriculum includes core public health and occupational health sciences, research methods and biostatistics, management and financial management, public health nursing, and occupational health nursing. A dual degree option with the School of Nursing is available. The doctoral curriculum focuses on policy and program evaluation in occupational health and safety.

Environmental health also offers a focus in occupational medicine, the academic component of an occupational medicine residency program for physicians.

Ph.D. students may pursue one of three training programs:

- a. Molecular basis of risk assessment provides the trans-disciplinary training in exposure, modern toxicology, epidemiology, and environmental policy that is required to develop sound health risk assessment approaches. www.umn.edu/eoh/mbra
- b. Occupational health services research and policy is a joint offering by the Division of Environmental and Occupational Health (EOH) and the Division of Health Services Research and Policy. EOH students receive a minor in health services research, policy and administration. www.umn.edu/eoh/ohsrp
- c. Occupational injury prevention research training. www.umn.edu/eoh/oiprtp

DUAL AND JOINT DEGREES

M.P.H./J.D. in law

M.P.H./M.S. in occupational health nursing

M.S./J.D. in law

Ph.D./J.D. in law

FINANCIAL AID

Division research activities support approximately 15-20 research assistants and 4-5 teaching assistants annually. In addition to salary support, assistantships usually provide tuition waivers and eligibility for low-cost health insurance. The major also awards traineeships that provide stipend support and paid tuition in several specialty areas, as well as scholarships specifically designated for environmental health students.

CAREER PROSPECTS

Graduates with a master's degree in environmental health play prominent roles as environmental/occupa-

tional health practitioners in various settings, including industry, hospitals, government agencies, and private practice. Many progress into upper-level positions. Sample job titles of graduates include environmental epidemiologist, health and safety officer, infection control practitioner, occupational health analyst, environmental chemist, hazard communication specialist, and supervisor of occupational medicine clinic.

FOR FURTHER READING

- *The Earth's Biosphere*, Vaclav Smil, MIT Press, Cambridge, MA (2002)
- *The Greatest Experiment Ever Performed on Women: Exploding the Estrogen Myth*, Barbara Seaman, Hyperion, NY (2003)
- *Secret Agents: The Menace of Emerging Infections*, Madeline Drexler, Joseph Henry Press, Washington, D.C. (2002)
- *Sync: The Emerging Science of Spontaneous Order*, Steven Strogatz, Thiea Press, New York, NY (2003)
- *When the Smoke Ran Like Water*, Devra Lee Davis, Basic Books, New York, NY (2002)

SAMPLE FIELD EXPERIENCES

- Honeywell
- Metro Transit, Twin Cities
- Minnesota Department of Health
- 3M
- Minnesota Occupational Safety and Health Administration
- National Institute for Occupational Safety and Health
- University of Minnesota, Department of Environmental Health and Safety

SAMPLE FINAL PROJECTS

- "Arsenic in Drinking Water: Review and Analysis of the Mechanism of Action and Health Risk Assessment"
- "Children's Environmental Health: Special Vulnerabilities, Existing and Potential Policies, and Recommended Guiding Principles"
- "Environmental Illness: The Perceptions and Reality of Multiple Chemical Sensitivity Syndrome"
- "Lead Exposures in the Reconstruction Industry"
- "Sediment Toxicity from the National Ambient Stream Quality Network"

www.epi.umn.edu

EPIDEMIOLOGY

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THE FIELD OF EPIDEMIOLOGY

The scientific tasks of epidemiology are description, quantification, and analysis of patterns of health and disease in populations. The work incorporates the study of biological, environmental, behavioral, and social patterns of health and disease. Epidemiologists usually work in collaboration with multidisciplinary teams of other professionals, such as physicians, laboratory scientists, exercise physiologists, nutritionists, statisticians, and behavioral scientists.

Epidemiologists analyze public health trends relating to both health and disease, design and implement studies, and interpret the results for policy and program development. Their work extends beyond investigation into the cause of disease to the development of intervention strategies to prevent disease and promote health. Epidemiologists investigate disease etiology and prevention, and intervention strategies, at the individual and societal levels. They work closely with clinicians and basic scientists to translate medical and laboratory data into population recommendations and to discover associations in the population that need to be researched more fully.

EPIDEMIOLOGY AT THE UNIVERSITY OF MINNESOTA

The extensive epidemiologic research program at the University of Minnesota School of Public Health offers students many opportunities for research training. Students study with faculty who are international leaders in cardiovascular disease, cancer and infectious disease; nutrition; maternal and child health; genetic epidemiology; behavioral interventions; and epidemiologic methods for clinical and community-based research. The Division of Epidemiology is the home of many internationally recognized research studies that work with participants recruited from the Twin Cities metropolitan area. These studies provide many opportunities for students to analyze data in their area of interest.

RESEARCH ACTIVITIES

The faculty develop and implement innovative methods for a variety of research interests, including population-based surveillance of cardiovascular disease and cancer trends; cross-sectional and cohort studies of risk factors and behavior related to cardiovascular disease, cancer, diabetes, AIDS, and other diseases among youth and adults; clinical and community trials in treating and preventing hypertension, coronary heart disease, and cancer; community-based health promotion and program evaluation; case-control studies of cancer etiology; the role of genetic factors and their interaction with the environment in the pathogenesis of chronic and infectious diseases; laboratory studies in blood lipid chemistry; and biologic markers for diet and alcohol consumption.

QUALIFICATIONS FOR ADMISSION

The major admits applicants with a variety of backgrounds, including biology, law, mathematics, microbiology, genetics, medicine, dentistry, veterinary medicine, and social and behavioral sciences. Strong preference is given to applicants with excellent quantitative and analytic abilities and a solid foundation in a life science. Admitted students must be comfortable learning statistical methods to address problems in human health and disease. Applicants are expected to demonstrate quantitative aptitude with at least a 70th percentile ranking on the quantitative and analytic sections of the GRE and satisfactory grades in college-level quantitative courses such as algebra, statistics, calculus, or trigonometry. Relevant experience in a public health setting is preferred. Ph.D. applicants must have completed or be near completion of a master's degree in a related field.

ADMISSION DECISIONS

Each application is important to us and we understand the eagerness of applicants. We process hundreds of applications simultaneously and contact applicants with our admissions decision as soon as possible.

We notify epidemiology M.P.H. applicants regarding admission decisions about six weeks after receiving completed applications. The admissions committee begins reviewing mid-February (for the application deadline of March 1).

Applicants who have not heard from us by approximately six weeks after the completion of their application may inquire about their status. We follow procedures to protect the privacy and confidentiality of all application materials. Applicants may e-mail the major coordinators (gradstudies@epi.umn.edu), identifying themselves by full name, indicating the major to which they applied. We are not able to provide status information by phone or in response to any e-mail address that does not correspond exactly to the e-mail address indicated on the application form.

We notify Ph.D. applicants regarding an admissions decision about six to eight weeks after receiving a completed application. The admissions committee meets after the application deadline of January 15. The Ph.D. process has several addi-

tional internal steps that make the process a bit longer. For specific information about the Ph.D. application review process, contact one of the program coordinators at: kish@epivax.epi.umn.edu

DEGREE PROGRAMS

The M.P.H. degree in epidemiology prepares students for careers in epidemiologic research in health agencies, medical institutions, universities, research institutes, regulatory agencies, and industries such as pharmaceuticals and health insurance. We encourage students to pursue the M.P.H. degree, but an M.S. in epidemiology is available. Applicants interested in the M.S. should contact a coordinator in epidemiology before applying.

Students complete a 45-credit curriculum that includes 37-38 credits of required coursework plus 7-8 credits of electives. Many epidemiology and other health-related graduate-level courses are available as electives. These allow students to develop a specialty emphasis in either specific public health topics or methodological areas. An accelerated 31-32 credit M.P.H. degree program is offered for students who have completed M.D., D.D.S., D.V.M., or Ph.D. work in a related field.

Length of program:

Students may pursue their M.P.H. on a full-time or part-time basis. Note that the majority of courses are offered only during the day.

In addition to coursework, all epidemiology master's students are required to complete:

- A master's project (three formats: paper, written literature review of publishable quality, or NIH-type grant application)
- A comprehensive oral examination
- A field experience of at least 90 hours

The Ph.D. program is designed for students interested in research and teaching careers in the health sciences. The core curriculum totaling 66-72 credits emphasizes epidemiologic and public health aspects of cardiovascular disease; cancer; alcohol, tobacco, and other substance abuse; infectious diseases; and maternal and child health. Students must pass written and oral preliminary examinations, write and defend a dissertation, and prepare a first-authored manuscript for publication. Students may select one of two concentrations; both emphasize study design, measurement, quantitative analysis, and data interpretation.

Ph.D. concentrations:

- Behavioral epidemiology focuses on origins and development of human behavior patterns and how they are influenced and formed by personality, family, culture, and environment.
- Etiologic epidemiology focuses on the biological causes of disease states, especially determinants of cardiovascular disease, cancer, and infectious diseases.

DUAL DEGREES

- M.P.H./M.S. in nursing
- M.P.H./M.D. in medicine
- M.P.H./J.D. in law

CAREER PROSPECTS

The current national job market for epidemiology M.P.H. graduates is extremely strong, and the degree is expected to remain very marketable in the future. The epidemiology M.P.H. is also an appropriate foundation for several Ph.D. degrees. Some graduates go on to earn M.D., D.D.S., or D.V.M. degrees. Many graduates go on to national and international research careers in academia and research organizations. Sample job titles of graduates include epidemiologist in acute and chronic diseases for a state health department; research associate for a department of family practice; manager of analytic and business statistics in a pharmaceutical company.

SAMPLE FINAL PROJECTS (M.P.H.)

- "A Pilot Study to Evaluate a Tobacco Diversion Program"
- "Behaviors, Attitudes, and Beliefs of Minneapolis Gay Bar Patrons—A Minnesota AIDS Project Survey"
- "Characteristics of Government-Sanctioned Torture"
- "Disability after Fracture in Postmenopausal Osteoporotic Women: The Fracture Intervention Trial (FIT)"
- "Improving Adherence to Screening Mammography"
- "Practices and Characteristics Associated with Establishment Participation in an Alcohol Risk Management Training Program"
- "Survivors Treated at the Center for Victims of Torture in Minnesota"
- "Tuberculosis Infection among Children of Migrant Farm Workers in Minnesota"

FOR FURTHER READING

- American Journal of Public Health Basic Epidemiology Methods and Biostatistics Page, Cole-Timmreck
- Epidemiology (journal)
- *Epidemiology, An Introduction*, K.J. Rothman
- *Epidemiology in Medicine*, Hennekens and Buring
- *Foundations of Epidemiology*, Lilienfeld and Stolley
- *Logistic Regression: A Self-Learning Text*, Kleinbaum
- "Resources" link on the Division of Epidemiology Web site: www.epi.umn.edu
- The American Journal of Epidemiology

SAMPLE FIELD EXPERIENCES (M.P.H.)

- Centers for Disease Control and Prevention, Atlanta
- General Mills Headquarters, Minneapolis
- Health Partners, Minneapolis
- Mano a Mano Medical Resources, Minneapolis
- Minnesota Department of Health, St. Paul
- Nonprofit Center of Milwaukee
- Selian Lutheran Hospital, Arusha (Tanzania)
- Veteran's Affairs Medical Center, Minneapolis

www.hsr.umn.edu

HEALTH SERVICES RESEARCH, POLICY & ADMINISTRATION

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THE FIELD OF HEALTH SERVICES RESEARCH

Health services research focuses on the organization, financing, and delivery of health care services. It deals with policy issues related to costs, access, and quality of health services and equitable access to health resources.

HEALTH SERVICES RESEARCH AT THE UNIVERSITY OF MINNESOTA

Students learn from and work with an internationally acclaimed faculty actively engaged in research. Faculty research is funded by international, federal, and state agencies, and by private industry. Faculty members work closely with state and national policymakers to link their research results to policy initiatives. Students have opportunities to become involved in these projects as soon as they enter their educational programs and work with faculty through all phases of research projects. A mentoring philosophy is an important tradition of the program. The major is housed in the Division of Health Services Research and Policy, a national leader in health services education and research.

Minnesota is known widely for its innovative health policies and health care delivery systems.

- The concept of hospital systems was initiated in Minnesota.
- Medical group practices have been the main mode of physicians' practice since the early 1960s.
- HMOs were pioneered in Minnesota, and Integrated Service Networks were developed as the second generation of the HMO concept.
- Minnesota has been a leader in extending health insurance to low-income individuals and families, and to people with high cost of illness who have difficulty obtaining private insurance.

Through classroom presentations, internships, conferences, speaker series, and research projects, students interact with the faculty and policymakers who are shaping the future health care system.

RESEARCH ACTIVITIES

Faculty research interests include health insurance theory; Medicare reform; effects of managed competition on the structure of physician practices; health outcomes research; social HMOs; patterns and quality of care for vulnerable populations; performance and effectiveness of alternative health systems; gender bias and racial discrimination in health care; impact of health care reform on rural providers and consumers; diffusion of technology and its impact on rural providers; integrated health delivery systems; organizational influences on the quality of health care; and psychoactive drug use by nursing homes. Faculty publish in all the major peer-reviewed health services research journals.

QUALIFICATIONS FOR ADMISSION

This is an ideal field for persons interested in affecting policy or administering health care systems. Students come from a variety of educational backgrounds, including economics, political science, public affairs, and sociology. Strong quantitative skills are essential; a health services background is helpful, but not required.

ADMISSION DECISIONS

Admissions applications are reviewed on a rolling basis beginning in mid-January. The application process is complex and requires the submission of information to both the Graduate School and the School of Public Health. The admission committee reviews completed application packets to make decisions. Applicants are notified in writing by mail of the admissions decision shortly after the committee's decision. The deadline to apply is March 1, but if seats are still available, the application deadline may be extended.

DEGREE PROGRAMS

Master's Degree

The program prepares health services researchers and health policy analysts to carry out sophisticated empirical studies, formulate policy options, work effectively in the political arena to shape and implement policies, and evaluate policies once implemented. Students learn basic, theoretical, and statistical skills as well as the main social and health service analytic paradigms. Courses in research design, survey and sampling methods, health care organizations, and cost-benefit analysis complete the required curriculum. Electives can be taken throughout the University. The two-year, full-time program offers concentrations in research analysis and clinical outcomes research.

The M.S. program also has opportunities for a paid internship that places students in health services research positions at organizations throughout the community. These internships give the students hands-on learning, networking, and mentoring. Students receive an hourly wage and subsidy that pays half their tuition and health insurance.

Ph.D. Degree

The program is designed primarily for students interested in academic careers or senior research positions in government or the private sector, though a number of graduates from the doctoral program also work in private industry. The emphasis is on theory, modeling, and quantitative methods. Coursework is supported by the student's ongoing involvement with faculty on research projects and is linked to the health care field by these projects. Coursework includes research methods, health economics, organizations, medical sociology, health policy, statistics, research design, and research methods. Students take a supporting program or minor. During their course of study, students may also work as research assistants on a project with a faculty member in the student's area of interest. This collaborative experience allows students to gain hands-on experience on complex research projects.

DUAL AND JOINT DEGREES

M.S./M.P.P. in Public Policy

The dual M.S. degree with M.P.P. is offered in conjunction with the Humphrey Institute of Public Affairs. In this dual degree option, students in HSRP&A may apply some of their M.P.P. coursework toward electives. The M.P.P. degree also accepts some HSRP&A courses permitting the two degrees to be completed faster than if pursued separately.

Ph.D./M.D. in Medicine

Students complete the first two years of medical school, then complete the entire Ph.D. program during the next four to five years. Students return to the Medical School to finish their final two years and their chosen residency.

M.S./J.D. in Law, Ph.D./J.D. in Law

The combined degree options with law train students in the legal, ethical, and policy problems posed by health, the sciences, and the environment. Graduates become leaders in areas such as managed care and health policy, intellectual property issues, biotechnology, and environmental law and policy. Students in the program are able to obtain a J.D. from the Law School together with an M.S. or Ph.D. in less time and with more academic support than if they pursued the two degrees separately.

Separate entrance applications to each degree program are required.

COLLABORATIVE PROGRAM

The Divisions of Health Services, Research and Policy, and Environmental and Occupational Health offer a collaborative doctoral-level program in occupational health services research and policy. HSRP&A students will receive a minor in environmental health. Likewise, students who major in EOH may minor in HSRP&A. Fellowship funding may be available.

FINANCIAL AID

Graduate School fellowships, training grants, research assistantships, paid M.S. internships, and tuition fellowships are available through HSRP&A. Student loans and college work-study are available through the University's Office of Student Finance.

FOR FURTHER READING

- National Library of Medicine:
www.nlm.nih.gov/nlmhome.html
- Academy for Health Research and Health Policy:
www.academyhealth.org
- Local Research Centers and Institutes:
www.hsr.umn.edu/research/research_centers.shtm

SAMPLE DISSERTATION TITLES (Ph.D.)

- "A Comparison of Medicare Service Utilization in a Social HMO and a TEFRA Risk HMO"
- "Assessing the Relationship Hospital Competition and Guideline Adherence for Acute Myocardial Infarction"
- "Capital and Health Status in Near-old Adults"
- "Choice of Health Insurance Plans by Enrollees of a State High Risk Pool"
- "Selection of Healthcare Provider Systems in a Direct Contracting Model"
- "The Impact of Infant Feeding Method on Health Care Costs and Utilization in a Medicaid Population"

CAREER PROSPECTS

M.S. Graduates

- American Medical Association, Chicago, IL
- Blue Cross Blue Shield, Minneapolis, MN
- Ingenix, Minneapolis, MN
- Kaiser Permanente, Los Angeles, CA
- Minnesota Department of Health, Minneapolis
- United Health Group, Minneapolis, MN

Ph.D. Graduates

- Agency of Health Research and Quality, Rockville, MD
- Emory University, Atlanta, GA
- National Institutes of Health, Bethesda, MD
- Rutgers University, New Brunswick, NJ
- University of Chicago, Chicago, IL
- University of Florida, Gainesville, FL
- University of Pittsburgh, Pittsburgh, PA
- University of Rochester, Rochester, NY
- University of South Florida, Tampa, FL
- University of Washington, Seattle, WA

www.epi.umn.edu

MATERNAL & CHILD HEALTH

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THE FIELD OF MATERNAL AND CHILD HEALTH

The field of maternal and child health requires expertise in theories of human growth and development; social disparities; and public health (epidemiology, biostatistics, environmental health, management, and behavioral sciences). MCH practitioners assess maternal and child health needs; develop and manage programs; and formulate and advocate for effective policies in areas such as reproductive and perinatal health, health of children, adolescents (including those with special needs), and families.

MATERNAL AND CHILD HEALTH AT THE UNIVERSITY OF MINNESOTA

Minneapolis and St. Paul have long been known for innovation and research in the health sciences. The Twin Cities are home to many not-for-profit and for-profit community agencies that play a vital function in training students and employing graduates.

The MCH program draws from a legacy in Minnesota; a long record of accomplishments in improving the health status of mothers, children, adolescents, and their families in Minnesota, the Upper Midwest, and the nation. The MCH faculty and community leaders are especially concerned about race- and status-based income disparities and social inequalities, which are manifest in health status disparities.

The multidisciplinary faculty has expertise in epidemiology, medicine, journalism, women's health, nursing, psychology, nutrition, family studies, and health education. Faculty members in MCH work collaboratively with faculty throughout the SPH and the University, with particularly strong linkages to the adolescent health program in the Medical School, the School of Nursing, the Department of Family Social Science, and the

Institute of Child Development. The faculty also have strong collaborations with local and state departments of health.

Students admitted to the MCH program often bring a wealth of knowledge and experience that they are encouraged to share with other students. The MCH curriculum is comprehensive, emphasizing scientific knowledge of the field as well as skills in methodology/analysis, management/communication, and policy/advocacy.

RESEARCH ACTIVITIES

MCH faculty focus their research, teaching, and community service expertise on reproductive and perinatal health; family planning; child, adolescent, and family health promotion, risk reduction, and resiliency; child and family adaptation to chronic health conditions; and preventive interventions in the areas of adolescent pregnancy, childhood obesity, and adolescent sexual risk-taking. MCH faculty research is strengthened by close collaborations with other faculty in the Division of Epidemiology who have breadth and depth of biologic and behavioral expertise. The faculty's research and community service activities afford additional opportunities for student training.

QUALIFICATIONS FOR ADMISSION

Students who want to positively influence health outcomes of mothers, children, and families in the United States should apply. The MCH program also offers a specialized track in MCH epidemiology for students who have a strong interest in pursuing a career that will involve data collection, management, and analysis. Applicants' interests typically include developing, implementing, and evaluating MCH programs; working collaboratively with multidisciplinary professionals from communities, public and private organizations and agencies, clinicians, policy makers, and researchers to develop innovative initiatives for health promotion; or managing programs that serve the needs of MCH populations.

Applicants must have at least one year's work or volunteer experience in an area of public health, preferably pertaining to families, mothers, or children.

The M.P.H. in maternal and child health is an appropriate degree for students planning to proceed to a Ph.D. degree in biological or behavioral epidemiology, which is available in the School of Public Health. The option of a Ph.D. in epidemiology with an emphasis in maternal and child health is also available.

ADMISSION DECISIONS

Each application is important to us and we understand the eagerness of applicants. We process hundreds of applications simultaneously and contact applicants of admissions decision as soon as possible. Generally, we notify admissions decisions about six weeks after receiving a completed application. The admissions committee begins review of applications in mid-February.

Applicants who have not heard from us by approximately six weeks after the completion of their application may inquire about their status. We follow certain procedures to protect the privacy and confidentiality of all application materials. Applicants may e-mail the major coordinators (gradstudies@epi.umn.edu), identifying themselves by full name, indicating the major to which they applied. We are not able to provide status information by phone or in response to any e-mail address that does not correspond exactly to the e-mail address indicated on the application form.

DEGREE PROGRAM

The M.P.H. in maternal and child health can be earned through an accelerated or two-year option, based on full-time enrollment. Students in both options are strongly encouraged, but not required, to attend full time.

Most applicants qualify for consideration in the two-year option. At present, this option consists of at least 47 semester credits.

Students admitted into the two-year option also have the option of completing their M.P.H. in maternal and child health with an epidemiology emphasis. This emphasis was created to meet the increasing local, state, and national demands for MCH epidemiologists to allow students to develop quantitative expertise in MCH content areas. The MCH epidemiology emphasis at the University of Minnesota is found within the nationally renowned Division of Epidemiology and thus has both the faculty and the courses to provide a superior program.

The accelerated option, consisting of at least 32 semester credits, is designed for individuals with a doctorate, extensive knowledge in a health-related area, or at least five years of relevant experience in a public health agency. Meeting these criteria does not automatically ensure acceptance. Applicants interested in this option should justify this request in their letter of intent. If the accelerated request is denied, an applicant is considered for the two-year option.

In addition to coursework, the following are required of students in both options:

- Complete a 120-hour supervised field experience conducted in the community
- Conduct a master's project, which can take the form of a research project, technical field report, or critical literature review
- Pass an oral examination

Length of program:

Students may pursue their M.P.H. on a full-time or part-time basis. Note that the majority of courses are offered only during the day.

DUAL DEGREES

M.P.H./M.S.W. in social work
M.P.H./M.S. in nursing

FINANCIAL AID

Completed applications received by March 1 are given first consideration for financial aid. Aid that may be offered each year to select admitted applicants includes the Robert W. ten Bensele Scholarship, Colleen Berney Scholarship, Public Health Service grant(s), and MCH research assistantships. Several maternal and child health traineeships are available for MCH students who are U.S. citizens and wish to specialize in maternal, child, or adolescent health. Financial aid is generally awarded to the strongest applicants as defined by academic merit, congruence with the program's goals and objectives, or public health experience. The department also has funds to support one Ph.D. student each year in the biological or behavioral epidemiology program who is specializing in MCH.

CAREER PROSPECTS

MCH leaders work to identify and promote social and environmental conditions contributing to the health of mothers, children, and families. MCH leaders also develop public health programs that may include health promotion and disease prevention, as well as primary care services. MCH-focused epidemiologic skills are increasingly required in city, county, and state health departments. Sample job titles of graduates include project coordinator, director of program services, lead health associate, and youth center coordinator. Graduates work in nonprofit organizations, government agencies, universities, school districts, and research institutes.

SAMPLE FINAL PROJECTS

- "A Multidisciplinary View of Current Knowledge and Future Training Needs of Adolescent Pregnancy Prevention"
- "A Profile of Adolescent Fathers: A Review of Research and Interventions"
- "Assessment of the Reliability Between Minnesota Birth Certificates and Telephone Survey Data about Maternal Parental Behaviors and Characteristics"
- "Development of a Culturally Sensitive Asthma Action Plan for American Indian Children and Their Families"
- "Early Postpartum Hospital Discharge: An Analysis of Legislative Initiatives in the States"
- "Sexual Abuse and Eating Disorders among American Indian Adolescent Females"
- "Unmet Service Needs for Preadolescents with Chronic Illnesses and Disabilities"
- "Parent-Infant Attachment Program: An Evaluation"

FOR FURTHER READING**Books and Journals**

- American Journal of Public Health
- Annual Review of Public Health
- Family Planning Perspectives (journal)
- *Health and Welfare for Families in the 21st Century*, Wallace, Green, Jaros, Paine, Story (editors)
- Healthy People 2010
web.health.gov/healthypeople/2010
- Maternal and Child Health Journal
- *Maternal and Child Health: Programs, Problems and Policy*, J. Kotch

Web Sites

- Alan Guttmacher Institute: www.agi-usa.org
- Association of MCH Programs: www.amchp1.org
- Center for Leadership Education in Maternal & Child Public Health: www.epi.umn.edu/mch
- Children's Defense Fund: www.childrensdefense.org
- Future of Children: www.futureofchildren.org
- MCH Bureau: www.mchb.hrsa.gov
- MCH Information Resource Center: www.mchirc.net
- National Center for Education in MCH: www.ncemch.org

SAMPLE FIELD EXPERIENCES

- Child Family Health International, San Francisco
- Children's Defense Fund, St. Paul
- Medical Education in Cooperation with Cuba (MEDICC), Cuba
- Minneapolis American Indian Center
- Minnesota Department of Health, St. Paul
- Minnesota Organization on Adolescent Pregnancy Prevention and Parenting (MOAPPP), St. Paul
- Powderhorn-Phillips Cultural Wellness Center, Minneapolis

THE FIELD OF PUBLIC HEALTH ADMINISTRATION

This management discipline advocates for the public interest and promotes health through population-focused administration, development and implementation of health-enhancing policy, and evidence-based public health.

PUBLIC HEALTH ADMINISTRATION AND POLICY AT THE UNIVERSITY OF MINNESOTA

The M.P.H. program in public health administration and policy (PHAP) reflects a unique synergy between theory and applied learning. It combines classroom rigor in policy research and health administration with professional preparation for public health leadership. The major is housed in the Division of Health Services Research and Policy, a national leader in health services education and research.

The PHAP program is a vibrant learning community of small classes, congenial colleagues, and close interaction between students and faculty. In addition to ongoing communication in classrooms and offices, PHAP students and faculty also gather more informally at semester luncheons and other events.

RESEARCH ACTIVITIES

PHAP students have rich learning opportunities. Faculty members hire PHAP students for funded research and outreach activities and mentor students in the design and implementation of students' projects. Students also benefit from the program's strong ties to local health care, public policy, and business communities. The Twin Cities are among the country's most fertile settings for health services and policy innovation and provide excellent field placement and career opportunities.

QUALIFICATIONS FOR ADMISSION

Applicants should have a strong commitment to formulating policies or assuming organizational leadership with the goal of preventing disease and promoting health across populations.

ADMISSION DECISIONS

Admissions applications are reviewed on a rolling basis, beginning at the end of January. Complete applications are forwarded to the coordinator who convenes the PHAP admissions committee to review the applications. Applicants are notified by mail of the admission decision shortly thereafter. The deadline to apply is March 1, but if seats are still available the application deadline may be extended.

www.hsr.umn.edu/programs/mph_pha/index.shtm

PUBLIC HEALTH ADMINISTRATION & POLICY

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DEGREE PROGRAM

All students complete a master's research project in an area of interest. In addition, they design a fieldwork experience to develop competencies in public health administration practice and to enhance career prospects after graduation.

Standard Program (50 credits)

This is the appropriate plan for applicants with a baccalaureate degree and limited or no public health experience. Students complete the PHAP required core courses and the public health core courses. They also choose one of the following three specialty areas: management, analysis, or policy.

In addition, students can complete a number of electives which can form the basis for an additional specialty area of their interest, such as health services management, finance, managed care, evaluation, long-term care administration, and bioethics.

Accelerated Program (36 credits)

Applicants with advanced degrees or with extensive and progressively more responsible work experience in public health practice may qualify for the shorter plan (upon approval of the faculty). Students complete the PHAP required core courses (fewer credits than the standard program) and the public health core courses. They also choose one specialty area from management, analysis, or policy, and complete a few electives.

DUAL DEGREES

M.P.H./M.B.A. in management
M.P.H./M.S. in nursing
J.D./M.P.H. in law

Separate entrance applications to each degree program are required.

FINANCIAL AID

The Stauffer Award is offered to promising incoming students who have demonstrated leadership and academic excellence. Research/teaching assistantships also become available throughout the year as a result of research grants. Student loans and college work-study are also available through the University's Office of Student Finance.

CAREER PROSPECTS

Graduates assume administrative positions in public health organizations at the local, state, federal, and international level in planning agencies, voluntary health organizations, mental health agencies, human services organizations, long-term care agencies, international health organizations, managed care plans, community clinics, and alternative health care delivery settings. Graduates share a strong commitment to preventing disease, promoting health, and serving defined populations.

Some graduates are working as:

- Assistant chief of cancer control section of a state health department
- Assistant commissioner of health of a state health department
- Chief of immunization programs of a state health department
- Research director, sports medicine center, Mayo Clinic
- County health officer
- Director of HIV/STD prevention of a national youth organization
- Health services coordinator of a large urban school district
- Coordinator of a county healthy family initiatives program
- Executive director of research at a large HMO
- Regional coordinator of a breast/cervical cancer control program for a state health department
- Research project coordinator in a center for tobacco reduction and health improvement of an HMO

FOR FURTHER READING

- *America's Health Care Safety Net: Intact but Endangered*, Institute of Medicine National Academy Press, Washington, DC 2000 (Available for reading on-line at www.nap.edu/)
- *Betrayal of Trust: The Collapse of Global Health*, Laura Garret
- *Health of Nations: An International Perspective on U.S. Health Care Reform*, Laurene A. Graig
- *Public Health Administration: Principles for Population Based Management*, Lloyd F. Novick and Glen P. Mays
- *Public Health Law: Power, Duty, Restraint*, Larry O. Gostin and Lawrence O. Gostin

- *Public Health Leadership: Putting Principles into Practice*, Louis Rowitz
- *The Future of Public Health*, Institute of Medicine. National Academy Press, Washington, DC 2000 (Available for reading on-line at www.nap.edu/)
- *The Nation's Health*, 6th ed., Phillip R. Lee and Carroll L. Estes
- The Turning Point: Collaborating for a New Century in Public Health, www.turningpointprogram.org
- *Why Are Some People Healthy and Others Not?*, Robert G. Evans, Morris C. Barer, and Theodore R. Marmor

SAMPLE FIELD EXPERIENCES

- Department of Economic and Social Affairs, United Nations, NY
- Health Policy and Planning Section, St. Paul/Ramsey County Department of Public Health
- Health Systems Development Section, Minnesota Department of Health
- Mental Health Division, Community University Health Care Center, Minneapolis
- Office of Program Planning Evaluation, Centers for Disease Control, Atlanta, GA
- Population Health, Blue Cross Blue Shield of Minnesota

SAMPLE FINAL PROJECTS

- "A Comprehensive View of the U.S. Healthcare Safety Net"
- "Minnesotans in Need: Addressing the Health Needs of Latinos in Minnesota"
- "Public Health Informatics: An Evolving Discipline"
- "Quality Management Methodologies and Public Health Administration"
- "School-Based Health Centers and Managed Care: Collaboration May Promote a Healthier Future for Adolescents"
- "The Use of a Mammography Outreach Program to Increase Mammography Rates in Rural Minnesota"

THE FIELD OF PUBLIC HEALTH NUTRITION

Public health nutrition advances knowledge about the role of nutrition in disease prevention and health promotion, and applies this knowledge to planning, managing, delivering, and evaluating nutrition services and programs. Four key areas of study include:

- Analyzing the relationship of diet to health and disease
- Developing, implementing, and evaluating programs to achieve and maintain healthful eating patterns
- Assuring delivery of nutrition-related services as a basic component of health care
- Providing access to a safe and adequate food supply

PUBLIC HEALTH NUTRITION AT THE UNIVERSITY OF MINNESOTA

The public health nutrition major emphasizes nutritional assessment, program planning, health behavior change and intervention strategies, research and evaluation methods, and policy development. An emphasis on nutritional epidemiology helps prepare public health nutrition professionals to address significant issues in the field with up-to-date epidemiologic methods. It combines the strengths of the public health nutrition faculty with the expertise of other faculty in the Division of Epidemiology. This program is responding to the need for nutritional epidemiologists nationally, an area where the School of Public Health is one of the country's leaders. All students are provided with practical experience in different agencies and organizations, and networking opportunities among public health nutrition professionals.

RESEARCH ACTIVITIES

Faculty members are internationally recognized for their expertise in public health nutrition and related areas. Specific research interests include nutrition and pregnancy outcomes; nutrition and women's health; child growth and nutrition; child and adolescent nutrition and eating behaviors; obesity and eating disorders prevention; dietary assessment methods; dietary risks for heart disease and cancer; and dietary prevention of chronic diseases across the life cycle, especially in at-risk populations. The research vigor in the major and a low student-to-faculty ratio create unique opportunities for student-faculty collaboration.

QUALIFICATIONS FOR ADMISSION

The public health nutrition major welcomes applicants with career goals in public health and applied nutrition, nutrition education, community intervention, and nutritional epidemiology. Applicants must have a bachelor's degree from an accredited college or university. The major offers three program options of 13, 16, and 24 months leading to the M.P.H.

www.epi.umn.edu

PUBLIC HEALTH NUTRITION

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Major Coordinators:

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ADMISSION DECISIONS

Each application is important to us and we understand the eagerness of applicants. We process hundreds of applications simultaneously and contact applicants of admissions decision as soon as possible. Generally, we notify admissions decisions about six weeks after receiving a completed application. The admissions committee begins review of applications in mid-February.

Applicants who have not heard from us by approximately six weeks after the completion of their application may inquire about their status. We follow certain procedures to protect the privacy and confidentiality of all application materials. Applicants may e-mail the major coordinators (gradstudies@epi.umn.edu), identifying themselves by full name, indicating the major to which they applied. We are not able to provide status information by phone or in response to any e-mail address that does not correspond exactly to the e-mail address indicated on the application form.

PROGRAM OPTIONS

13-month Program

Required qualification(s) of applicant: registered dietitian (R.D.) or R.D.-eligible; at least three years of full-time professional experience in public health nutrition

16-month Traditional Program and 16-month Nutritional Epidemiology Program

Required qualification(s) of applicant: degree in nutrition or dietetics; R.D. or R.D.-eligible

24-month Traditional Program and 24-month Nutritional Epidemiology Program

Required qualification(s) of applicant: no nutrition degree, but has completed specific science prerequisites outlined on the curriculum sheet.

Length of program:

For students seeking R.D. licensure, a six-month dietetic internship for graduate students (DIGS) is available. For more information, contact the DIGS program director at (612) 624-3255, visit their Web site at <http://fscn.che.umn.edu/digs/> or see the Public Health Nutrition Curriculum Sheet. Students may pursue their M.P.H. on a full-time or part-time basis. Note that the majority of classes are offered only during the day.

DEGREE PROGRAMS

Coursework is organized around six general areas:

- A foundation in basic public health through courses in epidemiology, biostatistics, health management, behavioral sciences, and environmental health
- Nutrition core courses, including public health nutrition programs and principles, maternal and infant nutrition, child and adolescent nutrition, adult and elderly relationships, and community nutrition intervention planning
- Research methods courses and an applied master's under the guidance of a faculty adviser
- Elective credits in other specialty areas in the SPH and across the University
- Hands-on field experience credits in the community
- Additional food science and nutrition courses (required for those in the 24-month program only)

Students may focus coursework and experiences around public health nutrition programs or nutritional epidemiology. Nutritional epidemiology includes advanced courses in epidemiology, biostatistics, and specialty areas within epidemiology (e.g., obesity and eating disorders).

DUAL DEGREES

M.P.H./M.S.W. in social work

M.P.H./M.S. in nursing

FINANCIAL AID

Students interested in working as graduate research or teaching assistants may apply for a number of competitive assistantships, including the Marguerite J. Queneau Research Assistantship and the Ruth Stief Assistantship. Every applicant with an admission application completed by March 1 will be considered for these awards.

Several maternal and child health nutrition traineeships are available for public health nutrition students who are U.S. citizens and wish to specialize in maternal, child, or adolescent health. Eligibility includes being a registered dietitian, at least one year of work experience, and career goals in public health nutrition and maternal and child health. For additional information and application forms, contact the Student Services Center.

CAREER PROSPECTS

Overall, approximately 60 percent of graduates work in public health agencies (e.g., local and state health

departments), 20 percent in educational institutions, and the remainder in health promotion and education programs in HMOs, hospitals, clinics, and private industry. Other graduates are public relations and media consultants, internship directors, and private practice dietitians. Some M.P.H. graduates continue their graduate work in Ph.D. or other professional degrees. Examples of jobs obtained by current graduates include: public health nutritionist, dietetic internship director, state WIC director, breastfeeding coordinator for state health department, and senior researcher at the National Cancer Institute.

The M.P.H. in public health nutrition may be an appropriate degree for students who wish to proceed to a Ph.D. degree at the University. The Ph.D. program in nutrition offers a concentration in public health nutrition; the Ph.D. degree in epidemiology offers a focus on nutritional aspects of epidemiology. Several M.P.H. graduates currently are following this career path.

FOR FURTHER READING

- American Journal of Clinical Nutrition
- American Journal of Public Health
- International Journal of Obesity
- Journal of Nutrition
- Journal of Nutrition Education and Behavior
- Journal of the American Dietetic Association
- Public Health Nutrition
- "Resources" link on the Division of Epidemiology Web site www.epi.umn.edu

SAMPLE FIELD EXPERIENCES

- Department of Children, Families & Learning (Minnesota Department of Education)
- Extension Services, Hennepin/Ramsey Counties
- FoodShare, MN
- HealthPartners Nutrition Services, MN
- March of Dimes, MN
- St. Paul Ramsey Nutrition Program, MN
- RAP Head Start, MN

SAMPLE FINAL PROJECTS

- "A Community-Based Approach to Teaching Preadolescent Girl Scouts about Healthy Eating, Exercising, and Feeling Good about Their Bodies"
- "Behaviors Related to Fruits and Vegetables Consumption in Low-Income Women"
- "Dash Your Way to Better Health"
- "Minnesota Foodshare 1999 Legislative Proposal: The Special Supplement Food Program for Women, Infants, and Children (WIC)"
- "Needs Assessment and Curriculum Development in Early Childhood and Family Education (ECFE)"
- "Parental Perceptions on the Food Intake of Preschool-Aged Children"
- "The Better Restaurant Challenge: A One-Month Contest to Promote and Stimulate Diner Interest in Low-Fat Foods"

www.php.umn.edu

PUBLIC HEALTH PRACTICE

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knowledge and experience. Curriculum design assumes students will have minimal time for on-campus attendance. Technology-enhanced and distributed learning opportunities are an integral part of this program.

RESEARCH ACTIVITIES

PHP faculty focus their research, teaching, and community service expertise on the application of population science. The interdisciplinary faculty comes to the program from the School of Public Health, the Medical School, and the College of Veterinary Medicine, and offers expertise in epidemiology, environmental health, health services research and policy, biostatistics, and clinical practice specialties. The faculty's research and community service activities afford opportunities for student training.

QUALIFICATIONS FOR ADMISSION

Students should apply to PHP if they seek the ability to address the needs of populations through initiatives that protect, promote, and improve health in a multidisciplinary environment. Applicants' interests typically involve collaboration with clinicians, policy makers, researchers, and professionals from communities, public agencies, and private organizations.

Qualifications for Admission to the Executive Program in Public Health Practice (EPHP) Leading to an M.P.H. Degree

EPHP is a flexible curriculum that students may tailor to their career and practice. Established focus areas are: food safety/biosecurity, preparedness, response and recovery, cultural competency, risk assessment, and public health leadership. Each area has suggested coursework and study options. Students with other interests may propose a focus not listed.

Applicants must have an advanced health professional

THE FIELD OF PUBLIC HEALTH PRACTICE

The major focuses on public health knowledge and skills to understand, assess, and manage population health in public health, health care, and human services settings. Applicants must indicate an interest in one of the following career-oriented concentrations within this major:

- Executive Program in Public Health Practice (EPHP), an M.P.H. for working health and human service professionals with completed advanced degrees
- Program in Public Health Medicine (PHM), leading to a dual M.D./M.P.H. degree
- Veterinary Public Health, leading to a dual D.V.M./M.P.H. degree
- University of Minnesota Regents' Certificates in:

Core Concepts (PHCert-CC)—for working health or human service professionals with completed baccalaureate or advanced degrees who wish to develop a strong foundation of knowledge in basic public health concepts.

Food Safety and Biosecurity (PHCert-FSB)—for working health or human service professionals with completed baccalaureate or advanced degrees interested in protecting the health and well being of the community through a safe food supply.

Preparedness, Response and Recovery (PHCert-PRR)—for working health or human service professionals with completed baccalaureate or advanced degrees who wish to attain the knowledge and skills necessary for emergency and bioterrorism preparedness to protect the health of the community.

Occupational Health and Safety (PHCert-OHS)—for working health or human services professionals with completed baccalaureate or advanced degrees interested in learning to recognize, evaluate and control current and emerging health and safety threats in the workplace.

PUBLIC HEALTH PRACTICE AT THE UNIVERSITY OF MINNESOTA

Public health practice (PHP) is a collaboration of SPH, the University of Minnesota campuses in Rochester and Duluth, the University of Minnesota Schools of Medicine in the Twin Cities and Duluth, the Mayo Medical School, the University of North Dakota, the University of Minnesota College of Veterinary Medicine, and other accredited colleges of veterinary medicine in the United States. The program encourages physicians, nurses, veterinarians, health care and human service professionals, and current public health workers without formal training in public health to pursue advanced study in public health.

Classes are lively and stimulating; PHP students come from all over the world and draw from a wealth of

degree (e.g., M.S.N., M.D., D.D.S., D.V.M., Pharm.D.) and be currently licensed and practicing in their fields. Practicing professionals with other advanced degrees (e.g., M.S., Ph.D., Sc.D., M.B.B.S.) will also be considered where educational background and prior training are judged to be appropriate.

Applicants must submit:

- Completed SPH application and fee
- Completed three letters of recommendation and SPH form of which at least one should be familiar with the student's work experience
- Letter of intent
- Transcript(s) indicating advanced degree with minimum cumulative GPA of 3.00; one official transcript from each university or college attended; official English translations must be submitted if original is not in English
- Résumé
- GRE score if applicant's advanced degree is not from an accredited U.S. or Canadian school or if applicant has not passed USMLE
- A score of at least 600/250 on the TOEFL where English is the candidate's second language

Applicants must articulate their educational vision in a letter of intent no longer than two pages, double-spaced.

- Describe succinctly your educational goals and specific learning objectives. If they are not applicable to one of the established focus areas, you can suggest coursework that you would like to apply to your learning objectives. Courses can be viewed at www.semesters.umn.edu/tccat/template/desn.cfm and www.cpheo.umn.edu/institute. Address how you will meet the domains and specific competencies of public health practice (these can be found at www.TrainingFinder.org/competencies). Include how public health knowledge and skills and how EPHP's emphasis on public health practice will help you understand, assess, and manage population health in your current field of practice.
- Explain how your experience, learning style, and past education will contribute to your success in EPHP.
- Describe the accommodations you will make as you integrate your degree studies into your work, family, and community commitments. In thinking about your learning skills (e.g., use of time, setting priorities, and study habits), speculate on what difficulties you might encounter and tell us what you might do to overcome them.

Consult the PHP coordinator for testing criteria if you have a degree or coursework from an international institution. Applications are reviewed and students are admitted for every term.

Deadlines:

- Fall Semester—July 1
- Spring semester—December 1
- Summer term—April 1.

Qualifications for Admission to the Program in Public Health Medicine (PHM) Leading to an M.D./M.P.H.

Applicants must be currently enrolled in good standing in medical school. Candidates may enter the program after the first year of medical school and complete coursework during a one-year sabbatical from medical school. Students are admitted into the program beginning Summer session only.

Applicants must submit:

- Completed SPH application and fee
- Completed SPH recommendation form and attached letter
- Letter of intent
- Request for a letter of good standing from their medical school to be sent to the School of Public Health. The letter should include anticipated medical school graduation date.
- Signed release to their medical school to permit data from the medical school admissions file to be forwarded to the School of Public Health

Priority deadline for application is November 15.

Applications received after that date will be accepted on a space-available basis.

Qualifications for Admission to the Veterinary Public Health (VPH) Program Leading to a D.V.M./M.P.H.

Applicants must be currently admitted into and in good standing with an accredited college of veterinary medicine. Applicants must have received a baccalaureate degree before beginning M.P.H. coursework and may enter the program the summer before beginning veterinary medicine school.

Applicants must submit:

- Completed SPH application and fee
- One completed SPH recommendation form with attached letter from a recent professor
- Letter of intent
- Letter of good standing from their college of veterinary medicine. The letter should include anticipated graduation date. For students applying before beginning the D.V.M. program at a college of veterinary medicine, the letter should indicate that they have been admitted in good standing to the D.V.M. program.
- Signed release to their college of veterinary medicine to permit data from the admissions file to be forwarded to the University of Minnesota School of Public Health.

Priority deadline for application is March 1. Applications will be considered after that date on a space-available basis. Students are admitted into the program beginning Summer session only.

Qualifications for Admission to the University of Regents' Certificates

Public Health Certificate in Core Concepts (PHCert-CC)

The certificate will be awarded upon successful completion of 15 credits in the public health core concepts of biostatistics, environmental and occupational health, epidemiology, ethics, management, and social and behavioral sciences. Students will be required to make application for certificate completion within three years of matriculation.

Credits acquired toward the completion of the PHCert-CC may be credited to an M.P.H. within the School of Public Health under specific circumstances. Students complete these courses online or on campus with approval. See the PHCert-CC curriculum sheets for more details.

PHCert-CC Application deadlines:

Fall semester–July 1

Spring semester–December 1

Summer term–May 1

International students requesting an I-20 must take nine credits each semester in order to be considered full time. Fifteen credits are required to complete this certificate program; therefore an additional three credits of electives is required for full-time status for one year. Certificate students will complete the program in two semesters with a total of 18 credits. International students requesting an I-20 are admitted into the Public Health Certificate in Core Concepts Program for Fall semester only. Students on an F-1 visa may take a maximum of one online course per semester.

Public Health Certificate in Food Safety and Biosecurity (PHCert-FSB)

The PHCert-FSB will be awarded upon successful completion of 14 credits. Students complete these classes by attending at least two Public Health Institutes, held in May/June of each year. Students will be required to make application for certificate completion within four years of matriculation. Credits acquired in the PHCert-FSB (15 credits maximum) may be credited to an M.P.H. within the School of Public Health under specific circumstances. See the PHCert-FSB curriculum sheet for more details.

Public Health Certificate in Occupational Health and Safety (PHCert-OHS)

The PHCert-OHS will be awarded upon successful completion of 13-16 credits. Students complete these classes by attending at least two Public Health Institutes, held in May/June of each year, and through online classes. Students will be required to make application for certificate completion within four years of matriculation.

Credits acquired in the PHCert-OHS (15 credits maximum) may be credited to an M.P.H. within the School of Public Health under specific circumstances. See the PHCert-OHS curriculum sheet for more details.

Public Health Certificate in Preparedness, Response and Recovery (PHCert-PRR)

The PHCert-PRR will be awarded upon successful completion of 12-14 credits. Students complete these classes by attending at least two Public Health Institutes, held in May/June of each year. Some courses are also available online. Students will be required to make application for certificate completion within four years of matriculation. Credits acquired in the PHCert-PRR (15 credits maximum) may be credited to an M.P.H. within the School of Public Health under specific circumstances. See the PHCert-PRR curriculum sheet for more details.

Applications for the PHCert-FSB, OHS, and PRR are accepted for Summer term only. Application deadline is April 1. Students requesting an I-20 are not eligible for these three certificate programs (FSB, OHS, PRR).

Applicants must submit:

- Completed SPH application and fee
- Transcript(s) indicating a baccalaureate degree; one official transcript from each college or university attended, official English translations are required if original is not in English
- Brief letter of intent
- A score of at least 600/250 on the TOEFL where English is the candidate's second language

ADMISSIONS DECISIONS

Once the completed file is received from the Student Services Center (SSC), it is reviewed by the appropriate admissions committee. After the PHP major receives the file, students will typically learn the admissions committee's decision within three to four weeks.

Public health medicine students will typically hear the admissions committee's decision in mid-January.

FINANCIAL AID

Limited scholarships are available for students to take courses at the Public Health Institute each spring. Early application is encouraged.

CAREER PROSPECTS

Many students in PHP programs will use their public health knowledge and skills to enhance effectiveness and opportunities in their current work or career path. Population science is an increasingly valued area of expertise in many health and human service organizations. Others will use their degree or certificate to move into public health positions. Public health is experiencing a workforce shortage. Many practitioners are reaching

retirement; the demand for replacement professionals will increase. Health disparities, high rates of child poverty, emerging and reemerging infectious diseases, a greater appreciation for preventive health, foodborne illness, animal/human disease issues, an aging population, and many other factors will create many job opportunities in public health.

FOR FURTHER READING

- American Journal of Public Health
- Annual Review of Public Health
- *Demonstrating Excellence in Academic Public Health Practice*, ASPH Council of Public Health Practice Coordinators
- Healthy People 2010, <http://web.health.gov/healthypeople/2010>
- *Preparing Currently Employed Public Health Professionals for Changes in the Health System*, K. Gebbie, I. Hwang
- *Public Health: What It Is and How It Works*, B.J. Turncock
- "The Public Health Workforce: An Agenda for the 21st Century," U.S. DHHS/PHS. Web document: <http://web.health.gov/phfunctions>

SAMPLE FIELD EXPERIENCES

- Allina (HMO) clinic
- American Cancer Society
- Breaking Free
- Children, Youth, and Family Consortium
- Children's Hospitals and Clinics, Health Care Coalition on Violence
- Hennepin County Community Health Department

SAMPLE FINAL PROJECTS

- "An Evaluation of the Political Activity Among Neighborhood Associations in Minneapolis and St. Paul"
- "Knowledge and Attitudes of Hmong Health Care Workers About Hmong Traditional Healing Practices: A Needs Assessment"
- "Resiliency in Urban Native American Youth and Substance Abuse"
- "The Smoke You Don't See: Uncovering Tobacco Industry Strategies Against ETC and the EPA"
- "The Social Environment and Adolescent Nutritional Beliefs and Behaviors: Analysis of Focus Group Data"
- "The Association of Perinatal Violence and Gestational Weight Gain"
- "The Model of Basic HIV/AIDS Information for Health Care and Social Services Personnel"
- "Violence at a Family Planning Clinic"

Admission Requirements

A GUIDE TO ADMISSION REQUIREMENTS AT THE UNIVERSITY OF MINNESOTA SCHOOL OF PUBLIC HEALTH

Applicants considering an M.P.H. degree or certificate apply through the School of Public Health. Applicants interested in pursuing an M.S. or Ph.D. degree in a field of public health submit materials to both the University of Minnesota Graduate School and the School of Public Health. Directions, online application, and downloadable forms for all programs in public health are available on this Web page: sph.umn.edu/students/student-services/application/.

The table on the following pages shows admission requirements for areas of study in the School of Public Health.

ADMISSION REQUIREMENTS BY MAJOR

Admission requires a baccalaureate or higher degree from an accredited college or university. Admissions committees in each major review applicants according to their personal statements, background and experience, record of academic achievement, demonstrated academic potential, letters of recommendation, compatibility of interests with program faculty, and other factors. Test scores and GPAs listed in the following table provide competitive points of reference for admission but are not alone decisive in the admissions review.

Applicants may apply to more than one major. We require a separate fee and application packet for each. Note that there is a separate admissions committee for each major.

INTERNATIONAL APPLICANTS

Documentation Needed

- One official transcript from each college or university attended, with an official English translation if the original is not in English
- Official mark sheets and diploma(s)
- Financial Certification form (available in the Prospective Student section of our Web site www.sph.umn.edu)

ADMISSION REQUIREMENTS BY MAJOR

Admission Requirements

BIostatistics (M.S. or M.P.H.)		BIostatistics (Ph.D.)	
GPA¹	3.10 overall; 3.40 statistics, math	GPA¹	3.70 statistics, math
GRE^{1,2,3}	450 V, 550 Q (Test not required for applicants with an M.D. or Ph.D. from a U.S. school)	GRE^{1,2,3}	550 V, 650 Q, 3.5 AWA (Test not required for applicants with an M.D. or Ph.D. from a U.S. school)
PREREQUISITES	Math (multivariate calculus, linear algebra), applied statistics, computer programming (e.g., fortran, C)	PREREQUISITES	M.S. in statistics or biostatistics, coursework in real analysis, mathematical statistics or applied statistics
APPLICATION DATES^{4,10}	December 31 (first round of admissions and financial aid); June 15 (final deadline)	APPLICATION DATES^{4,10}	December 31 (first round of admissions and financial aid); June 15 (final deadline)
TOEFL^{5,6}	600/250 (Applicants scoring higher than 600/250 will be considered even if Verbal GRE is below 450)	TOEFL^{5,6}	600/250 (Applicants scoring higher than 600/250 will be considered even if verbal GRE is below 550)
SUBSTITUTE REQUIREMENTS	Degree from U.S. college or IELTS ⁷ score greater than 7.0 substitutes for TOEFL	SUBSTITUTE REQUIREMENTS	Degree from U.S. college, or IELTS ⁷ score higher than 7.0 substitutes for TOEFL
CLINICAL RESEARCH (M.S.)		COMMUNITY HEALTH EDUCATION (M.P.H.)	
GPA¹	3.00	GPA¹	3.00
GRE^{1,2,3}	Not required	GRE^{1,2,3}	1000, 3.5 AWA ⁸ (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)
PREREQUISITES	Advanced health professional degree (e.g., D.D.S., D.V.M., M.D., Pharm.D., Ph.D.) or other advanced doctoral degree in a clinical biomedical field or an advanced nursing degree (e.g., M.S.)	PREREQUISITES	One year of relevant experience, one quantitative methods course (statistics preferred), three behavioral and social science courses (four to five preferred)
APPLICATION DATES⁴	March 1-May 15	APPLICATION DATES^{4,10}	March 1 (priority consideration for admission and SPH scholarships ¹⁰)
TOEFL^{5,6}	600/250	TOEFL^{5,6}	600/250
SUBSTITUTE REQUIREMENTS	ECFMG or UMN fellow with minimum 24 academic credits substitutes for TOEFL	SUBSTITUTE REQUIREMENTS	ECFMG substitutes for GRE and TOEFL
ENVIRONMENTAL HEALTH (M.P.H., M.S., or Ph.D.)		EPIDEMIOLOGY (M.P.H.)	
GPA¹	3.00	GPA¹	3.00
GRE^{1,2,3}	1000, 3.5 AWA ⁸ Also acceptable: DAT, GMAT, LSAT, MCAT (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)	GRE^{1,2,3}	1000, 3.5 AWA ⁸ (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)
PREREQUISITES	Sciences and engineering prerequisites vary by major. Occupational health nursing requires a baccalaureate nursing degree	PREREQUISITES	Life sciences background; demonstrated analytic and quantitative aptitude on GRE (70th percentile) or in college-level coursework
APPLICATION DATES^{4,10}	March 1 (priority consideration for admission and SPH scholarships ¹⁰)	APPLICATION DATES^{4,10}	March 1 (priority consideration for admission and SPH scholarships ¹⁰)
TOEFL^{5,6}	600/250	TOEFL^{5,6}	600/250
SUBSTITUTE REQUIREMENTS	ECFMG substitutes for GRE and TOEFL	SUBSTITUTE REQUIREMENTS	ECFMG substitutes for GRE and TOEFL

ADMISSION REQUIREMENTS BY MAJOR

EPIDEMIOLOGY (Ph.D.)		HEALTH SERVICES RESEARCH, POLICY AND ADMINISTRATION (M.S.)	
GPA ¹	3.00	GPA ¹	3.00
GRE ^{1,2,3}	1000, 3.5 AWA (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)	GRE ^{1,2,3}	1000, 3.5 AWA ⁸
PREREQUISITES	Advanced degree in related field; life or behavioral sciences background; demonstrated analytic and quantitative aptitude on GRE (70th percentile) or in college-level coursework	PREREQUISITES	Some college-level math is recommended
APPLICATION DATES ^{4,10}	January 15	APPLICATION DATES ⁴	January 15 (first round of financial aid); June 15 (final deadline)
TOEFL ^{5,6}	600/250	TOEFL ^{5,6}	600/250
SUBSTITUTE REQUIREMENTS	ECFMG substitutes for GRE and TOEFL	SUBSTITUTE REQUIREMENTS	No substitutes
HEALTH SERVICES RESEARCH, POLICY AND ADMINISTRATION (Ph.D.)		MATERNAL AND CHILD HEALTH (M.P.H.)	
GPA ¹	3.00	GPA ¹	3.00
GRE ^{1,2,3}	1200, 5.0 AWA ¹¹	GRE ^{1,2,3}	1000, 3.5 AWA ⁸ (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)
PREREQUISITES	Calculus, statistics, intermediate microeconomics	PREREQUISITES	One year of experience, basic understanding of human physiological or psychological development
APPLICATION DATES ^{4,10}	January 15 (first round of financial aid); June 15 (final deadline)	APPLICATION DATES ^{4,10}	March 1 (priority consideration for admission and SPH scholarships ¹⁰)
TOEFL ^{5,6}	600/250	TOEFL ^{5,6}	600/250
SUBSTITUTE REQUIREMENTS	No substitutes	SUBSTITUTE REQUIREMENTS	ECFMG substitutes for TOEFL
PUBLIC HEALTH ADMINISTRATION AND POLICY (M.P.H.)		PUBLIC HEALTH NUTRITION (M.P.H.)	
GPA ¹	3.00	GPA ¹	3.00
GRE ^{1,2,3}	1000, 3.5 AWA ⁸ . Also acceptable: GMAT, LSAT, DAT, MCAT. (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)	GRE ^{1,2,3}	1000, 3.5 AWA ⁸ (Test not required for applicants with a doctoral-level degree from an accredited U.S. or Canadian school)
PREREQUISITES	One year of experience preferred, evidence of leadership experience	PREREQUISITES	24-month option: 3 credits biology, 6 credits general chemistry, 3 credits organic chemistry, 3 credits biochemistry. 16-month option: nutrition or dietetics degree, RD or RD-eligible. 13-month option: RD or RD-eligible and three years full-time nutrition experience
APPLICATION DATES ^{4,10}	March 1 (priority consideration for admission and SPH scholarships ¹⁰)	APPLICATION DATES ^{4,10}	March 1 (priority consideration for admission and SPH scholarships ¹⁰)
TOEFL ^{5,6}	600/250	TOEFL ^{5,6}	600/250
SUBSTITUTE REQUIREMENTS	ECFMG substitutes for GRE and TOEFL	SUBSTITUTE REQUIREMENTS	ECFMG substitutes for GRE and TOEFL

ADMISSION REQUIREMENTS BY MAJOR

Admission Requirements

<p style="text-align: center;">PUBLIC HEALTH PRACTICE EXECUTIVE PROGRAM IN PUBLIC HEALTH PRACTICE (M.P.H.)</p> <p>GPA¹ 3.00</p> <p>GRE^{1, 2, 3} Test not required for applicants with an advanced health professional degree from an accredited U.S. or Canadian school</p> <p>PREREQUISITES Advanced health professional degree (e.g., M.S.N., M.D., D.D.S., D.V.M., Pharm.D.); M.S., Ph.D. or Sc.D. or M.B.B.S. may be considered</p> <p>APPLICATION DATES^{4, 10} Fall term: July 1; Spring term: December 1; Summer term: April 1</p> <p>TOEFL^{5, 6} 600/250</p> <p>SUBSTITUTE REQUIREMENTS ECFMG substitutes for GRE and TOEFL</p>	<p style="text-align: center;">PUBLIC HEALTH MEDICINE (M.D./M.P.H.)</p> <p>GPA¹ 3.00</p> <p>GRE^{1, 2, 3} MCAT</p> <p>PREREQUISITES Currently enrolled in medical school</p> <p>APPLICATION DATES⁴ November 15 (priority consideration for admission and SPH scholarships¹⁰)</p> <p>SUBSTITUTE REQUIREMENTS No substitutes</p>
<p style="text-align: center;">VETERINARY PUBLIC HEALTH (D.V.M./M.P.H.)</p> <p>GPA¹ 3.00</p> <p>GRE^{1, 2, 3} 1000, 3.5 AWA⁸</p> <p>PREREQUISITES Admitted in good standing to D.V.M. program; baccalaureate degree</p> <p>APPLICATION DATES⁴ March 1 priority consideration for admission and SPH scholarships</p> <p>SUBSTITUTE REQUIREMENTS ECFMG substitutes for GRE and TOEFL</p>	<p>Footnotes:</p> <p>¹ GPA and standardized test results are required. Applicant is considered if either minimum is met.</p> <p>² GRE score is for general test; no subject test is required.</p> <p>³ Scores for standardized tests taken within five years of SPH enrollment are acceptable.</p> <p>⁴ International applicants should submit application packet one month prior to indicated deadlines.</p> <p>⁵ Score of 600 on paper test compares to 250 on computer test.</p> <p>⁶ TOEFL, the most common English proficiency test, is required for international applicants except those from an English-speaking country. Applicants who have completed 16 semester credits / 24 quarter credits (within the past 24 months) in an academic program in a recognized institution of higher learning in the U.S. do not need to submit the TOEFL as part of the application process.</p> <p>⁷ IELTS is International English Language Testing System.</p> <p>⁸ If taken before October 1, 2002, minimum composite must be 1500.</p> <p>⁹ If taken before October 1, 2002, minimum scores are 450 V, 550 Q, 550 A.</p> <p>¹⁰ One award (MacArthur Fellowship) has a deadline of January 15.</p> <p>¹¹ If taken before October 1, 2002, minimum composite must be 1800.</p> <p>¹² If taken before October 1, 2002, minimum scores are 550 V, 650 Q, 650 A.</p>
<p style="text-align: center;">UNIVERSITY OF MINNESOTA REGENTS' CERTIFICATES</p> <p style="text-align: center;">PUBLIC HEALTH CERTIFICATE IN CORE CONCEPTS (CC) PUBLIC HEALTH CERTIFICATE IN FOOD SAFETY AND BIOSECURITY (FSB) PUBLIC HEALTH CERTIFICATE IN OCCUPATIONAL HEALTH AND SAFETY (OHS) PUBLIC HEALTH CERTIFICATE IN PREPAREDNESS, RESPONSE AND RECOVERY (PRR)</p> <p>GPA¹ No specific GPA required, but transcripts are reviewed; grades in science and math courses are strongly considered</p> <p>GRE^{1, 2, 3} Not required</p> <p>PREREQUISITES Baccalaureate degree, letter of intent and work experience considered</p> <p>APPLICATION DATES⁴ For CC only: Fall term, July 1; Spring term, December 1; Summer term, May 1. For FSB, OHS, PRR: April 1 (admission for Summer term only)</p> <p>TOEFL^{5, 6} 600/250</p> <p>SUBSTITUTE REQUIREMENTS No substitutes</p>	

OTHER ADMISSION SPECIFICS

Transcripts

A transcript is required for any coursework reported on the application. Applicants should allow extra time for a transcript evaluation if they attended an academic institution outside the United States.

STANDARDIZED TESTS

Graduate Record Examination (GRE)

Find test times, dates and registration forms for the GRE at www.gre.org or by calling (609) 771-7670. Most applicants take a computerized version which provides the School with an official score within 10-15 days, compared to the paper test for which scores are not available for four to six weeks. To have scores sent directly to the School of Public Health, use institution code 6874 and department code 0616. The application is not considered complete until we receive an official score. Copies of test scores are not accepted.

Students in China, Hong Kong, Korea, and Taiwan will have two opportunities in the 2003-04 testing year to take the paper-based portion of the GRE General Test. See www.gre.org for details.

Test of English as a Foreign Language (TOEFL)

For information or to register for the test, visit www.toefl.org. The TOEFL is required of every applicant whose previous degree was obtained from a non-English speaking country and whose native language is not English. To have scores sent directly to the School of Public Health, use institution code 6874 and department code 8417.

IMMUNIZATION POLICY FOR STUDENTS ADMITTED TO PROGRAM THE ACADEMIC HEALTH CENTER

OSHA regulations, CDC guidelines, and Academic Health Center (AHC) policy require all School of Public Health students (except those in certificate programs) to have a health clearance as a condition of enrollment.

Admitted students must complete the immunization documentation process as a condition of enrollment. For description of requirements and downloadable form see www.bhs.umn.edu/services/AHC.htm#AHC.

ADMISSION TO THE SCHOOL

Recent statistics show that approximately half of the applicants each year have been offered admission. If the applicant is not offered admission, they are welcome to reapply. Often, once students raise their GRE score, take a prerequisite course, or gain more professional experience, they increase their chances for admission.

Each major has its own admissions committee. Completed files are sent to the admissions committee for review. Once we receive application materials, we send a confirmation letter. Prospective students are not required to participate in an interview as part of the admissions process, but we encourage Ph.D. applicants to be in contact with the coordinator in the major to which they are applying.

Each major processes applications as quickly as possible. In some cases, especially during the peak season of early spring, applicants may not hear for up to six weeks after the completion of the application packet. In other cases applicants may be notified within a few days.

Fall admission is typical. Applicants to an M.P.H. program may request and receive permission to defer admission for one year. There is no deferral for M.S. students. Deferral is rare for Ph.D. students.

In some cases it is possible to transfer course credit from another university or college. Prior approval is required.

Tuition & Financing

2003-2004 TUITION

(Tuition and fees for 2004-2005 will be determined by the University of Minnesota Board of Regents in spring 2004.)

	RESIDENT	NON-RESIDENT
School of Public Health (M.P.H. and Certificate students)		
Per Credit	\$ 388.30 ¹	\$ 763.71 ¹
Graduate School (M.S. and Ph.D. students)		
1-5 credits (per credit)	\$ 613.56	\$ 1,205.14
6-14 credits	3,681.36	7,230.84
Each credit over 14 (per credit)	613.56	1,205.14

2003-2004 SELECTED FEES

For a list of all fees see
www.onestop.umn.edu/Finances/tuitionrates/2003-04/index.html

Fee	Students Assessed	# of Credits	Frequency	Amount
SPH Technology Fee	All students	1-5 credits	per term	\$ 50.00
		6 or more credits		75.00
SPH Credential Fee	Students in public health certificate programs		one time fee	160.00
University Fee	All students	1-9 credits	per term	30.00
		10 or more credits		300.00
University Student Services Fee²	All students	6 or more credits	per term	277.12
Orientation Fee	M.S. and Ph.D. students		one time	40.00
Student Health Benefit Plan³	See ³ below	See ³ below	per term	

FINANCING YOUR EDUCATION

Graduate education is an investment in your personal fulfillment, social contribution, and earning potential. With wise planning, the time and money you spend now will bring long-term satisfaction. Students in the School of Public Health finance their education using a combination of means including those listed below. For more information see: www.sph.umn.edu/student-services/application/financial/.

Students finance their education at the School of Public Health in many different ways, including:

- Awards from other University of Minnesota departments and colleges
- Awards through a School of Public Health division or major
- Awards and scholarships through the School of Public Health
- Campus or off-campus jobs
- Employer reimbursement
- Graduate assistantships (SPH students may apply for graduate assistantships anywhere on campus. SPH faculty are extremely prolific researchers; their projects fund more than 100 graduate students every year. In addition to a salary, assistantships usually provide tuition waivers and eligibility for low-cost health insurance. For current postings, benefits and policies, see www.umn.edu/ohr/gao/)

- Graduate School awards
- Loans
- Outside scholarships
- Personal savings
- Tax benefits
- Traineeships
- Tuition reciprocity

School of Public Health research activities typically support more than 100 graduate assistantships every year. School of Public Health students may also apply for graduate assistantships across the University campus. In addition to a salary, assistantships usually provide tuition waivers and eligibility for low-cost health insurance. For current postings, benefits and policies, see www.umn.edu/ohr/gao/.

AWARDS AND SCHOLARSHIPS

The School of Public Health confers numerous awards each year for new and continuing students. To be considered for these awards, please complete the scholarship form in addition to the application for admission.

The scholarship form along with additional information about financing your education at the School of Public Health is available at: www.sph.umn.edu/student-services/application/financial/.

Footnotes:

- ¹ Degree-seeking students will be charged the same tuition rate for all courses whether a traditional classroom course or a distance education course. Distance education students who are off-campus (e.g., living in Texas or California) will pay resident rates for online courses. See Web site for possible changes in policy.
- ² Students who are registered for fewer than 6 credits for a particular term are not charged this fee.
- ³ Students registered for 6 or more credits and admitted to a degree program must have health insurance. The University will automatically enroll these students in the University-sponsored Student Health Benefit Plan unless they have proof of coverage (e.g., through an employer, including the health plan provided

to graduate assistants). Effective Fall 2003, all international students, visiting scholars, and their dependents must enroll in the Student Health Benefit Plan (SHBP) unless they are covered by a United States-based employer-sponsored health plan or the Graduate Assistant Insurance Plan (GA Plan) provided by the University of Minnesota. www.bhs.umn.edu/insurance/international.htm.

Resources

SCHOOL OF PUBLIC HEALTH, OFFICE OF STUDENT AFFAIRS

Student Services Center – The hub for all questions regarding applications, orientation, class scheduling, graduation and much more. The SSC works closely with the coordinators in each of the majors to manage the bureaucracy for students, create a productive educational setting, provide for social and collegial interaction, and coordinate all information to students.

Career Services Center – Staff assist students and alumni with a wide range of career-related activities in an effort to maximize employment opportunities, enhance career skills, and develop professional contacts.

Programs and resources include:

- The Public Health Mentor Program
- The Career Resource Library
- Announcements of local and national jobs
- Individual career counseling and coaching
- Workshops
- Career fairs

For more information, see www.sph.umn.edu/career.

Multicultural Services — Numerous programs and activities ensure students find the SPH to be an open and welcoming environment. The Office of Multicultural Services is also the avenue to connections in the community that work with and serve diverse populations.

Academic Warm-Up — Prior to the beginning of fall semester, SPH students are invited to participate in the Academic Warm-Up, an eight-day series of classes and events designed to acquaint themselves with subject matter, meet classmates, and familiarize themselves with the campus.

Workshops include:

- Math Refresher
- Résumés, Resources, and Reality: Job Search Strategies as a Graduate Student
- Pulling It All Together: Information Gathering and Synthesis
- Intro to EXCEL
- A Gentle Introduction to Statistical Analysis Software (SAS) for Public Health Students
- Writing Matters: A Brief Refresher Course
- Bio-Medical Library Orientation and Tour
- Financial Aid
- Orientation to the Public Health Mentor Program

So much of a public health education happens beyond the classroom. Popular features are service projects with several local nonprofit organizations and community immersions in some of the vibrant urban communities of the Twin Cities (Somali, Hispanic, African American, American Indian, and Hmong). Social events (e.g., Twins' baseball game, campus scavenger hunt, networking tea for international students, all-school book discussion, ice cream social) celebrate the beginning of a new academic year.

UNIVERSITY OF MINNESOTA

Academic Health Center — The AHC is home to the School of Public Health and five other health sciences schools: Medicine, Nursing, Dentistry, Pharmacy, and Veterinary Medicine, as well as allied health programs and interdisciplinary efforts; www.ahc.umn.edu/.

Biomedical Library — The library offers an extensive collection of health sciences literature, health science electronic databases, as well as rare historical items. The library provides courses and workshops on research and information gathering; www.biomed.lib.umn.edu/.

Boynton Health Service — Student health service; www.bhs.umn.edu.

Center for Health Interdisciplinary Programs (CHIP) — CHIP fosters relationships and teamwork among students of the various health programs at the University of Minnesota; www.chip.umn.edu.

Disability Services — Many accommodations are available at the University to ensure that students with disabilities participate fully in academic and student life. For information about arrangements, call Disability Services at (612) 626-1333 (V/TTY) or (612) 626-9086 (fax); <http://ds.umn.edu>.

Graduate Assistantships — Postings of current openings across campus; <http://data.ohr.umn.edu/webfm/gaopost/gaopost.html>.

Graduate School Admissions — (612) 625-3014; e-mail gsadmit@umn.edu; Online application www.grad.umn.edu.

Housing and Residential Life —

This department can assist students in their search for a place to live, either on or near campus. Call (612) 624-2994 or e-mail housing@umn.edu; the department's Web site address is: www.umn.edu/housing.

International Student and Scholar Services —

This office serves the unique needs of international students. Contact them at (612) 626-7100, (612) 626-7361 (fax), or e-mail: iss@umn.edu; the Web site address is www.iss.umn.edu.

Onestop — The campus electronic hub — billing, class schedule, financial aid, registration, other services; <http://onestop.umn.edu>. (612) 624-1111, (800) 400-8636, e-mail helpingU@umn.edu.

Parking and Transportation Services —

Campus and city maps, bus and parking info; www.umn.edu/pts. (612) 626-7275; e-mail parking@umn.edu;

Recreation Center — The University offers numerous opportunities for fitness. The University Rec Center houses two fitness centers, 14 handball and racquetball courts, five squash courts, two gymnasiums, steam rooms, saunas, a pro shop, a deli, and numerous lounge spaces. Full-time student fees include membership to the Rec Center; www.recsports.umn.edu/.

Frequently Asked Questions

For additional information, visit www.sph.umn.edu. Click on "prospective students."

APPLICATION PROCESS

What kind of background and degree do I need to be a viable applicant?

SPH students come from all academic areas: biology, English, social work, chemistry, art, business, statistics, history, psychology... Some undergraduate degrees may be favored for specific majors; refer to descriptions of each major on the previous pages. Admission into some Ph.D. programs requires a prior advanced degree in a related area.

Who makes admission decisions?

Each degree and certificate program has its own admissions committee composed from their faculties. Committees review completed applications for evidence of the applicant's intent and purpose in studying public health, past academic performance, program-specific academic potential, professional and life experience, English fluency (where required), and other factors such as an applicant's compatibility with faculty expertise and program directions. The School of Public Health Dean ultimately approves all M.P.H. admissions; the University's Graduate School approves recommendations for M.S. and Ph.D. admissions.

What is a letter of intent (for M.P.H. applicants) or statement of purpose (for M.S. applicants)?

The letter of intent or statement of purpose should describe past or present professional experience, future career goals, and educational needs. Include the professional role you see yourself performing and, if possible, the type of agency, organization, or setting in which you plan to work upon receiving your public health degree. See the description of the major(s) to which you are applying for any specific requirements. (Epidemiology Ph.D. applicants

must also submit a proposed research statement.)

Who should complete the recommendation forms/letters?

References providing recommendations should be qualified to assess your academic work; clinical, public health, or professional experiences; or leadership potential in public health. Each letter must be accompanied by the SPH recommendation form.

Can I apply to more than one major?

Yes. We require a separate fee and application packet for each major to which you apply. If you are applying to more than one major, indicate this in a memo in your application packet. The first application must contain original transcripts; the second application may contain copies of transcripts.

If I have attended the U of M before, do I have to complete the entire application process?

Yes, you must complete all processes, including requesting an official transcript and paying application fees.

Do I need original transcripts from all colleges/universities I have attended?

Yes. For any coursework reported on your application you must provide a transcript. If you attended an academic institution outside of the United States, allow extra time for a transcript evaluation. This could require an additional three weeks from when your file is complete to the time it reaches the admissions committee.

Do I need to take standardized tests?

The answer is usually yes, but there are some exceptions. Most degree programs require the Graduate Record Examination (GRE) as important evidence of your academic potential for graduate work. However, some M.P.H. majors may accept other tests such as the GMAT, or Medicine or Law School entrance examinations. Be sure to check with the specific program for details.

How do I register to take the standardized tests for admission?

Find test times, dates, and registration forms for the GRE at www.gre.org or by calling (609) 771-7670. Most applicants take the computerized version, which provides us with an official score from Educational Testing Services (ETS) within 10-15 days after the exam date. Please note that with the paper test, scores are available four to six weeks after the test is taken.

Standardized test information:

- GRE www.gre.org
Institution code: 6874
Department code: 0616
- TOEFL www.toefl.org
Institution code: 6874
Department code: 8417

What if I haven't taken the GRE by the application deadline?

Your application is not considered complete until the official score from ETS is received by the School of Public Health Student Services Center. Please make your test-taking plans accordingly. Refer to the admission chart for deadline dates.

How do I apply for financial aid?

Complete the entire process of the Free Application for Federal Student Aid (FAFSA) online at www.fafsa.ed.gov Use school code: 003969.

What is the Title IV code for my financial aid application?

The Title IV code for the University of Minnesota Twin Cities is 003969. Use this code to complete the Free Application for Federal Student Aid (FAFSA) form.

When is my file ready to be reviewed?

When we receive your packet, we send you a letter indicating its status. The letter will indicate either that the file is complete or that it is missing materials, as specified. If the file is incomplete, you are responsible for making sure that the missing materials are sent to the School of Public Health before the deadline. You may call (800) 774-8636 or (612) 626-3500 or e-mail sph-ssc@umn.edu to check on

the arrival of missing materials. When all the materials arrive, we send a letter confirming that the file is complete.

Note: copies of test scores are unacceptable. To reduce delays, be sure to have official test scores from ETS sent to the School.

How competitive is admission? Am I likely to get in?

Schoolwide over the past several years, approximately 50 percent of all applicants have been offered admission. The profile of admissions each year is partly determined by the caliber of the applicant pool. Successful applicants in almost all cases exceed the school minimum admission requirements. Additional information is included in the description of some majors on the previous pages.

Can I be admitted at any time other than fall semester?

Application to the programs in the public health practice major (certificates, public health medicine, veterinary public health, and the executive program in public health practice) have distinct timelines; please see page 36 for more details. Among the other majors, fall admission is typical. Some school-wide processes are structured for this traditional academic year (e.g., scholarships and awards, orientation). Environmental health is the major most receptive to spring admissions. For possible exceptions in other majors, contact sph-ssc@umn.edu or (800) 774-8636.

If I am not offered admission, what are my options?

If you are interested in reapplying for the following year, please contact the relevant major chair to see how you might improve your application. Applicants may be successful with their second application and go on to become high-achieving students. If you applied to a degree program, you may consider applying to a different major or to a certificate program. Coordinators in each of the majors can provide excellent advice on these possibilities.

Can I transfer courses from another university or college?

For M.P.H.: Coursework taken at the University of Minnesota before the term to which you are admitted are considered “transfer courses.” Credits must be approved and cannot exceed 15 semester credits. To be transferred into an M.P.H. plan of study, courses must be approved by the SPH associate dean and major faculty. E-mail the coordinator if you have questions.

For M.S.: Credits must be approved by adviser, director of graduate studies, and Graduate School; credits cannot exceed 40 percent of M.S. coursework.

For Ph.D.: See Graduate School Web site www.grad.umn.edu/gsss/

If admitted, may I defer my admission?

For M.P.H.: In most cases, you may defer your admission for one year. You must request a deferment in writing from the major. If granted, your name is added to the next year’s incoming class list. You do not have to pay the application fee again or submit another application during this one-year period.

For M.S.: There is no deferral. Applicants must reapply and repay the fee.

For Ph.D.: Deferral is rare. Talk with the relevant coordinator for details.

SPECIAL CONCERNS OF INTERNATIONAL APPLICANTS

What documentation do I need?

If you are an international applicant, you must submit one official transcript from each college or university attended, with an official English translation if the original is not in English. We contract with a professional firm to evaluate transcripts and provide a summary to admission committees.

Remember to include official mark sheets and diploma. Your admission file is not forwarded to the admissions committee until all official documentation has been received and evaluated. Please allow one additional month for this processing.

All international students are required to complete a Financial Certification form (to process the I-20) identifying sufficient funding for one academic year. Find an updated Financial Certification form on the SPH Web site (www.sph.umn.edu).

Financial aid is limited at the University.

International students are eligible to apply for graduate assistantships. These positions are competitive; if you do not have an assistantship contract with the major to which you have been admitted, you cannot calculate assistantship income on your Financial Certification form. If you do not have sufficient funding to cover your expenses for the first year, consider delaying your studies; reapply when you have secured sufficient funds.

Is financial aid available for international students?

Most financial aid is directed to U.S. citizens. However, there are some scholarships for which international students are eligible. All students may apply for graduate assistant positions that are posted throughout the year. For posting details, see www.umn.edu/ohr/gao.

ACADEMIC OPTIONS

Must I register as a full-time student?

No. Most of our majors allow you to complete your degree as a full-time or part-time student. Part-time status requires additional planning, as many courses are offered during daytime hours only. Your credit load may affect financial aid eligibility.

Full-time status:

- M.P.H.
Fall, Spring semesters—9 credits
Summer—6 credits
- M.S., Ph.D.
Fall, Spring semesters—6 credits
Summer—6 credits

Can I complete a degree in the evening or summer, or on the Web?

All M.P.H. core requirements and some other courses are available online as well as in traditional classroom format. Students in degree programs

must complete most of their coursework on campus. We believe this interaction and the intellectual community are critical to the academic development of our students. Coursework for the public health certificate in core concepts is available entirely on the Web.

Can I take classes in the SPH before I've been admitted? How should I register?

You may register for a class without being admitted to the school. You may complete the necessary form ("Request for Graduate Credit") on the web <http://onestop.umn.edu/Forms> or contact the School of Public Health Student Services Center (sph-ssc@tc.umn.edu) for the forms and details. To be transferred into an M.P.H. plan of study, courses must be approved by the SPH associate dean and major faculty. Consult the coordinator in the major to which you are applying. Forms must be approved by the Student Services Center after obtaining permission from the instructor.

THE STUDENT EXPERIENCE

How can I apply for graduate assistantships? What are the benefits?

Many of our students obtain research or teaching assistantships, working for any of numerous departments on campus or for numerous community organizations. Once admitted, you may begin looking at the postings at www.umn.edu/ohr/gao/. The coordinator in the major to which you are applying may also have information about assistantships.

Application for any assistantship requires submitting a résumé and cover letter. Hiring is competitive; if you have data analysis, literature review, information management, data gathering, knowledge of statistical software (SPSS, SAS, etc.), or other research skills, you have greater likelihood of being hired. Assistants receive tuition benefits, health insurance, and more. See www1.umn.edu/ohr/gao/ for details.

What assistance is available in helping to find internships and jobs?

The School of Public Health Career Services Center provides resources to students, prospective

students, and graduates. These include job and internship postings, mentor program, information sessions with employers, workshops of job search tools, a resource library, and individual job search coaching.

What services are available for students with disabilities?

The University is a leader in creating inclusive learning environments. Refer to Disability Services at <http://.ds.umn.edu/>.

Where do students live?

Many students live in apartments off campus. Come early to find the most convenient and affordable units. The University Web site has information about on-campus and off-campus housing www.umn.edu/housing/. Also refer to the classified listings in the major Twin Cities newspapers www.startribune.com/ or www.twincities.com.

To live off campus do I need a car?

Popular areas for student residence are well-served by buses. Parking on campus is limited, and monthly bus passes are offered to University students at a discount. Travel by public transportation outside the Twin Cities metropolitan area is more limited.

FOR MORE INFORMATION

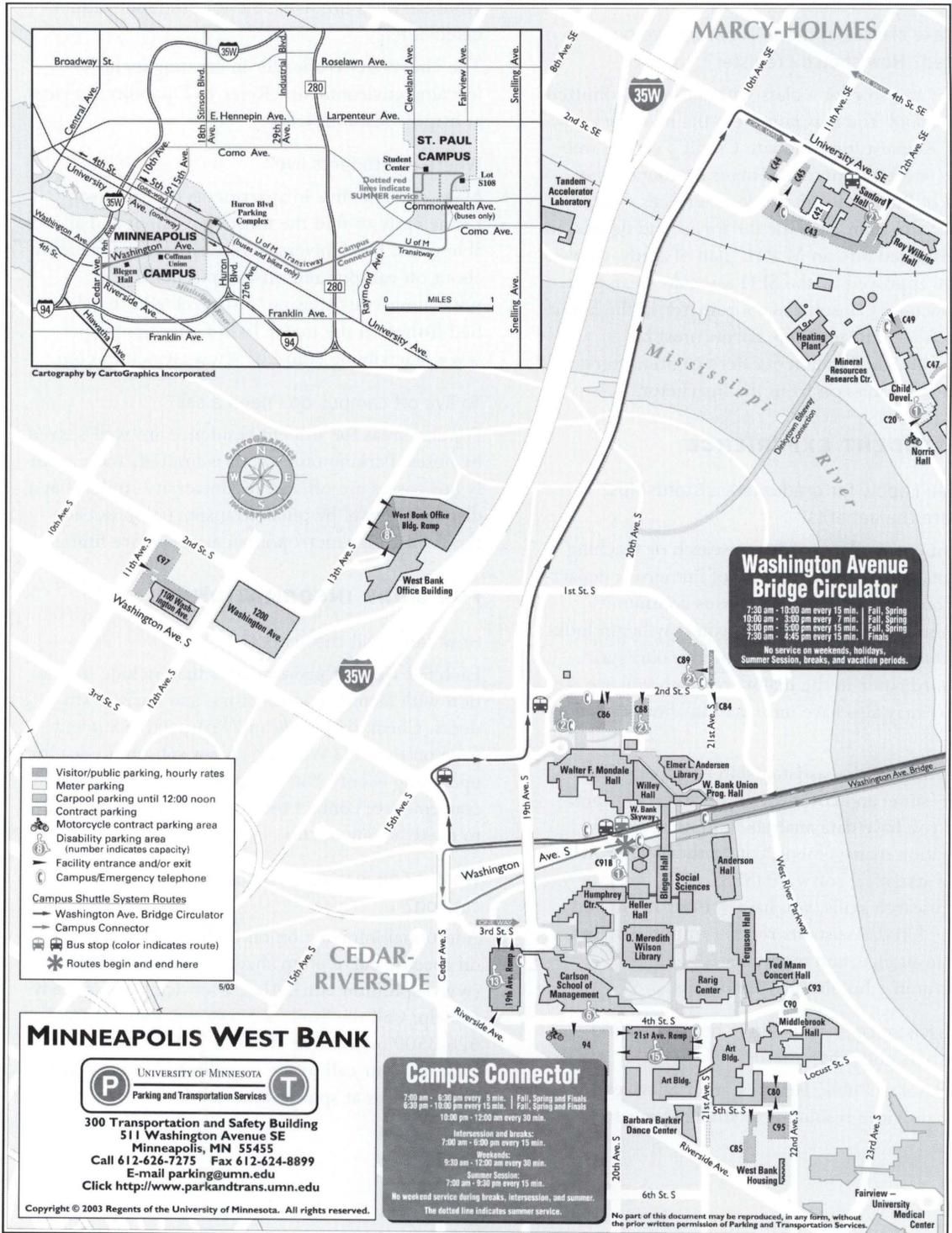
How can I visit the school?

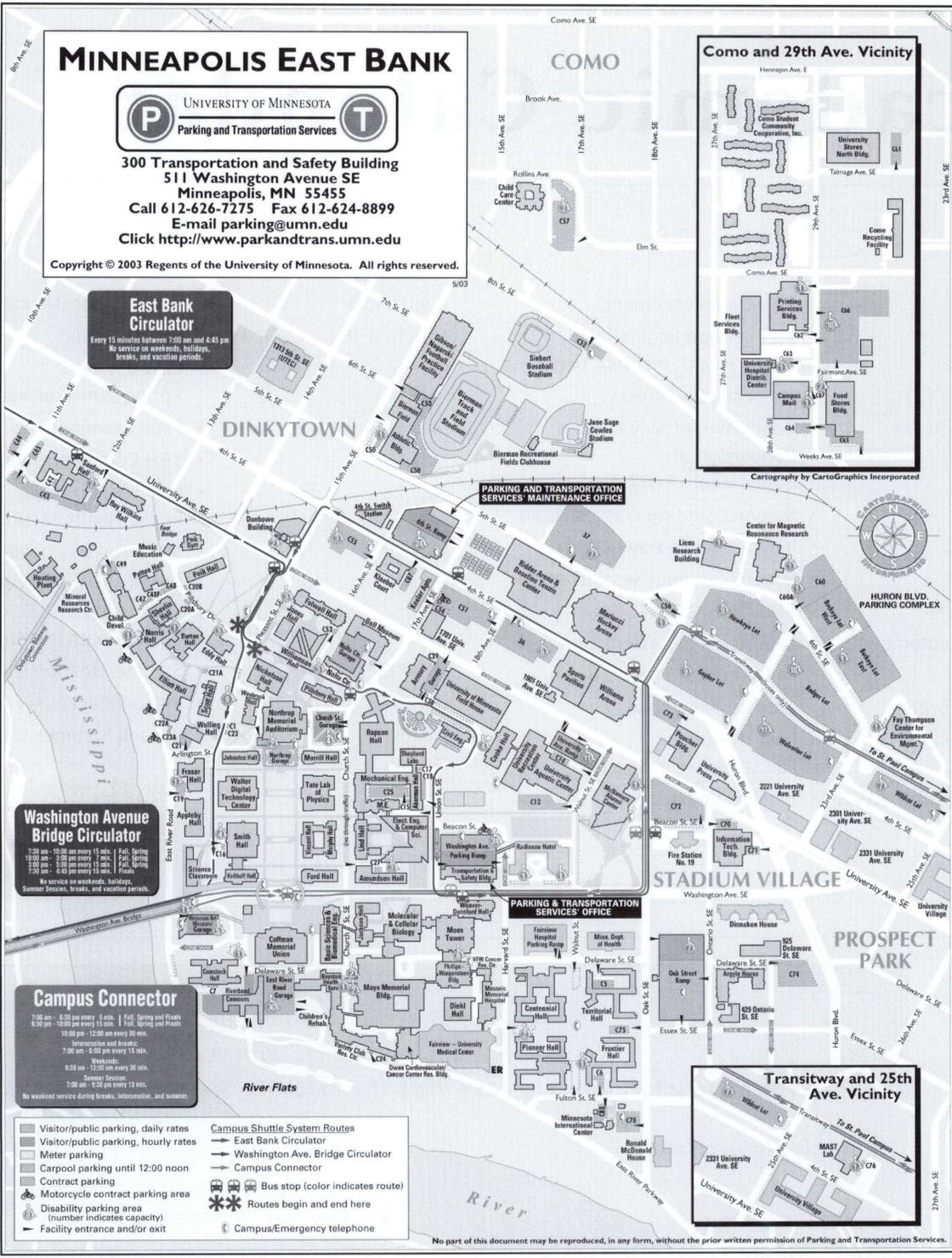
Each fall we host preview days that include interaction with faculty, coordinators, and current students. Check the Applicant/Prospective Student page on the SPH Web site (www.sph.umn.edu) for upcoming events. You may also visit campus at your convenience; contact the coordinator in your major to make arrangements.

What if I have questions not clarified in this catalog?

Additional information on each major is available on specific curriculum sheets and on SPH Web site (www.sph.umn.edu). Also, a service team is ready to help. Call the Student Services Center at (612) 626-3500 or toll free at (800) 774-8636. We can forward your call to the coordinator in your major. Or e-mail us at sph-ssc@umn.edu.

Campus Map





MINNEAPOLIS EAST BANK

P UNIVERSITY OF MINNESOTA **T**
 Parking and Transportation Services

300 Transportation and Safety Building
 511 Washington Avenue SE
 Minneapolis, MN 55455
 Call 612-626-7275 Fax 612-624-8899
 E-mail parking@umn.edu
 Click <http://www.parkandtrans.umn.edu>

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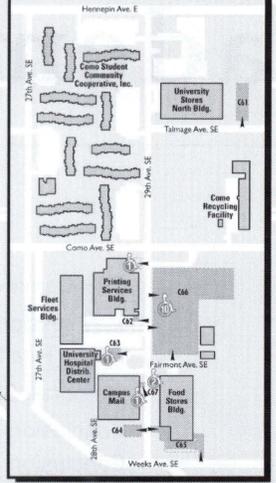
East Bank Circulator
 Every 15 minutes between 7:00 am and 4:45 pm
 No service on weekends, holidays, breaks, and vacation periods.

Washington Avenue Bridge Circulator
 7:00 am - 1:00 pm every 15 min. Fall, Spring
 1:00 pm - 5:00 pm every 15 min. Fall, Spring
 7:00 am - 4:45 pm every 15 min. Finals
 No service on weekends, holidays, Summer Session, breaks, and vacation periods.

Campus Connector
 7:00 am - 6:30 pm every 5 min. Fall, Spring and Finals
 9:30 pm - 10:00 pm every 15 min. Fall, Spring and Finals
 10:00 pm - 12:00 am every 30 min.
 Intervention and breaks:
 7:00 am - 8:00 pm every 15 min.
 9:30 am - 12:30 am every 30 min.
 Summer Session:
 7:00 am - 9:30 pm every 15 min.
 No weekend service during breaks, intervention, and summer.

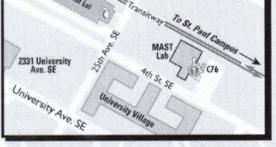
- Visitor/public parking, daily rates
- Visitor/public parking, hourly rates
- Meter parking
- Carpool parking until 12:00 noon
- Contract parking
- Motorcycle contract parking area (number indicates capacity)
- Disability parking area (number indicates capacity)
- Facility entrance and/or exit
- Campus Shuttle System Routes
 - East Bank Circulator
 - Washington Ave. Bridge Circulator
 - Campus Connector
- Bus stop (color indicates route)
- Routes begin and end here
- Campus/Emergency telephone

Como and 29th Ave. Vicinity



Cartography by CartoGraphics Incorporated

Transitway and 25th Ave. Vicinity



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Academic Calendar

2004

May 17	• SPH Commencement
May 24	• May session begins • Public Health Institute begins
May 31	• Memorial Day holiday
June 11	• Conclusion of May session • Conclusion of Public Health Institute classes
June 14	• Summer session classes begin
July 5	• Independence Day holiday
August 6	• 8-week Summer session ends
August 26	• SPH Orientation
August 27-September 2	• SPH Academic Warm-Up
September 7	• Fall semester classes begin
November 25-26	• Thanksgiving holiday
December 15	• Last day of Fall semester instruction
December 16-18 & 20-22	• Final examinations

2005

January 18	• Spring semester classes begin
March 14-18	• Spring Break
May 6	• Last day of Spring semester instruction
May 9-14	• Final examinations
May 16	• SPH Commencement
May 23	• May session begins • Public Health Institute begins
May 30	• Memorial Day holiday
June 10	• Conclusion of May session • Conclusion of Public Health Institute classes
June 13	• Summer session classes begin
July 4	• Independence Day holiday
August 5	• 8-week Summer session ends

We hope this catalog has helped answer your questions.

We look forward to speaking with you.

For more information, please visit the following Web sites or call us:

www.semesters.umn.edu/tc

Review the School's list of courses and descriptions.

www.sph.umn.edu/faculty

Research the School's faculty, their expertise, and their research interests.

[www.sph.umn.edu/students/student-services/
applicants.visit](http://www.sph.umn.edu/students/student-services/applicants.visit)

Join us for an upcoming special visit event.

www.sph.umn.edu/application

Apply online to the School of Public Health.

To speak with a representative or to request a paper application, call (612) 626-3500 or (800) 774-8636.

Information in this catalog is current as of November 1, 2003.

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, color, creed, religion, national origin, sex, age, marital status, disability, public assistance status, veteran status, or sexual orientation.

In adhering to this policy, the University abides by the Minnesota Human Rights Act, Minnesota Statute Ch. 363; by the Federal Civil Rights Act, 42 U.S.C. 2000e; by the requirements of Title IX of the Education Amendments of 1972; by Sections 503 and 504 of the Rehabilitation Act of 1973; by the Americans with Disabilities Act of 1990; by Executive Order 11246, as amended; by 38 U.S.C. 2012, the Vietnam Era Veterans Readjustment Assistance Act of 1972, as amended; and by other applicable statutes and regulations relating to equality of opportunity.

Inquiries regarding compliance may be directed to the Office of Equal Employment Opportunity, 419 Morrill Hall, 100 Church Street SE, University of Minnesota, Minneapolis, MN 55455, (612) 624-9547.

UNIVERSITY
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