Epidemiology

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Hoda Anton-Culver, Department Chair
Ralph J. Delfino, Vice Chair for Research and Graduate Studies
Irvine Hall, Room 224
949-824-7401
http://www.epi.uci.edu/
EpiGrad@uci.edu;

Overview
The Department of Epidemiology faculty researches the genetic and environmental factors affecting the distribution of health and illness in large human populations. This serves as a cornerstone of the graduate program and the medical research program by utilizing highly evidence-based biostatistical methods to determine risk factors leading to disease and optimal treatment approaches for clinical practice and medical interventions essential to preventative medicine and public health. In addition to the medical sciences, the epidemiology faculty has diverse research interests and relies on a number of other basic-science disciplines including biological sciences (to understand the disease process), biostatistics (to evaluate large population data and develop research methods), geographic information science (to map disease patterns), and social science (to understand proximate and distal risk factors). The Department maintains facilities for research that enable genetic, molecular, and biochemical techniques. The faculty in the Department of Epidemiology has strong, peer-reviewed research portfolios and resources needed to support the Department’s postdoctoral and doctoral training programs.

The Department offers programs of study leading to the M.S. or Ph.D. degrees, but not an undergraduate degree. The Department offers undergraduates the opportunity to gain research experience in epidemiology through the 199 series of undergraduate research courses in epidemiology. These courses are available to all upper-division undergraduates irrespective of the individual major they have declared on campus.

Master of Science in Epidemiology
The M.S. degree in Epidemiology requires the student to complete a number of required courses in the department, and elective course work. There is a comprehensive exam at the end of the first year. In addition, the student will typically take additional seminar courses during the graduate study. The student engages in thesis research with a faculty thesis advisor, and will prepare and submit a dissertation to the thesis committee. The final examination is an oral presentation of the thesis to the committee. The normative time to degree is two years for the thesis M.S. degree.

Doctor of Philosophy in Epidemiology
At the end of the first year, students must demonstrate proficiency by passing a preliminary qualifying exam. The purpose of this exam is to verify that the student has mastered the material presented in the required courses of the first-year of the program. The goals of these first-year courses are to establish a foundation of knowledge in relevant disciplines, to acquire an understanding of research methods including the responsible conduct of research, and to sharpen critical thinking abilities. There is a formal evaluation of the student’s progress at the end of the second year, in which the student demonstrates they are ready to begin thesis research in which they will take major responsibility for the design, conduct, and publication of Ph.D.-level research projects.

Students must have selected a thesis advisor and joined the advisor’s research group by the end of the third quarter of the first year.

Advancement to Candidacy
Following successful completion of the second year of graduate study, the next step in progression toward the doctoral degree is Advancement to Candidacy. The purpose of this process is to ensure that the student has selected an appropriate topic for the dissertation and that the proposed research that has been completed or is contemplated is scientifically rigorous and likely to be completed successfully and within the normal period of graduate study. The advancement to candidacy exam must be taken by the end of the spring quarter of the third year of graduate study.

Once this examination is completed, the student is advanced to candidacy for the doctoral degree and is expected to complete the degree within two to three years. The student must submit a dissertation on this research and defend the thesis in an oral examination during the final year of graduate study. The normative time for completion of the Ph.D. is five years, and the maximum time permitted is seven years.

Students who are interested in these graduate degrees in Epidemiology should apply to the Department of Epidemiology in the School of Medicine. Applications are exclusively online, through the Graduate Division website (http://www.grad.uci.edu). For further questions contact EpiGrad@uci.edu or call 949-824-7401.
The Department of Epidemiology in the School of Medicine also has a joint doctoral program with the School of Social Ecology leading to a Ph.D. in Social Ecology with a concentration in Epidemiology and Public Health. That program is designed to prepare students to conduct research on questions in epidemiology and public health and on related questions on the formulation of environmental and health policy. Students interested in that program should contact the School of Social Ecology for information.

Faculty

Hoda Anton-Culver, Ph.D. University of St Andrews, Genetic Epidemiology Research Institute and Professor of Epidemiology

Dwight Culver, M.D. Stanford University, Genetic Epidemiology Research Institute and Health Sciences Clinical Professor of Epidemiology

Ralph J. Delfino, M.D., Ph.D. McGill University, Genetic Epidemiology Research Institute and Professor in Residence of Epidemiology

Karen L. Edwards, Ph.D. University of Washington, Professor of Epidemiology; Genetic Epidemiology Research Institute; Program in Public Health

Rufus D. Edwards, Ph.D. Rutgers, The State University of New Jersey, Genetic Epidemiology Research Institute and Associate Professor of Program in Public Health; Environmental Health Sciences; Epidemiology

Deborah Goodman, Ph.D., M.D., M.P.H. University of California, Los Angeles, Genetic Epidemiology Research Institute and Associate Adjunct Professor of Epidemiology

Luohua Jiang, Ph.D. University of California, Los Angeles, Genetic Epidemiology Research Institute and Assistant Professor of Epidemiology

Feng Liu Smith, Ph.D. Iowa State University, Genetic Epidemiology Research Institute and Assistant Researcher of Epidemiology

Christine E. McLaren, Ph.D. Case Western Reserve University, Genetic Epidemiology Research Institute and Professor of Epidemiology

Trina Norden-Krichmar, Ph.D. The Scripps Research Institute, Genetic Epidemiology Research Institute and Assistant Professor of Epidemiology

Andrew O. Odegaard, Ph.D. University of Minnesota, Genetic Epidemiology Research Institute and Assistant Professor of Epidemiology

Hannah L. Park, Ph.D. Stanford University, Genetic Epidemiology Research Institute and Assistant Professor in Residence of Epidemiology

Norbert Staimer, Ph.D. Technical University of Munich, Genetic Epidemiology Research Institute and Project Scientist of Epidemiology

Nathan D. Wong, Ph.D. Yale University, Genetic Epidemiology Research Institute and Adjunct Professor of Medicine; Epidemiology

Argyrios Ziegas, Ph.D. University of Southern California, Genetic Epidemiology Research Institute and Associate Adjunct Professor of Epidemiology

Affiliate Faculty

Ellen S. Burt, Ph.D. Yale University, Professor of English; Comparative Literature; European Languages and Studies (eighteenth-century French literature and nineteenth-century poetry)